

CURE
Elderly-Personas
MANUAL

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Acknowledgements

The CURE-Elderly-Personas are fictitious persons synthetically generated from average traits mixed across countries. Photos are taken from an external database. CURE-Elderly-Personas materials and documents do not represent private data from a single person. Information included in CURE-Elderly-Personas materials and documents do not infringe any privacy and data security rights.

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Introduction

CURE-Elderly-Personas are a realistic and rich basis for Personas to be used in AAL (Ambient Assisted Living) and familiar projects with the aim of developing products and services for people aged 60 and older. The intended users of the generated **CURE-Elderly-Personas** sets are researchers, designers, developers and practitioners with or without previous experience in using this method.

The sections below provide brief information about the Persona method and the generated **CURE-Elderly-Personas** sets for novices and experienced users. Further, they outline the benefits and effects of the Persona method and offer guidelines for introducing this empathy tool in design teams and a way of keeping them alive. Since **CURE-Elderly-Personas** are prepared as basic Personas without aiming at a specific project, this manual also provides further information on how to adopt the **CURE-Elderly-Personas** to project specific goals by adding additional data. However, **CURE-Elderly-Personas** can also be applied in their basic version.

This manual also includes the limits of the developed **CURE-Elderly-Personas** sets, the strategies how these restrictions were overcome and provides interested users rich literature sources for further reading.

1. What are Personas?

Personas are a design tool based on the ideas of Alan Cooper [4]. The aim of the Persona method is to raise the empathy for the end users in development teams through virtual user models and as a means for communicating peer group definitions. Personas allow developers to define which users they are developing products for. They are *“specific types of individuals with specific needs”* [5]. According to Cooper Personas are *“a precise descriptive model of the user, what he wishes to accomplish, and why.”* As an archetypical figure Personas can guide decisions about product features, interactions, and even visual design [11] and assure an effective user-based end product. Personas are considered to be a strong tool for interaction design processes as this method also allows incorporating other techniques.

“Personas are based on the behaviors and motivations of real people. They represent them throughout the design process” [4]. Personas build consensus and commitment to the design and measure the design’s effectiveness [4]. In general they show the nature and scope of the design problem [13]. Personas determine what a product should do and how it should behave. They are a communication tool for stakeholders, developers and other designers. Furthermore, Personas also contribute to other product-related efforts such as marketing and sales plans.

2. What are CURE-Elderly-Personas?

CURE-Elderly-Personas are created based on data from a multidisciplinary and cross-national panel database on health, socio-economic status and social and family networks of people older than 50 years - the SHARE database. Detailed information about the development of **CURE-Elderly-Personas** can be found in the project deliverables in the “*Publications*” section at the project website (<http://elderlypersonas.cure.at>). The results of the project are 4 **CURE-Elderly-Personas** sets – one valid for central European countries (age group 60-79) and three sets each specific for central, northern and southern European countries (age group 80+) (see Figure 1). Data for the northern European countries comes from Sweden, Denmark and the Netherlands, for the southern European countries from Italy, Greece and Spain and for the central European countries from Austria and Germany. Data for the age group 60-79 comes from Austria and Germany.

Region	Number of CURE-Elderly-Personas	Age Group
Central Europe	12 (6 female / 6 male)	60-79
Central Europe	6 (3 female / 3 male)	80+
Northern Europe	6 (3 female / 3 male)	80+
Southern Europe	6 (3 female / 3 male)	80+

Figure 1. **CURE-Elderly-Personas** sets for different age groups and European regions

Since comparative studies indicate remarkable differences in health status and life expectancy across Europe [17] the project consortium decided to concentrate on three regional groups: Germany and Austria (central European countries), Italy, Spain and Greece (southern European countries) and Sweden, Denmark and the Netherlands (northern European countries). Results from cluster analyses revealed similar results for central, northern and southern European countries in the age group 60 to 79 years occur and more variation for the age group 80 years and older. The differences between the three regions in this age group are related especially to the family status, economic situation, household size, and the overall health condition.

