



END USER REQUIREMENTS

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Version	Comments	Authors
V1	This document presents the process followed in order to understand better the end users requirements, needs and problems regarding social interaction and technological affinity, the two keystones of this project.	Javier Gámez Javier Ganzarain Úte Vidal Ricard Barberà Josep Carné

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1 INTRODUCTION AND OBJECTIVES

This document presents the process followed in order to understand better **the end users requirements, needs and problems** regarding social interaction and technological affinity, the two keystones of this project.

The first stage of the product and service development consists of gather and understand the needs and problems of the target group. **This should be the solid base to offer a successful product to the current market.** Moreover it is deemed necessary, to know who are the main target group, as well as, their specific characteristics that differentiate them from other population groups.

The process follow in this first phase of this project consist **of three main steps**:

- Analysis of **the state of the art**. The main idea is take advantage from the current knowledge, in order to integrate properly the end user.
- End user **typology**. Define and analysis of the end user group (target group) that is described in section 2. First, we proposed a new approach to describe our end users based on a double axis representation using 2 variables: social interaction and technological affinity. At the end, we presented the personas approach, it helps to have a better idea of the future end users and to keep their preferences and needs in the main for the development of our product.
- **Needs and problems identification**. Gather the **needs** and **problems** of our target group, in terms of social interaction and technological affinity, among Germany and Spain. In order to carry out this task we used a qualitative method called focus group.

The following chart shows the iterative and dynamic model of our typology approach:

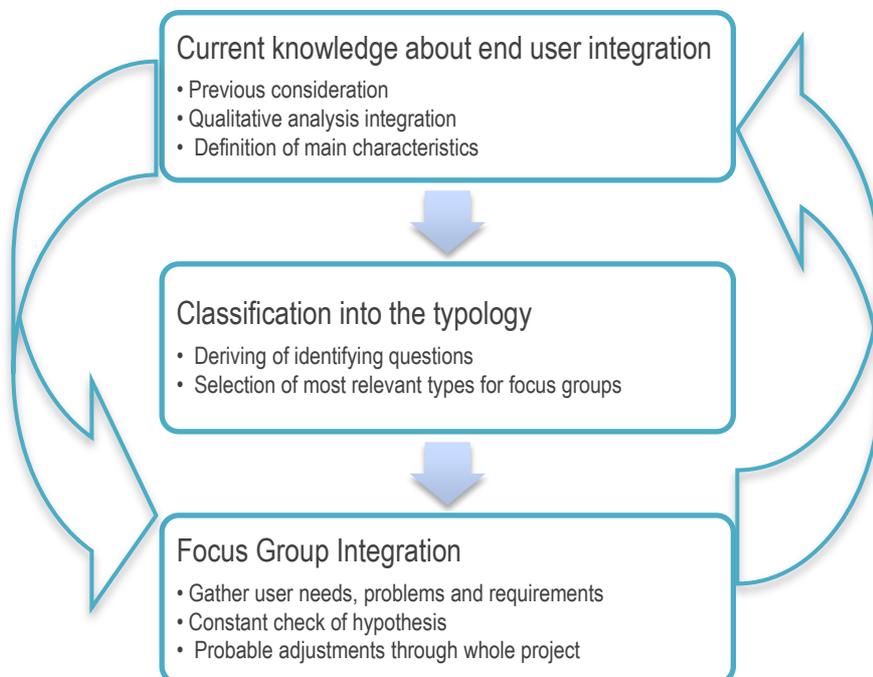


Figure 1. Methodology approach

The main **objective** of this document consist of determine the main end user requirements that will be the guidelines and roadmap of the product future development.

2 OVERALL CONSIDERATIONS FOR END USER INTEGRATION

In the following we review recommendations extracted from different authors. Old people are not a homogenous group. For this reason it is important to define segments of population. Fisk (Fisk et al., 2004) distinguish two main groups: younger-old (60-75) and older-old (more than 75). Redish (Redish et al., 2004) proposes four factors:

- age: including chronological age, but taking into account life experiences.
- ability: cognitive and physical (high – low)
- aptitude: expertise with computers and the Web (high – Low)
- attitude: confidence levels and emotional state of mind (Positive – Negative). Positive and forward looking, risk-taking and experimental — or negative, fearful, or diffident; confidence levels and emotional need for support from another human being

When asked to evaluate software systems, older people tend to blame themselves and their own incompetence rather than poor design. They tend to be very positive about the prototypes which are presented to them, wanting to praise the developers rather than give an objective view. Their confidence in their ability to use technology can also be very fragile, and it is important from an ethical perspective not to put them in a position where any confidence they have is threatened (Newell et al., 2006).

Three to four users are the optimal number for most usability studies (Newell et al., 2006).

Technology Acceptance Models (TAMS) incorporate factors that affect the uptake of technology, where the perception of the usefulness of the technology weighed against the time taken to learn it (Zajicek, 2001). The main question for old people is: Is it worth the expenditure? For this reason learning and progression are vital elements in determining how successfully older users are adopting new technologies (Anna Dickinson et al., 2007).

Dickinson et al. (2007) provides the following recommendations:

Things to be considered within End User Integration

Procedural Issue	Suggested Solutions	Reasons
Written documentation (e.g. consent forms, information sheets, experimental directions).	Ensure readability. Font size should be at least 14 point. Language should be straightforward, 'every day. Avoid jargon and terminology.	Older participants may find small font sizes harder to read. Wide variety in literacy and education levels, with a significant proportion of older adults having relatively poor literacy.
Experimental instructions	Be especially careful to ensure that participants understand experimental instructions before you begin. Be prepared to repeat instructions (if necessary using different words) throughout the experiment.	Inexperience with experimental conditions can mean uncertainty about appropriate behaviors. Additionally, memory issues may make it necessary to repeat instructions
Companions	Be prepared for participants to ask to bring – or simply to bring – companions for moral support. Have a strategy for coping with and accommodating companions, depending on the formality of the	Attendance at a research venue can be an intimidating experience. Companions, while helping to reduce participant anxiety, can also interfere with experimental conditions if not situated properly.

