
ICT-PSP Project

LIFE 2.0

Geographical positioning services to support independent living and social interaction of elderly people

ICT-PSP-270965

WP2 – <Platform design>

Public report – Deliverable 2.1

Scenarios description Extracts

Executive summary and introduction

Section 1 Executive summary

This Deliverable reports personas and envisioning scenarios as results obtained from the analysis and elaboration of the data from the ethnographic investigation (see D 1.1). Personas are design tools (Cooper, 1999) used to synthesise users profile in a larger description that include circumstances and habits of people together with their preferences and needs. Envisioning scenarios are design tools used in design discipline to elaborate first ideas or insight of possible solutions for specific problems. Here both tools have been used to collect users profiles and trajectories of solutions for Life 2.0 platform. The deliverable is organised in 4 different sessions: in session 1 a detailed description of personas and envisioning scenarios is reported. It is intended as an introduction for not designer to these tools and on their role in the process of User Centered Design (intended as the specific that has been adopted in Life 2.0 to lead the Platform design and experimentation in living labs with elderly people). Session 2 reports all the personas elaborated by each of the pilot partners starting from the material about end users collected during the ethnographic analysis. Personas will be used during the local workshops to work together with elderly

people to understand if the end users represented in the personas correspond to their profile, needs and lifestyle. Scenarios for envisioning have been elaborated in each pilot partner on the basis of personas and ethnographic data to start to envision, from data coming from real contexts, possible functionalities and solutions to be implemented in Life 2.0 platform. Session 4 is dedicated to discuss from general point of view personas and scenarios previously reported. This session aims to compare the different personas and scenarios to individualise similarities and differences in terms of users' needs, cultural traits and characteristics that would affect life 2.0 Platform. Session 5 discuss some conclusion in terms of further steps that will be developed on the basis of the work and materials reported in the deliverable.

Section 2 Introduction to the deliverable

Deliverable 2.1 is the first output expected in the DOW for the task 2.1. Specifically it reports results from building scenarios activity for sketching the service idea and the correspondent functionalities that will characterize Life 2.0 platform.

This activity has been mainly carried out within the context and the procedure of the most advanced techniques under the umbrella of the User Centred Design (Norman & Draper, 1983) approach this in order to guarantee that the platform under development and the services offered through it to elderly people would really meet users' needs but also would bring the entire project to experiment new services under the stream of open innovation and living labs approach.

The entering data that deliverable 2.1 has exploited, are those that come from ethnographic observation, as reported in D 1.1. In particular the ethnographic analysis has represented the basis on which to build personas and scenarios.

More specifically personas are the synthesis of the data collected from the ethnographic analysis about elderly people and their habits and experiences. They have synthesized qualitative descriptions of elderly contacted during WP1 on each of the site of experimentation of the Life 2.0 future platform. Personas considered as a synthetic tool allows researchers to individualize "stereotypes" of the main users profiles individualized during the ethnographic analysis.

Personas that have been built for Life 2.0 have three main valuable characteristics:

- 1) they come from the real observation of different groups elderly in Europe;
- 2) they have been built on the basis of a consistent number of end users;
- 3) they are representative of the different types of users that will use Life 2.0 platform.

Personas as design tool allowed researchers in the context of Life 2.0 to add, within the qualitative description of users needs, profile, characteristics, habits, beliefs, values also particular circumstances (bad experiences, frustrating situations, or good examples of positive experiences) lived by end users that could represent potential trajectories of envisioning of services and functionalities that could support elderly independence living using the Life 2.0 platform.

In this light the steps that have been followed to build up scenarios have been the following:

1. Analysis of all the materials and data collected during the ethnographic observation (deliverable 1.1);
2. Elaboration, on the basis of the results of the step 1 of the personas profiles reported in session 2 of this document. This step has been conducted by each of the partner enrolled in ethnographic analysis;

3. Design of envisioning scenarios as suggestions for service ideas and functionalities on which to build up the Life 2.0 platform. This step has been conducted by each of the partner enrolled in ethnographic analysis;

4. Clustering of the scenarios for envisioning obtained for each pilot partner in order to individualized main areas of functionalities of Life 2.0 platform.
In particular each partner of Life 2.0 pilot has been required to elaborate personas and scenarios.