3. Why using Personas as a design tool?

Personas are a powerful, multipurpose design tool helping designers and developers in solving problems [5]. When using Personas the developers and designers stop discussing about numbers and data of abstract user groups, they start talking about the use of the product for a defined user – the Persona. Instead of “*somebody might not want that*” they can say “*Sophie does not need that*”. Personas let the developers focus on only a limited number of persons, which reduces the complexity of the problem. Hence Personas save time and allow the project members to focus on the important aspects of products or services.

I. Benefits of Personas

Personas create...

- an *understandable* form of *user data*
- a transparent, *vivid* and *realistic representation* of complex and *abstract data*
- *sympathy* and *empathy* for the *target user group*
- a *unified representation* of the *target group* in the *design team*
- a *strong focus* on the *target group* and *essential aspects*
- the *possibility* for *realistic* and *efficient user scenarios*
- a *reduced complexity* of *problems*
- *time-saving development cycles*

II. Effects of Personas

Personas...

- *transform abstract user data* into practical *design solutions*
- *communicate wishes, attitudes* and *mental models* of users to researchers, designers and developers
- *create a unified picture* of „the user“ *in the mind* of the design team

III. Why Personas work

References to people are rich and powerful

- *Complex data is hard to memorize and recall*
- *Humans love stories, related to fictional characters and turn them into real entities*

Personas are generative

- *Personas can „come to life“ and participate in the design process*
- *Personas use the power of empathy, personal experience and relationships through narrative and storytelling*
- *Personas are more powerful than scenarios alone*

Personas help focus a team on the important aspects of their target users

- *Personas simplify the world and do not have distracting idiosyncrasies*
- *Personas bring the problem down to a very concrete level*
- *Personas allow a more fluent communication*
- *The team can concentrate on designing for a manageable set of Personas knowing that they represent the needs of many users*
- *By always asking, "Would Jim use this?" the team can avoid the trap of building what users ask for rather than what they will actually use*
- *Design efforts can be prioritized based on the Personas*
- *Disagreements over design decisions can be sorted out by referring back to the Personas*
- *Designs can be constantly evaluated against the Personas, getting better designs into usability testing*

4. How to use CURE-Elderly-Personas?

In general, Personas are simple in concept, but must be applied with considerable sophistication. The following sections give a brief summary of how to apply the **CURE-Elderly-Personas** in your project.

I. Define your Target Users

The first step is to define the kind of elderly persons you want to design or develop for. Further, you have to prioritize these individuals so that the needs of the most important users are met without compromising the ability to meet the needs of secondary users (e.g. communication tools for elderly have to consider both – the needs of the “*older person*” [primary user] but also the needs of the “*grandchild*” [secondary user]).

Prioritize the users as following [5]:

1. **Primary Users:** Are the users that are in the main focus. The service, product, business model will be optimized for them.
2. **Secondary Users:** Also use the product, service, business model. The solution will also satisfy them, as best as it can.
3. **Low Priority Users:** Represent infrequent or unauthorized users as well as those who may misuse the solution.
4. **Users Affected by the Solution:** Users that do not use the product themselves, but are affected by it (e.g. the spouse of the primary user that uses a travel website to plan a trip)
5. **Exclusionary Users:** Users that you are not designing for. It is useful to specify these users to prevent non- users from creeping back into product development discussions.

At least one primary user must be defined to support you during your development process [5]. The other user groups may help you in lower levels. There may be cases where you need **CURE-Elderly-Personas** only as primary users or, as mentioned above, as users of secondary or other groups depending on your project with its specific aims.

II. Choose the right CURE-Elderly-Personas

The second step is to choose the **CURE-Elderly-Personas** that represent your user group(s) best. The filter tool on the project website (<http://elderlypersonas.cure.at>) supports you in pre-filtering the Personas so that it is easier for you to choose the right **CURE-Elderly-Personas** you want to design for. The Persona theory suggests not choosing more than 5-6 Personas for a project [13]. Personas provide a powerful tool for communicating different types of users and their needs, then deciding which users are the most important to target in the design of form and behavior [5]. You should not

try to design a product or service that pleases everyone, because then the result pleases nobody, as illustrated in Figure 2.