	experiment, such that they do not affect the experiment.	
Cognitive testing	Explain clearly at the beginning of cognitive testing the instructions and the level of performance expected. If necessary, when failure occurs make it explicit that this is to be expected. Do not automatically use 'age-specific' scales.	Older adults can be very vulnerable to worries about the effects of ageing on memory and cognition. Diversity and highly effective strategies mean that age-specific scales may produce a ceiling effect
Think aloud procedures	Be aware of potential problems with both 'concurrent' and 'retrospective' think aloud techniques.	Concurrent think aloud places significant stress on inexperienced computer users and often fails to produce useful data. Conversely, retrospective think aloud often produces excellent data, but the process may confound experimental measures.
User diaries	Be aware that inexperience and other factors will affect the data received; check regularly that desired data is being collected; follow up rapidly with one-to-one discussions.	Difficulties with memory, processing and physical problems with writing can reduce the usefulness of information gathered through user diaries. One-to-one discussions are normally the best way of eliciting information from in experienced computer users.
Balanced measures	Combine subjective and objective measures.	Beginners can find it difficult to express specific problems with an interface. Additionally, the explanation given by a participant often differs from that given by an observer. Richer information from multiple approaches makes it more likely that useful data will be gathered.
Timing	Be as flexible as possible. In more formal experimental situations, where flexibility may be more difficult, budget generously for time.	Older participants commonly take longer to complete tasks and to achieve autonomy than researchers anticipate
Recruitment	Choose appropriate recruitment strategies. Be cautious about situations where participant vetting is carried out by someone outside there search team, for example an employee of a local charity or other agency	Strategies vary according to the research. It is often wasteful and inefficient to depend upon others to vet participants.
Instructions for visit to research space	Ensure directions are clear and explicit; provide a range of information about finding the venue and contact numbers. Include information about what to bring (e.g. reading glasses, hearing aid)and check by telephone beforehand that the information has been received and understood.	Older participants may have to travel some way to attend the university; unlike students they may not know the campus well. Variations in literacy mean that directions should be as clear as possible. Telephoning to check beforehand helps to reassure participants and encourages attendance.
Longer-term study Maintenance Participants or their	To maintain participation in a longer term study it is important to be	family members may be ill, or busy, and occasional re-scheduling is preferable to

	flexible about session times and any re-scheduling.	losing participation in a study.
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3 THE ELISA TYPOLOGY

3.1 THE METHODOLOGICAL APPROACH TO DEFINE AND IDENTIFY OUR TARGET GROUP

Typology/Milieus are segments formed on the basis of behavior-related and psychographic variables. They are based on the assumption, that similar attitudes and ways of life through all kinds of social classes or backgrounds are responsible for the behavior of user groups rather than (socio-)demographic factors. With this segmentation types of persons can be assigned to typical behavior patterns. These types or milieus are clusters of customers with similar patterns that are identified through data oriented analysis and in combination with qualitative study results and quantitative validation. In this project we choose a method adapted to our needs, because we need a dynamic system due to length of the project and a method that ensures the most promising output for Elisa. As classical target group definition, e.g. only based on age, does not promise significant results due to the heterogeneity of our target group (called as well Best Agers). Multidimensionality, a multifaceted and more encompassed view on human experiences, dynamic process understanding concerning e.g. social inclusion and exclusion (Richard Layte and Bertrand Maitre, 2010) and a more personality based perception is needed for Elisa. That's why we prefer to identify our target group and to select our focus groups based on our own typology, that takes all of these aspects into account.

Benefits for product development

The typology approach is commonly used in the field of market research because it provides important approaches to population segmentation, target group research and product placement. With the information of typologies and personas, products and services can be developed to fit the needs of the end user in the best possible way. Moreover a valid forecast to the behavior of different user groups is possible.

We use it to

- segment our target group
- to describe our target group
- to identify patterns and common habits
- to identify our focus groups
- to elaborate product features
- to elaborate marketing introduction strategies adapted to the habits and need of each type
- it serves as meta level segmentation for the personas, who are selected exemplary ideal types within the meta types

In the first focus group we concentrated on the age range of **55 to 75 years**, as in this age range habits in social activity and technical affinity seem to show similar patterns. Nevertheless **40 plus** are considered as followers, so they will be integrated in later End User Integration stages as secondary user, as well as younger family members or other relevant secondary users like care givers.

For the definition of the age ranges, the age ranges being taken into account in statistics at EU and national level (Germany and Spain) has first been analyzed.

- In Germany, the ranges start with the decade and normally go from 50-59, 60-69 and so on (like in the (N)onliner-Atlas 2010 and the European Social Survey 2006).
- In Spain, in many cases, the age of going to pension has defined the limit of the ranges, and therefore age ranges of the studies normally go from 55-64, 65-74 (like in the INE: INEBASE (Encuesta sobre equipamiento y uso de tecnología de la información y comunicación en los hogares, 2007)) and so on.

Taking into account, the scope of the project, we have defined an underline for the age range of 55 years. We do consider that the people under 55 are already, more or less, used to technology and belong to the secondary users group of Elisa.

We propose to structure our target group taking into account two variables: **social activity** and **technological affinity**. It is important to remind that the overall objectives of Si-screen project and the AAL 2^a call are foster the social interaction by reducing the gap between the elderly and the ICT, so this approach is the best way to combine both and propose and overall view of the background that we face.

Social engagement and attitude towards society:

- Social Activity
- Responsibility towards society (Gets/gives support?)
- Social activities (Where? When? Level of participation? Public-life/do-it-yourself/traditional?...)
- Preferred leisure activities
- Appointment/Communication strategy
- Distribution of family/friends
- Household composition
- Average amount of social contacts

Technical affinity and attitude towards technology:

- Technical Affinity (ICT): = Use of ICT (Frequency? For what? Concerns? Motivations? Experience level? Skills?)
- Preferred way of communicating (Face to face? At a distance (phone, email, post, others?))

3.2 THE TYPOLOGY AS FIRST RESULT

The figures below show the typology among countries (Germany and Spain) that we propose. In the vertical axis we can the technological affinity, and in the horizontal axis we present the social activity. In both countries we divided elderly in 8 groups that are described in section 2.3.