Personas and scenarios reported in this report, are exclusively based on end users needs and motivations obtained in D 1.1. The aim of this deliverable is to collect personas and scenarios that would help the process of individualisation of the users requirements for life 2.0 platform (D 2.2). This process will take place during next 2 months exploiting a series of local workshops (Milano, Aalborg, Barcelona and Helsinki) and a general workshop to be held in June in Milano.

Deliverable 2.1 (as described in the DOW, WP 2) has not the aim to provide operative indications about any specific service or business case to be developed in the following Life 2.0 phases, but it aims to support the process of platform design and envisioning starting from users indication (open innovation model).

Specifically, about personas and scenarios:

1. Being end users the source of these scenarios, their aim is to emphasise and qualify basic needs emerging from users, without translating them immediately in business cases or any operative indications, but taking inspiration from them in order to start to figure out the future Life 2.0 platform.

2. They will be used as an inspiration and starting point for a reflection that will necessarily include the point of view of other actors and stakeholders that may have a role in the system and generate insights that support the construction of business cases for the Life 2.0 platform.

The previous goal will be reached by the means of a narrowing process that will start with Life 2.0 local workshops (Milano, Aalborg, Barcelona and Joensuu) and with a general workshop (fixed form June 2011 in Milano) during which all of the Life 2.0 partners will co-design the final Life 2.0 scenario (that will lead the platform design phase) completed with a technological and business evaluation of its potentiality in terms of implementation and value generation. Results of this process will be reported in Deliverable 2.2.

Section 2 describes, in details, personas and scenarios; section 3 reports 20 personas for Life 2.0 (developed from ethnographic analysis conducted in Milano, Joensuu, Aalborg and Barcelona); section 4 contains 27 scenarios related to personas.

2.1 Personas and Scenarios as design tool to envisioning Life 2.0 platform

2.1.1 Personas

Persona is a design technique that specifically targets user in interaction design developed by Alan Cooper (1999). It is a tool that helps researchers to identify and represents users needs (Cooper, 1999). A persona is a description of a hypothetical user of a product or a service, it is representative of a user's class that have exhibited precise behaviours and that have same goals. Personas are archetypical users whose needs and goals derive from a depth analysis of their activity (activity analysis). It is a fiction description of a archetypical user elaborated from a series of "field activities" such as interviews and work observations resulting in a representation of an individual that embody the characteristics of a target user population.

A more definition might be, "User models, or personas, are fictional, detailed archetypical characters that represent distinct group-ings of behaviours, goals and motivations observed and identified during the research phase" (Calde, Goodwin, & Reimann, 2002). Personas can be thought of as hypothetical users – fictional people who represent classes of users.

A persona is summarised in a 1/2 page description that includes things as education, goals, skills, attitudes, job description and personal details such as name, education, marital status, and favourite sport to bring the character to life. Personas are a way of having a continuous presence of a set of users in the back of the designer's head. The tool is implied to tackle a specific design problem, they are context-dependent like they clearly represent end users goals. Personas are conceptual tools that aim to inform the design process about the information collected on end users in a synthetic and effective way.

Data implied to build personas in the context of life 2.0 have been derived from the information and knowledge on life 2.0 users collected during the ethnographic analysis in Milano, Aalborg, Barcelona and Joensuu (see D.1.1).

Rarely a unique persona can describe an entire class of users, but different personas may represent a class of user. For this reason the present deliverable collected 20 personas that represent all of the needs of elderly people aging from 65 to 75 that took part in the Life 2.0 ethnographic analysis.