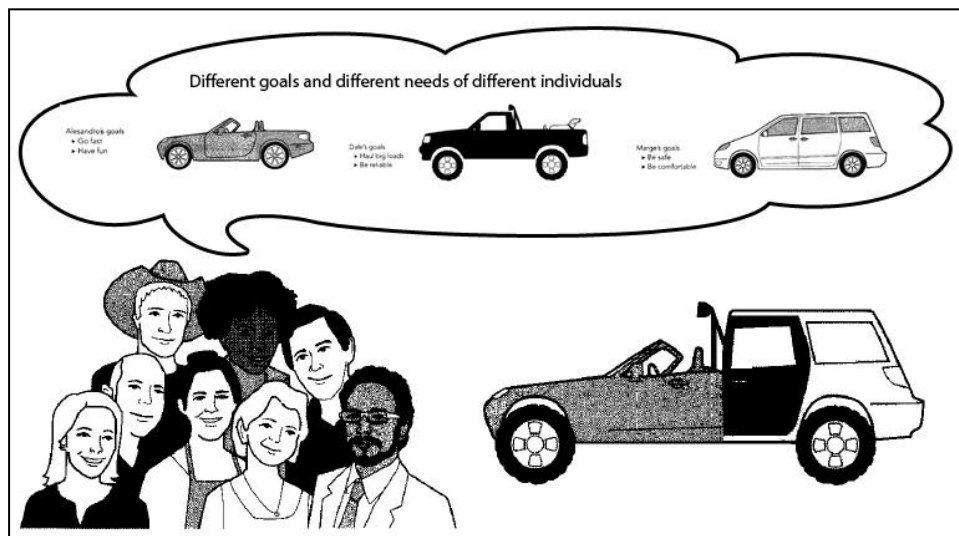


Figure 2. Design team with different users in mind [5]

III. How to adopt and extend CURE-Elderly-Personas

The **CURE-Elderly-Personas** are prepared as basic Personas without aiming at a single context or project. They give you basic information about demographic, health, social, economic and technological attributes and may be applied in all projects that aim at developing products and services for people aged 60 years and older.

Once you have selected the **CURE-Elderly-Personas** you want to work with, you can

- *use them in their basic version*
- *or extend them to your specific project goals – even when you are not experienced with the Persona method!*

The sections below (IV and V) provide brief information on how to adapt and shape **CURE-Elderly-Personas** to your specific project context. If you want to use the **CURE-Elderly-Personas** in their basic version you can jump to section VI - Make the **CURE-Elderly-Personas** come alive in your Project Team.

The prerequisite when extending the CURE-Elderly-Personas is that you must not change the basic characteristics and attributes of the CURE-Elderly-Personas, but only extend them!

CURE-Elderly-Personas can be enlarged with project specific information and goals by integrating data from public available statistics from your country, data from marketing studies, scientific publications or data from your own surveys, focus groups, cultural probes, interviews or observations. The generated **CURE-Elderly-Personas** sets are based on the SHARE database and are

clustered according to the health status, diseases, limitations, cognitive health, family and economic status. This data build the skeleton of the **CURE-Elderly-Personas** and must not be changed!

If you want to extend your chosen **CURE-Elderly-Personas** the selected Persona descriptions support you in defining the recruitment criteria for your interviews, focus groups or cultural probes participants. Moreover, you can also select only one **CURE-Elderly-Persona** and cluster your collected information and clone the basic **CURE-Elderly-Persona**, so that each single Persona has varying goals, motivations or any other attribute you want to add.

However, you have to pay attention to the basic skeleton of the **CURE-Elderly-Personas**. Keep in mind that they represent valid archetypical user groups since they are based on a large sample – the SHARE database – and must not be changed but only enlarged with additional information!