SOCIO-TECHNOLOGICAL TYPOLOGY (GERMANY)

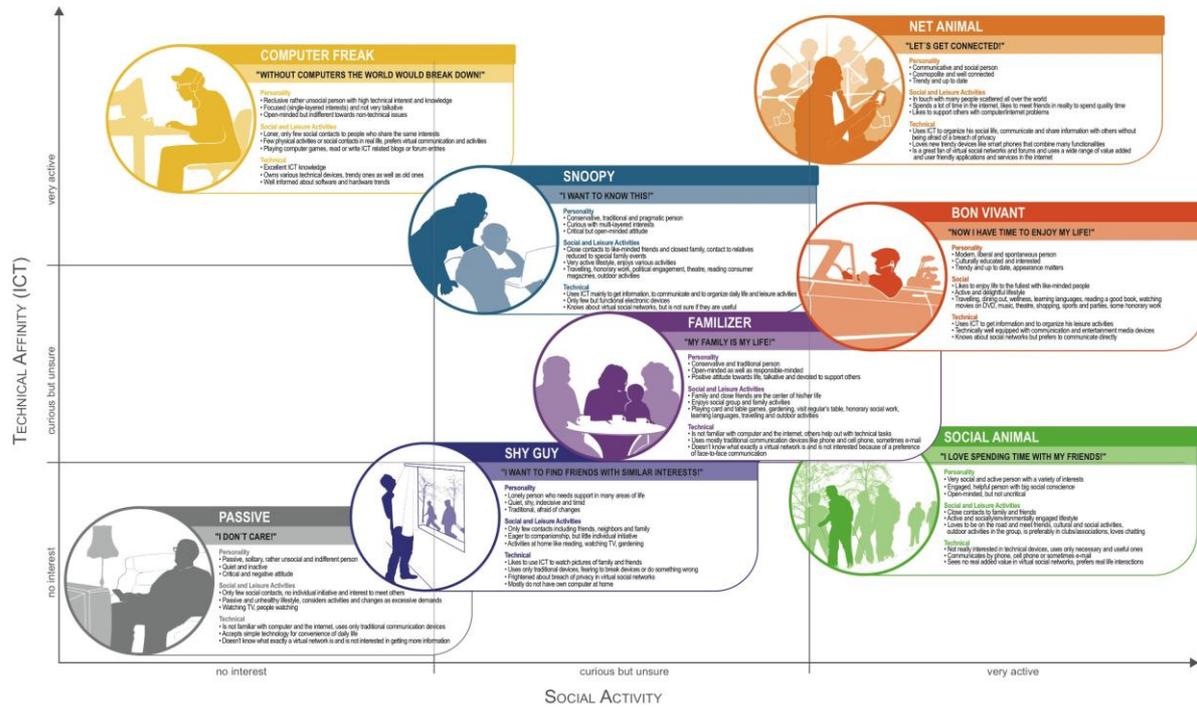


Figure 2. Typology of Germany

SOCIO-TECHNOLOGICAL TYPOLOGY (SPAIN)

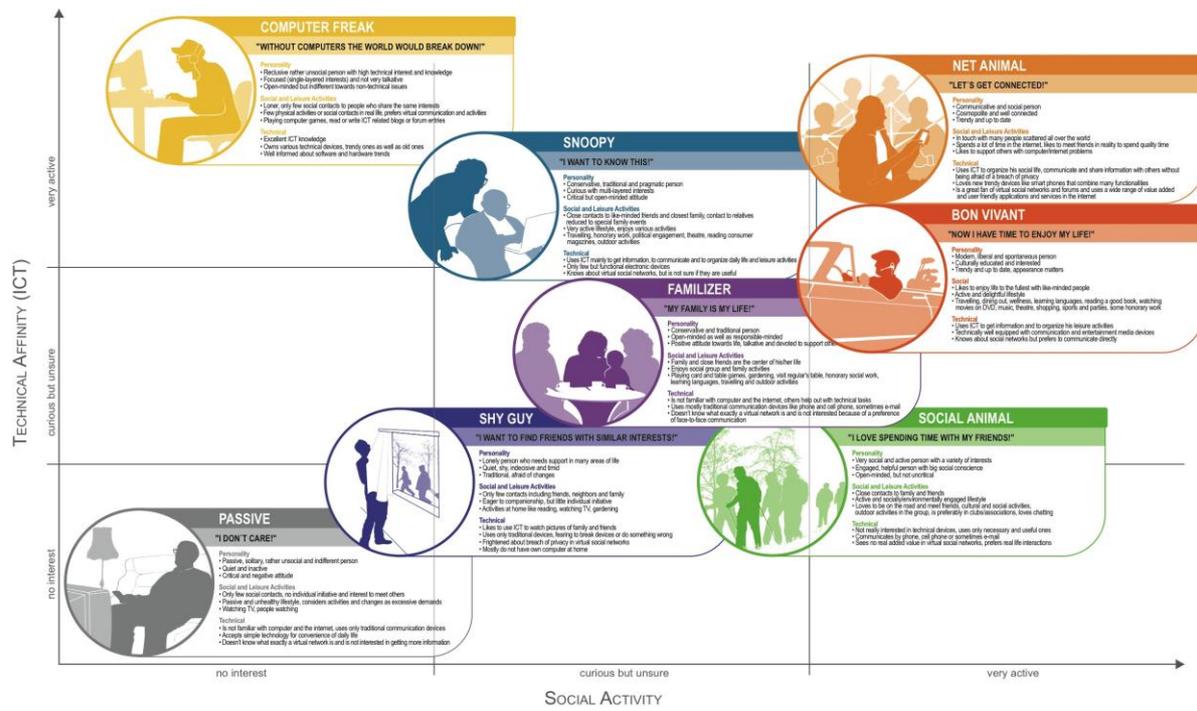


Figure 3. Typology of Spain

3.3 THE TYPES

Bon Vivant



Slogan: "Now I have time to enjoy my life!"