Table 1 presents high level summary of the personas as derived from D1.1 and that will be described in more details in the next sections:

Milano, Italy

<i>Persona code</i>	<i>Demographic characteristics</i>	<i>Familiarity with technologies</i>	<i>Needs and specific objectives</i>
A-doctor	Female, 67 years old, married with four sons (from 30 to 36 years old), two of them still live with her	email every day, mobile phone, good computer skills	have daily contact with the doctor
M-sport	Male, 65 years old, lives in a big apartment block with his wife	mobile phone, good knowledge of ICT	find people with the same interest in doing sport
F-grandpa	Male, 65 years old, lives with her wife and takes care of his grandson everyday	mobile phone, watches TV a lot, good computer skills	find friends for his grandson; find other grandparents helping him in doing grandson's homework
M-active	Female 70 years old, with two sons and one daughter, lives in a well connected area	not so interested in technologies, knows how to take pictures with mobile phone and how to send them	share time with friends
C-no car	Female, 70 years old, she lives on her own in an isolated area with a high percentage of elderly and which has a poor offer of aggregation for the third age. She was an English teacher and hasn't children nor a husband	mobile phone to call, watches TV, good computer skills	find friends with car to go out, share food with friends

Aalborg, Denmark

<i>Persona code</i>	<i>Demographic characteristics</i>	<i>Familiarity with technologies</i>	<i>Needs and specific objectives</i>
G-	Male, 82 years old, lives alone in his own house	uses a stationary computer regularly but keeps his cell in the drawer	needs to keep things listed down so that he doesn't forget. Helping other seniors out with practicalities
G-	Female, 70 years old, lives alone in a senior apartment	none, she though uses the texted services on her television and thinks that it's interesting to view pictures on the computer	to maintain her daily routines and skills in crafts
K-	Male, 70 years old, lives with his wife	has very good computer skills and skills to take pictures with his cellphone. Has used a GPS-navigator in their car when going on vacation	he's dependent on the public transport or transport by others
I-	Female, 67 years old, widow, lives alone	knows how to send a text message and check the news and the weather forecast on the Internet	needs to rearrange herself and her routines, and setup new activities in order to get over her husband
H-	Male, 69 years old, is living with his wife Elin, 68, in a small town outside Aalborg City	very good knowledge of computer use, various programs and how to install them. Can teach others	likes being challenged with new technology
B-	Male, 68, and his wife, Betty, 66, are living in the same local area as their grown up children, Maria, 36, and Thomas, 38	good, both for computers and smart phones	Benny and Betty are very busy with various activities and travels, so they need to plan long time ahead

Barcelona, Spain

<i>Persona code</i>	<i>Demographic characteristics</i>	<i>Familiarity with technologies</i>	<i>Needs and specific objectives</i>
P-	Pedro is 72 years old. He lives with his wife. He has one son and two grandsons	Very confident in him using ICT. He has a desktop computer and uses it for emailing, creating documents and presentations, managing his photo repositories and looking for information online	Wishes to be kept updated of upcoming activities happening in his neighbourhood. He also wants to share photos and documents with his friends, and would like to keep in touch more often with his two grandsons
S-	Female, 70 years old.	She uses her laptop to check	Sara aspires to be

	She lives with her husband, who is 9 years older than her. They have 2 children, two boys, Pedro and Carlos. Both of them live in the same city as Sara	her email, to send emails to friends / relatives; to look for interesting information available on the web. Sara has a mobile phone and she only uses its most basic functions	confident in the use of technologies which could help her save time. She would like to manage technology properly in order not to worry about her privacy while using computers
JL-	Male, 75 years. His previous occupation was veterinarian surgeon. He lives in Barcelona, in the Sant Martí area	uses his mobile phone for making and receiving calls. He likes to read digital version of traditional newspapers in his computer	wants to feel integrated in current society. He aims to get involved in worthwhile initiatives and contribute to them with his knowledge
MA-	Female, 69 years old. She has been widowed for 10 years ago. She lives alone in a flat. She has a daughter and two granddaughters	not very familiar with technology. She has a computer at home and uses it for e-mailing. She also has a mobile phone and uses it only for calls	She needs to fight against lonely, keep herself busy and communicate more often with her family and friends