IV. Defining project specific goals for CURE-Elderly-Personas

If you want to extend the basic **CURE-Elderly-Personas** you have to define the goals for your chosen **CURE-Elderly-Personas** depending on your specific project context. First, you have to gather additional data from your target user groups – represented by the chosen **CURE-Elderly-Personas**. You can access public available statistical data or marketing studies or perform your own surveys, marketing studies, interviews, focus groups, observations or cultural probes. The **CURE-Elderly-Personas** support you in defining participants for your own data gathering or in setting the focus for you data search. If you perform your own data acquisition you have to confront participants with your product or service idea to help them thinking about their goals. The more concrete, the better!

According to Cooper, there are three types of goals that can be defined [5]:

- 1. Experience Goals:** Represent simple, universal, and personal goals. They express *how a user wants to feel* while using a product or service. Experience goals provide designers and developers clues on a product's visual and aural characteristics, its interactive feel (affect, emotion). Examples are *"Feeling of control"*, *"Have fun"* or *"Remain focused and alert"*.
- 2. End Goals:** Describe the *motivation of the user* for performing tasks associated with a specific product or service. End goals are essential factors in determining the overall product experience, tasks or look and feel. Examples are *"Stay connected with friends and family"*, *"Find music that I'll love"*. Cognitive walkthroughs, context or *"a day-in-the-life of"* scenarios are effective tools for exploring users' end goals. End goals can be visualized using storyboards.

- 3. Life Goals:** Are defined as the Persona's long-term desires, motivations, self-image attributes and personal aspirations that go beyond the context of the developed product or service. Life goals help to explain *why the user is trying to accomplish the end goals s/he seeks to accomplish*. They give clues on a product's overall design, strategy, branding and can be very critical for the product acceptance. Examples are „*Stay independent and healthy*“, „*Live a good life*“ or „*Be respected by my peers*“. Mood boards, context scenarios and ethnographic research can be applied to discover these behavior patterns and motivations.

After the definition of the specific user goals, it is important to look at the context in which they use the products or services you are developing for (e.g. home, mobile, public). Scenario development and task analysis for your project specific context is required – always based on your **CURE-Elderly-Personas**. This will give insights and information about the user's role, her/his responsibilities, her/his perceived benefits and preferences, the surrounding environment, possible (technical) constraints or the capacity of the used device in the context.

Keeping the goals in mind, a 2x2 matrix can be applied to plot how frequently particular functionalities or content will be used and how important it is for the user for achieving the defined goals [12]. Olsen suggests specifying four categories for functionalities or content see Figure 3 [12]:

1. **High frequency, high importance:** Make this the most visible and accessible content or functionality
2. **Low frequency, high importance**
3. **High frequency, low importance**
4. **Low frequency, low importance:** This content or functionality can be downplayed

<p>Important but occasional Secondary positioning, but still should be easily accessible.</p>	<p>Important and frequent Make it prominent and easy to get to (duh!). Stay out of the way of experienced users.</p>
<p>Less important and occasional You can downplay this. However, people may need more hand-holding to find it.</p>	<p>Less important but frequent Secondary positioning, but still should be easily accessible.</p>

Figure 3. 2x2 Matrix for specifying functionalities or content [12]

V. Integrating data into CURE-Elderly-Personas

The next step in shaping the **CURE-Elderly-Personas** is to integrate the collected data into the **CURE-Elderly-Personas** descriptions and further introducing them to your project team. The project

consortium offers you the basic layer of a Persona description on a DIN A4 page for each single **CURE-Elderly-Persona** as shown in Figure 4.