Personality and attitude towards life

- Enjoys life, likes to indulge himself to something, but also with a social/political conscience
- Modern, liberal and spontaneous person
- Culturally educated and interested in many things (including technical but that is of minor priority)
- Trendy and up to date, appearance matters (mostly for female BV)

Social Engagement and attitude towards society

- Likes to enjoy life to the fullest with like-minded people and some "darling" relatives
- Active and delightful lifestyle

- Participates in both worlds - real life (preferred) as well as virtual

Preferred leisure activities

- Travelling, dining out, wellness, learning languages, reading a good book, watching movies on DVD, music, theatre, shopping, sports and parties, some honorary work

Number and quality of social contacts

- A person with a lot of contacts (mostly related to his pleasure themes)

Technical affinity and attitude towards technology

- Uses ICT to get information and to organize his leisure activities
- Technically well equipped with communication and entertainment media devices
- Knows about social networks but prefers to communicate directly
- Uses rather self-explanatory equipment
- Does not like to read manuals
- Trusted brand behavior

Derivation from data research (Hypothesis, to be checked by questionnaire 2)

- 55-64 Years. Majority male
- Education: More than secondary school
- Employed

Computer Freak

Slogan: "Without computers the world would break down!"

Personality and attitude towards life

- Reclusive rather unsocial person with high technical interest and knowledge
- Focused (single-layered interests) and not very talkative
- Open-minded but indifferent towards non-technical issues

Social Engagement and attitude towards society

- Loner, only few social contacts to people who share the same interests
- Few physical activities or social contacts in real life, prefers virtual communication and activities
- Is willing to help others with technical, even complex, problems
- Can not explain technical issues to "normal" people, is a bad IT teacher

Preferred leisure activities

- No or only few physical activities
- Playing computer games
- Read or write ICT related blog or forum entries
- Loves to be asked about electronic devices and admired about his expertise therein

Number and quality of social contacts

- Only few contacts to other computer freaks and like-minded former colleagues
- Other social contacts (family and so on) are a must, and not necessarily wanted or needed

Technical affinity and attitude towards technology

- Excellent ICT knowledge, open source user / programmer
- Well informed about new hardware and software trends
- Lives in a technical world, uses ICT to organize his whole life
- Puts technology at the very top
- Owns various technical devices (PCs and others) at home, trendy ones as well as old ones purposes
- Uses social networks but is more active in special ICT discussion forums

Derivation from data research (Hypothesis, to be checked by questionnaire 2)

- 55-64 Years
- Majority male
- Married, living with partner in a large city

Shy Guy

Slogan: "I want to find friends with similar interests"

Personality and attitude towards life

- Lonely person who needs support in many areas of life
- Shy, Quiet, timid and indecisive
- Traditional, afraid of changes

Social Engagement and attitude towards society

- Living alone, only few contacts including close friends, neighbors and family
- Eager to companionship, but little individual initiative or unsuccessful when tries to find new contacts

- When familiar with others, feels happy staying with them (neighbors, close friends, family)
- Little social engagement because of weak self-confidence

Preferred leisure activities

- Outdoor activities like hiking, cycling or walking also as activities at home like reading, sewing, cooking, also travelling, cinema
- Visiting workshops at the adult education centre or senior-club, honorary work

Number and quality of social contacts

- Contact to a handful of close friends, neighbors and to family
- Would like to be part of a group but finds it difficult to get in contact with other people
- Prefers personal contact to others (face-to-face)

Technical affinity and attitude towards technology

- ICT usage limited to phone and cell phone, sometimes email
- Don't have a own PC, are not familiar to use PC uses only traditional devices, fears to break devices or do something wrong
- Frightened about breach of privacy in virtual social networks, wants to know people in person

Derivation from data research (Hypothesis, to be checked by questionnaire 2)

- 65-74 years
- generally female
- Retired and living alone

Net Animal

Slogan: "Let's get connected!"

Personality and attitude towards life

- Communicative and social person
- Cosmopolite and well connected
- Trendy and up to date

Social Engagement and attitude towards society

- Has a great number of friends
- Stays in contact to friends and family living scattered all over the world via Internet
- Likes to help others especially with computer/internet problems (e.g. online search, using skype)
- Is a gossip person, likes to be up to date and know everything about others

Preferred leisure activities

- Spends a lot of time in the internet, likes to date friends and go out
- Loves communicating and sharing of content (photos, videos, etc.)

Number and quality of social contacts

- Has a lot of friends but attaches also value on quality in relationships
- Is connected simultaneously to different social networks
- Virtual and real contact to former colleagues

Technical affinity and attitude towards technology

- Uses ICT to organize his social life, communicate and share information with others without being afraid of a breach of privacy
- Loves new trendy devices like smart phones that combine many functionalities
- Likes to share virtual social networks and forums (not facebook, prefers special networks like platinnetz); uses a wide range of value added and user friendly applications and services in the internet
-

Derivation from data research (Hypothesis, to be checked by questionnaire 2)

- 55-64 years
- male or female
- lives without partner in a large city

Passive**Slogan: "I don't care!"****Personality and attitude towards life**

- Passive, solitary, rather unsocial and indifferent person
- Quiet and inactive
- Critical and negative attitude

Social Engagement and attitude towards society

- Only few social contacts, no individual initiative and interest to meet others
- Passive and unhealthy lifestyle, considers activities and changes as excessive demands
- Is not interested in social activities (at home or outside) and does not spend any money for that either
- Waits until other persons do things for him/her

Preferred leisure activities

- Mostly passive activities that do not require moving
- Playing computer games, watching TV or watching other people

Number and quality of social contacts

- Only few obligatory/necessary contacts (family or colleagues)
- No interest to become friends with others

Technical affinity and attitude towards technology

- Is not familiar with computer and the internet, uses only traditional communication devices like telephone or fax
- Accepts simple technology for convenience of daily life
- Devices must offer the possibility of making something much easier, should be easy to handle, not get broken easily or offer a passive form of entertainment, like watching TV.
- Doesn't know what exactly a virtual network is and is not interested in getting more information

Derivation from data research (Hypothesis, to be checked by questionnaire 2)

- +65 years
- male or female
- married or widowed

Familizer

Slogan: "My family is my life!"