Joensuu, Finland

<i>Persona code</i>	<i>Demographic characteristics</i>	<i>Familiarity with technologies</i>	<i>Needs and specific objectives</i>
M-	Male, 68 years old retired physical exercise teacher, lives in a terraced house, countryside 30 km away from the city centre	not so interested in technologies, knows how to take pictures with mobile phone and how to send them	needs to have meaningful things to do and social contacts while his wife is working, likes sports and outings
L-	Female, 65 years old, one family house 15 km from the city centre, former taxi driver, rather small pension	mobile phone to call, watches TV a lot	wants to keep the car, nice to offer lifts to her friends
H-	Female, 75 years old lives in a block of flats in the centre of the city	interested of phone's tracking system, computer use is unpleasant	worried about her husband, who is going outdoors (nature or summer cottage), has to stay in the city, near home
K-	Female, 68 years old, lives in a semi-detached house in the residential area outside the city	mobile phone (several years old)	wants to be with the grandchildren, passion for singing with a hobby group every week, has lonely and sad moments when alone
P-	Female, 71 years old widow, lives in a one family house in the central area of the city	mobile phone, old computer for occasional e-mails	became a widow recently, has problems in going out alone now that the old companion, the husband, is dead
K-	Male, 70 years old retired technician, lives	mobile phone, good knowledge of ICT	has not learned to cook earlier but has realised it is a

	in a block of flats 8 km from the city center		necessary skill to know
V-	Male, 67 years old divorced man, former accountant, lives in a block of flats in the city centre	mobile phone, good computer skills	wants to keep fit both physically and mentally, has noticed some memory problems, has been recommended to start a dancing hobby

Table 1: Summary of the personas from all the four regions.

2.1.2 Scenarios

Scenario building (Carrol, 1995) is the methodology adopted in Life 2.0 to envisioning, starting from the ethnographic analysis (see D 1.1), the services that elderly would benefit in their everyday’s life to be independent by augmenting the digital connections with their relatives and network of friends and supports (public services, social services, health care services, neighborhood) with respect to the objectives defined for WP 2.

The methodology relies on the creation of realistic scenarios mainly based on the realistic activity observed during the ethnographic analysis, in order to evaluate how Life 2.0 can support these activities and how it can stimulate new and unpredicted uses.

The scenario identifies the personas has having certain motivations towards an artefact and describes the actions as taken and some reasons why these actions are taken. Furthermore it describes an artefact in terms of their users’ motivations and expectations. The basic property of a scenario is that it projects a concrete description of activity that the user engages in a description sufficiently detailed so that the design implications can be inferred and reasoned about. A scenario is usually represented by textual, pictorial or diagrammatic descriptions and can be used throughout all the system development process and artefacts.

Nielsen (1995) discusses 6 different scenarios applications that include:

1. diary scenario for data gathering;
2. brainstorming to envision new features of the system;
3. scenario for design and prototyping;
4. scenario for heuristic evaluation;
5. stereotypes scenarios for data analysis in exploratory studies;
6. scenarios for task based user evaluation.

In Life 2.0 scenarios are mainly used for conceptualising new service ideas as prototyping and for supporting the process of Life 2.0 platform requirements elicitation.

Scenarios will help designers to imagine the characteristics and the role of future services in the context in which it will be implemented to support Life 2.0 users. In that sense they represent real design proposals that can be integrated and consolidated during the development of the design process.

Envisioning scenarios are usually represented exploiting some kind of visual media (storyboard or videos, images and sketches). They often exploit the potentiality of narration as a way to represent the new imagined interaction between a user and an envisioned service.