Personality and attitude towards life

- Conservative and traditional person

- Positive attitude towards life, talkative and devoted to support others
- Open-minded as well as responsible-minded

Social Engagement and attitude towards society

- Family and close friends are the center of his/her life
- Enjoys social group and family activities
- Feels very responsible to family and close friends (emotional and financial support), but not to society in general

Preferred leisure activities

- Playing card and table games, gardening, visit regular's table, honorary social work, learning languages, travelling and outdoor activities

Number and quality of social contacts

- Regular contacts to family, close friends and to ex-colleagues
- Solid friendships (quality is more important than quantity)

Technical affinity and attitude towards technology

- Technically average or low, others help out with technical tasks (friends, family)
- Uses mostly traditional communication devices like phone and cell phone, sometimes e-mail
- Technical equipment must be useful
- Doesn't know what exactly a virtual network is and is not interested because of a preference of face-to-face communication

Derivation from data research (Hypothesis, to be checked by questionnaire 2)

- 65-74 years
- female
- living in large city
- retired
- not married

Snoopy



Slogan: "I want to know this!"

Personality and attitude towards life

- Conservative, traditional and pragmatic person
- Curious with multi-layered interests
- Critical but open-minded attitude

Social Engagement and attitude towards society

- Close contacts to like-minded friends and closest family, contact to relatives on special family events
- Very active lifestyle, enjoys various activities
- Feels more responsible for his own life, but is open to help within the family or good friends
- Lives in solid circumstances, a cultivated ambience is important

Preferred leisure activities

- Travelling, outdoor activities like cycling or hiking, honorary work, political engagement, theatre, reading consumer magazines
- Meeting friends in bars or at regular tables

Number and quality of social contacts

- Regular contact to like-minded friends and close family
- Contact to wider family not very close

Technical affinity and attitude towards technology

- Uses ICT mainly to get information, to communicate and to organize daily life and leisure activities
- Is well equipped with technical devices and has fun using it, but is not a technology freak
- Devices must be functional
- Knows about virtual social networks, but is not sure if they are useful

Derivation from data research (Hypothesis, to be checked by questionnaire 2)

- 65-74 years
- male or female
- lives in small city
- retired

Social Animal



Slogan: "I love spending time with my friends!"

Personality and attitude towards life

- Very social and active person with a variety of interests
- Engaged, helpful person with big social conscience
- Open-minded, but not uncritical
- Positive attitude towards life

Social Engagement and attitude towards society

- Close contacts to family and friends
- Active and socially/environmentally engaged lifestyle (e.g. honorary work)
- Loves to be on the road and meet friends, cultural and social activities, outdoor activities in the group, chatting

Preferred leisure activities

- Loves to be outside and do things in a group, a clubman through and through (e.g. sports club, language clubs, shooting associations)
- Active participant in leisure, cultural and social activities

Number and quality of social contacts

- A lot of social contacts (friends, family, acquaintances, colleagues, neighbors, etc.)

Technical affinity and attitude towards technology

- Not really interested in technical devices, uses only necessary and useful ones (household devices, car, drill, etc.)
- Uses ICT to organize his social life, but concentrated on phone, mobile phone, sometimes email.
- Sees no real added value in virtual social networks, prefers real life interactions

Derivation from data research (Hypothesis, to be checked by questionnaire 2)

- 55-64 years
- mainly female
- married or widowed/divorced

3.4 PERSONAS

Personas

Through working with Personas you can bring individuals within segments into life. They help to have a better idea of the future customer and to keep their wishes and needs in line of sight.

The typology segmentation identifies and categorizes a potential target group based upon common characteristics like attitudes, behavior, frequency of interaction, motivations, personal quotes, concerns, habits and more on a meta level.

These Personas are prototypical, but real stories of the multidimensional lives of specific target groups. The use of Personas also helps to understand the heterogeneity and diversity of customer's life.

In the following you can find our Personas, which have been adapted after our Typology Definition and Focus Group Integration.

SNOOPY



CURIOUS KURT

Age:	71
Home situation:	semi-detached house in a middle-size city
Personal status:	married
Financial standing:	financially secured
Kids:	1 son, 1 grandchild

I want to know it.

Who he is...

Kurt is a 71-year-old German man and is married. His son and his grandchild live in a large town, 60 km away. Kurt is retired and worked in a large insurance company. He is a traditional and pragmatic person with a lot of interests.

How he lives...

Kurt lives together with his wife in a semi-detached house in a middle-size city. He has a circle of good friends, many contacts to his former colleagues and supports his freelancing son in bookkeeping. He helps his wife in housekeeping and makes small repairs in the house. He undertakes a lot of things and is still fit.

What he likes...

Kurt meets his colleagues once a month at the regular's table and makes cycling trips with his friends at least three times a month. He is interested in many things, also in technical ones. He likes to go into classical concerts with his wife and travels very often together with her in their camper. On this trips, he takes his netbook with him to stay in contact with his son and to send him pictures.

What he needs...

When he has computer problems, he would love to have an easy accessible hotline. Sometimes, he gets lost in the internet due to confusing webpages. He is not sure about privacy in the internet; therefore, he does no online-banking. He would love to have a seal of quality for webpages.

For internal use only!

PASSIVE



DEMANDING MARTIN

Age:	74
Home situation:	flat in small town with accessibility problem
Personal status:	married, cared by his wife Caren (68)
Financial standing:	low-middle income
Kids:	2 children, living in the same town, 3 grandchildren

I don't know what to do.

Who he is...

Martin is a 74-year-old Spanish man, married for the second time. He used to be a truck driver and worked in and around his house a lot. He has two children and three grandchildren who live in the same town. He is not religious.

How he lives...

Martin lives with his wife Caren in a flat in a small town. He is bedridden and taken care of by his wife. He suffers from COPD, osteoporosis and depression. The flat has no elevator and an unsuited bath what is a great burden for his wife. He does not really have friends, due to his unmoveable status and his withdraw from his social live.

What he likes...

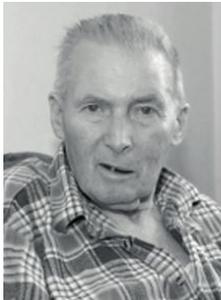
Martin likes beer, football and classic films. Due to a lack of activities / hobbies and his limited possibilities he is bored and a burden to his wife. He is good in mechanics but has no further relationship to electronic devices excluding his TV.

What he needs...

Martin would love to have an easy online self-help group about COPD, where he finds people with the same problem. As his medical compliance is not that reliable, a telecare service would improve his course of disease and unburden his wife Caren. He also would love to be able to take part in an online exchange platform for classic films or in the fan page of his favorite soccer team, but until now he is not familiar with computers, but he would change this with external support.

For internal use only!

FAMILIZER



CARING CAREN

Age:	68
Home situation:	flat in small town with accessibility problem
Personal status:	married to Martin (80)
Financial standing:	low-middle income
Kids:	2 children, living in the same town, 3 grandchildren

I take care of my husband.

Who she is...

Caren is 68-year-old Spanish woman. She is married and never worked outside her household. She has two children and three grandchildren who live in the same town. She is a Catholic. She is a conservative and traditional person and very responsible-minded.

How she lives...

Caren lives with her husband Martin in a flat in a small town. Her husband is bedridden and she takes care of him, which is a burden to her. She would love to adapt the unsuited bath to their needs but she doesn't know where and from whom to get information and support about it. She has a strong relationship to her children and grandchildren and to some close friends, but no supporting network.

What she likes...

Caren likes to knit and to crochet and loves taking care of her grandchildren. In general, she does not have a lot of time for herself because of her needy husband. She is not familiar with the computer and the internet, but her children and grand-children help her (e.g. in booking something).

What she needs...

Caren needs more time for herself and, therefore, hourly support in the care of her husband. She would love to get creative impulses in her knitting and crocheting. Telecare and Teleassistance would improve her quality of life, but she do not know where to get this information and support and if she can afford it.

For internal use only!

NET ANIMAL



JUAN THE COSMOPOLITE

Age:	60
Home situation:	solitarily, small/medium village near Alicante
Personal status:	divorced
Financial standing:	good pension
Kids:	2 children and 1 grandson

Let's get connected!

Who he is...

Juan is a 60-year-old Spanish man at the beginning of his retirement, divorced since more than a decade. He used to be a successful engineer and to travel a lot during his working life. He is not religious. He is a communicative and social person.

How he lives...

Juan lives alone in his parents' house in a small village near Alicante. He has a good pension. His daughters live abroad, one makes her PhD in France, the other one is married in the USA. To them and to many friends and former colleagues all over the world, he has regularly contact via internet. Since shortly, he has a Facebook account and already made some interesting contacts. He has back problems because of his office job. He has some friends in his village and meets them quite often in a bar.

What he likes...

Juan spends a lot of time in the internet and uses a lot of different platforms and services there (e.g. online-banking, online-shopping, theme fora). He loves to listen to audio-books with his smart-phone. He meets his daughter in the USA once a year, the other daughter visits him several times a year. He is open to new tasks and thinks about starting a new business (consulting) or collaborating as a volunteer. He fluently speaks English and French and has a very good technical know-how. For his back, he does swimming regularly.

What he needs...

He wants to have information for new developments in e.g. testing reports. He is looking for orientation for his retirement and wants to have an overview of honorary work possibilities in his area.

For internal use only!

BON VIVANT



ENJOYING SYLVIA

Age:	61
Home situation:	freehold flat
Personal status:	divorced, boyfriend
Financial standing:	financially secured
Kids:	1 child, 1 grandchild

I enjoy my life!

Who she is...

Sylvia is a 61-year-old Spanish woman, who has been divorced for five years, but has a boyfriend since two years. She finished an apprenticeship as a tailor and worked in this business as a freelancer until four years ago. She has one daughter and one grandchild, who all live in Barcelona.

How she lives...

Sylvia lives in her own flat 50 km outside of Barcelona. Her ex-husband was a manager; therefore she is financially secured and has no need to work. She can indulge herself in things she likes to do without financial problems. She has a little overweight, therefore little high blood pressure, meanwhile needs glasses for reading, but is still very pretty and enjoys her life.

What she likes...

Sylvia has a season ticket for the opera and loves to go there with her three good female friends. She loves to meet like-minded people and talk with her friends about anything and everything. She is doing sports like swimming and walking together with her friends, is going to painting classes, and is also engaged in honorary work at a political party. She loves to travel very often and into exotic countries.

She loves to make phone calls and to handwrite letters. She has a modern cell-phone and uses it to make a lot of pictures. She uses the internet to make online-bookings for events and hotels. She also does online-shopping because she enjoys the 24-hours opening. Sometimes she feels a little bit lost in the internet when she does not find the right key-words. Then she often stops searching because she is afraid to make mistakes.

What she needs...

Sylvia would love to go to a class to learn more about computer and internet or to get more help and support by the programs themselves. She likes to get to know new people and enjoys nice design. She would like to buy and sell things on e-bay. She loves services and products where she can benefit from the added values and which make her life more comfortable.

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SHY GUY



SHY MARIA

Age:	67
Home situation:	small apartment
Personal status:	single
Financial standing:	average pension
Kids:	-

I want to find friends with similar interests.

Who she is...

Maria is a 67-year-old German woman who never had been married and has no children. She worked in an office for over 40 years and has now time to do her hobbies. She likes to write and takes part in a writing-class for biographies. She is a dutiful Catholic. She is shy, a little depressive and conservative. Therefore, she does many leisure activities alone.

How she lives...

Maria lives in a small apartment. She lives well with her pension, but cannot spend a lot of money for expensive things in her leisure time. Her social contacts are based on a long-standing neighborhood but she has a poor relationship to her family and only some friends. She is interested in new friends, but has large difficulties to find some. She is a diabetic.

What she likes...

Maria speaks Italian fluently and loves the Toscana. She holds no driving license and travels by train or by bus. She loves to take part in workshops or guided groups, but does many leisure activities as cycling, hiking and walking alone. She communicates mainly via phone and prefers face-to-face contacts. For the case of an emergency she has a cell phone, but she does not have internet access at home.

What she needs...

Maria is looking for more contacts. She would need a 'contact machine'. She prefers personal contacts and is not convinced that it is possible to establish contacts via internet. She needs help and support in installation and usage of PC and internet, best by people she is familiar with and can trust. The devices must have buttons that are large enough and easy handling. She needs someone who is showing her the fun of life and shares it with her.