These scenarios show how the service should work from the user’s experience point of view.

The following Table 2 presents high level summary of the scenarios as derived in this document and that will be described in more details in the next sections:

MILANO	AALBORG	BARCELONA	JOENSUU
MSC1 - Taking care of a family member	ASC1 - Gunnar announces an activity about accountings	BSC1 - What is going on in my neighborhood? - events of the city council and service providers - adding an event on the map	JSC1 - Wanting to help others
MSC2 - Planning social events in group	ASC2 - Gudrun registers on the activity calendar	BSC2 - What I like and dislike of my neighborhood	JSC2 - Social travel pooling possibilities
MSC3 - Knowledge and information needs	ASC3 - Knud uses the website	BSC3 - Time banking	JSC3 - Long distance nature spotting
MSC4 - Everyday's relationships	ASC4 - Ingrid and the "forget me not"	BSC4 - What are they doing?	JSC4 - Daring to call friends
MSC5 - Swap food	ASC5 - "Where are my friends?"	BSC5 - Files interchange	JSC4 - Follow up network, support for changes
	ASC6 - Benny taking care of family	BSC6 - Recommending TV programs	JSC5 - Learning how to cook
		BSC7 - I'm sick, can I participate from home?	JSC6 - Lowering the mens' threshold to start dancing
		BSC8 - Watching TV together from different cities?	
		BSC9 - Sharing information	

Table 2: summary of the scenarios
 (The code before the scenario's title shows the first letter of the region produced that scenario:
 M=Milano, B=Barcelona, J=Joensuu, A=Aalborg
 SC is for scenario, and then the progressive number of them,
 so **MSC1** is for **MILANO-SC**enario-Number**1**)

Table 3 analyses scenarios listed in table 2 on the basis of three different dimensions: (i) their macro theme; (ii) the context in which they appeared; (iii) their sphere of potential impact with respect to elderly every days problem.

Scenario theme	Appears in how many regions	Sphere of potential impact
Social event coordination and signing	3 regions: Milano, Aalborg, Barcelona	Decrease social isolation of elderly; help social provider organisation in organisation of events
Increase and support everyday relationships	4 regions: Milano, Aalborg, Barcelona, Joensuu	Decrease social isolation of elderly and make them more active
Taking care of family member	2 regions: Milano, Joensuu	Decrease isolation and fear creating a peer to peer support with doctor or with other people with similar troubles
Mutual assistance (for ex. Help for food ordering or shopping).	4 regions: Milano, Aalborg, Barcelona, Joensuu	Decrease social isolation of elderly; big potential for some costs savings in the social care provider originations, especially for collecting individual shopping lists, buying food and delivering the food to the person

Table 3: analysis of scenarios related to their potential impact

Next session reports scenarios coming from ethnographic analysis on elderly people as it has been conducted on each of the Life 2.0 living lab. It was not in the goal of ethnographic analysis (see DoW WP 1) to report or analyse the point of view of other stakeholders that can be, from different reasons, interested in the development of Life 2.0 platform: from private service providers to social services, from care givers (family or public services) to municipality or representatives from cities government.

The following scenarios do not represent the final one on which the consortium will design and implement Life 2.0 platform.

On the basis of what has been specified in DoW WP 2 the following scenarios have the role of feeding the process of final scenarios building.

They will be used during the local workshops that each living lab will conducted in May with the aim to start their analysis and evaluation in terms of three different directions:

- (1) the possibility to integrate them in a larger scenarios;
- (2) the selection of two/three of them. The most promising in terms of service innovation (economical relevance);
- (3) the most suitable to be developed in Life 2.0 platform (technological constraints).

Final scenario for Life 2.0 will be then developed in a general 2 days workshop that will be conducted in Milano in June 21th and 22th. During this workshop all of the Life 2.0 partners will evaluate scenarios selected during local workshops and will together build the final one.