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SOCIAL ANIMAL



ACTIVE DAZY

Age:	60
Home situation:	large rental apartment in the suburb
Personal status:	married
Financial standing:	average income
Kids:	2 children, 1 grandchild

I love spending my time with my friends!

Who she is...

Active Dazy is a 60-year-old German woman. She and her husband are already retired. She used to be a music teacher and is still an active member of an orchestra. She has one daughter, one son, and one grandchild.

How she lives...

Dazy lives together with her husband in a large rental apartment with a gardening a suburb close to the city but is open to alternative living concepts. They are living from an average pension. She still travels as much as possible not withstanding her suffering from arthritis. She has a huge circle of friends and loves to spend time with them. Nevertheless, she is very family oriented and undertakes a lot with them.

What she likes...

Dazy is an open-minded, communicative and adventurous woman, who loves hiking, cycling and gardening. She is interested in culture and shows political as well as social engagement. Once a week, she does honorary work in a children's home. She still loves to play the trumpet and together with her husband, she participates in a German-French club. She takes part in sports programs and is open to new relationships by being very selective though.

She knows how to use her digital photo camera and her simple cell-phone. She can write an email but has no deeper understanding of technical details. Her preferred form of communication is phone and face-to-face. For special occasions, she writes handwritten letters and cards.

What she needs...

Dazy would love an easy-to-use computer. She likes to have to press only one button for all functions so that she can reach everything easier. The internet must be fast, safe, and trustful. She would love to have an easy guideline for her ICT means, because her grandchild doesn't have the time or the patience to explain everything to her. She wants to have an easier internet interface in order to get along much better.

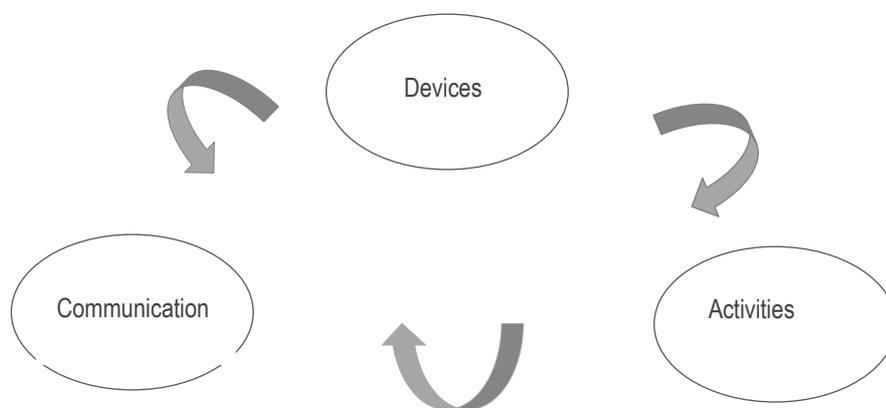
For internal use only!

4 FOCUS GROUP

4.1 INTRODUCTION AND GOALS

The objective of the 'elisa' project (Elderly Interaction and Service Assistant) is to create a new user oriented social interaction tool that enables elderly people to stay or get in touch with family, friends and the neighborhood, and which helps to find and participate in local activity, health and wellbeing offers.

To ensure a high level of system compatibility and an innovative but also high quality development, the relevant context conditions will be analyzed and explored in the early stages of the project. In this context we have to investigate three fundamental aspects: how do elder people organize their activities, how do they communicate with others, and which tools they use to do it.



Therefore, the specific objectives of this project are:

- To identify and characterise the main users of the tool that is to be designed.
- To learn of their predisposition, motivation and obstacles when undertaking different activities, interacting with other people and using the ICT.
- To identify new trends and developments in those services and activities that are of interest to the users, and also the technology that they are going to use for them.
- To detect the possible uses that would be given to our tool, which people would use it and with whom they would be in contact.
- To detect which companies might want to be related to this tool and introduce part of their content in it.

The aim of all of this is to correct the weaknesses found, to find a solution to the threats, maintain its strengths and explore the opportunities

4.2 METHOD

To achieve the objectives of this project, from the beginning we used the qualitative method of the discussion group. Qualitative research is a method of research used mainly in social sciences, the purpose of which is to explore social relationships and to describe the reality as it is perceived by people. Qualitative research requires a deep understanding of human behavior and the reasons that lead them to that behavior. As opposed to quantitative research, qualitative research seeks to explain the reasons for the different aspects of such behavior. In other words, it analyses why and how a decision is

made, a specific behavior is followed, etc. in contrast to quantitative research, which seeks an answer to questions like what, where and when.

For this study, specifically, we have used the group discussion method that enables individual subjectivity to be compared with the group, and aims at making the connection between different perspectives, experiences and points of view, at a qualitative and exploratory level. This method consists of a carefully-planned conversation, designed to obtain information on a specific subject, in a permissive, non-direct atmosphere.

The group is composed of a relatively small set of people, from six to eight, directed by an expert moderator in a relaxed, comfortable atmosphere that is often satisfactory for the participants, with the purpose of knowing what they think, how they feel or what they know about the subject under discussion. The participants are selected on the basis of uniformity related to the subject being studied.

Profile of the participants

The main aspects that are the object of analysis in this qualitative research are the way in which people over the age of 55 relate socially and their level of compatibility with technology. On the basis of these two central themes, we defined eight possible profiles of people, taking into account their greater or lesser degree of social activity and their familiarity with technology/internet. From these eight profiles, we selected five as being the most interesting for the objectives of the project, namely:

- The Net Animal
- The Bon Vivant
- The Snoopy
- The Shy Guy
- The Social Animal

4.3 RESULTS

All the results of the focus group carried out in Germany and Spain are presented in the attachments, as well as other data. We have extracted the main achievements and conclusion in section 4.4. in order to make easier the overall reading and comprehension of this document.

4.4 CONCLUSIONS

In the following, first the most important points are summarized, which are common for all types concerning all raised questions. Then, the different types are described individually based on these questions: What are their most preferred activities (with whom?) Which communication and information media do they mainly use and what for? What is their imagination of an ideal device?

Social interaction of elderly people

What are their main motivations for social interaction?

- To keep contact to their family and friends is very important to them.
- They want to maintain health/a good physical and mental status until old age.
- They want to help or support other people (to give something back to society, to help within the family).
- After retirement or family time they like do something that they always wanted to do (new challenges, to learn something new, to travel to places they still don't know).

What are they doing mostly together with other people or alone are?

- They like to travel with their partner/family or friends, alone or in a group; the destinations are adapted to their financial possibilities and physical status.
- They like activities in a natural environment, especially hiking and cycling or walking with other people or alone.
- They like to visit cultural events together with other people or alone, especially theater and concerts but also cinema or to visit a museum.

- They like to do honorary work.

Way of communication for social and leisure time

How do they communicate with other people?

- The device used by all typologies is the (fixed) phone, it is still their main mean.
- They prefer personal contact to talk about personal contents or to gossip.
- Beside this they use modern communication and information media dependent on the subject of communication and also adopted to the communication partner:
 - They use eEmail for longer text, when they want to think about the content and when the content is so important that it has to be written down, when they do not need an immediate answer, when they want to send additional information and when they want to inform several people.
 - They use the mobile when they are on the road, for emergency cases or to be available.
 - They use SMS to communicate with younger people (children, grandchildren) or for short messages.
 - Skype is used for family and friends living far away, mainly because it is cheaper.
 - Some already use doodle, drop box or voice over IP.
 - They send handwritten letters to special occasions (jubilees, when somebody had died, Christmas, Easter), to special persons (e.g. a friend of old age) or cards from holidays.

Where are they looking for information to plan their leisure activities?

- They use a lot of traditional media like newspaper, Radio, local television stations, printed information flyer or programs for local offers – because they are used to do it but also because a lot of ‘smaller’ local offers are difficult to find in the internet.
- They use the internet mainly for planning travels or to buy tickets for cultural events.

Degree of using modern communication media

What is their attitude towards technology?

- Their attitude towards modern information technology is heterogeneous, some are more critical or skeptical others more open-minded. But all see advantages in its use: e.g. that some things are cheaper (phoning, booking hotels, buying electronic media), that the internet is an enormous source of information or that it is easier to communicate.
- They did not grow up with modern communication media and they do not use it with the same naturalness like younger people (e.g. no trial-and error behavior, not used to English terms). They are afraid to make mistakes or crash it.
- Sometimes they have the feeling that the fast development of ICT is asking too much for them and that they cannot keep in step with it.
- They all are open-minded towards ICT when they have an advantage of the use, when they can see the utility for themselves.

Which internet functionalities are used by elder people?

- The most important item is information
- The most important contents they are interested in are travel, health, product information, price comparison, user generated content in communities/fora
- They are communicating mostly via email or Skype.
- They upload photo but prefer ‘platforms where they can determine the circle of users (drop box)
- Facebook is not very popular among elder people, they fear the breach of privacy. They are more interested in thematically focused networks or closed social networks for elder people (e.g. Platinnetz, Feierabend)

Which mobile functionalities are used by elder people?

- Calling is the most used functionality; but more to be available or for emergency case and not to longer talks.
- Some of them use SMS to communicate with younger people.
- Only a few have smart phones and then use all possible functionalities.

Where do they inform themselves before buying a new device??

- Most important is the personal consulting: children, grandchildren, friends, (former) colleagues, personal consultation in shops.
- Print media like magazines, books.
- Testing reports (print and online), e.g. 'Stiftung Warentest' (leading German consumer safety group).
- Internet: thematically for a or website of the manufacturing firm.

Which problems do they have using modern communication media?

- They have problems to operate the devices: it is too complicated; the buttons are too small, the handling of the mouse is difficult, the devices react to fast, and every device is different.
- Legibility: in general the contrast is too poor, the font size are too small. Often it is not adjustable, but when, they often don't know how to do it.
- User interface: too complex and confusing menu, too many information on one side, no overview of steps that have already been done.
- They have problems to install a device or program and need help when they have troubles with the PC.
- They have problems with searching machines, they don't know which key words they have to use.
- User manuals are often too complicated, they cannot understand them.

Which are their suggestions for improvement?

- They want devices and platforms that are easy, safe, reliable and suitable top their needs
- They want support for their computer problems, e.g. 24-h-hotlines, seniors-helps-seniors, classes for beginners and advanced users

Tendencies for the design of 'elisa'

Attributes

- Familiar device
- Easy to handle (only pressing one button)
- Easy navigation
- Self-explanatory
- Convenient font size
- Good contrast
- Easy installing (buy and play)
- Clear page design
- A "patient" tool or service
- Slow reaction
- No use of unknown technical terms
- No English terms
- Individualized user manuals
- Nice design

Health: content and functions

- Qualified information about health topics
- Expert and hospital research
- Information about prevention measurements
- Organization of doctor and health related issues.

Leisure: content and functions

- Assistance to plan travels (information, booking, search of fellow passenger to share double rooms in hotels or on board)
- Local news and offers
- Find accompaniment long term as well as spontaneously

- Information about budget-friendly offers or offers free of charge
- Information about honorary work

Culture: content and functions

- To buy tickets for cultural events
- Event calendar (50+)
- Information (platform?) about remainder tickets and final rehearsal (cheaper or free of charge)

Sports: content and functions

- Information about fitness studio, special offers 50+
- Sports clubs, special offers 50+
- Online registration

Daily Life: content and functions

- Online shopping
- Gardening tips, tips for animal husbandry, cooking tips/recipes
- Support/ help for smaller repairs, support system for daily life tasks (LETS - Local Trade Change System?)
- Requests for assistance/funding
- Real estate/ facility management
- Trusted person for assurances, banking etc. problems
- Municipality form support
- Organization of financials

Education: content and functions

- Classes, workshops concerning craftsmanship
- Special computer or internet classes for elder people
- Learning languages
- Online learning

Miscellaneous: content and functions

- Weather
- Information about living in old age (e.g. alternative concepts, senior citizens' home)
- A "pin board" for private non-commercial offers or to find new friends

Communication

- Messages to children and grandchildren
- Talking to family and friends
- Share photos, information or ideas with family and friends
- Appointments, dating (like doodle)

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