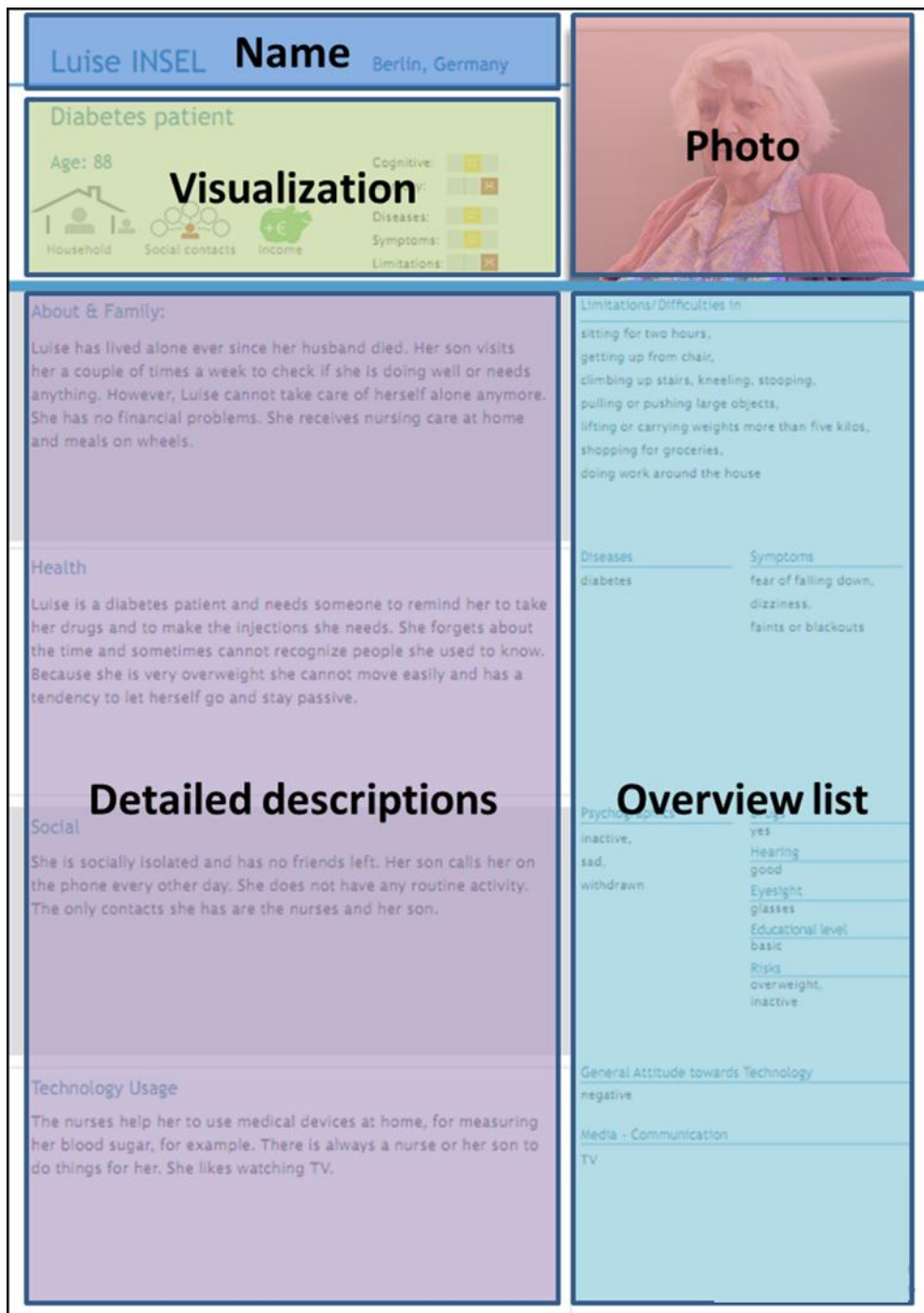


Figure 4. Example of **CURE-Elderly Persona** DIN A 4 Template

Each **CURE-Elderly-Person** has the following information as shown in Figure 4:

1. **Name:** You may change the names of the **CURE-Elderly-Personas** if you find it necessary. Suggested names for the central European group include clues about the main attributes of

the Persona. For example Herr Renner (*English*: Runner) is a healthy person who does sports regularly and wants to stay healthy for a longer time.

2. **Photo:** If you find or have photos matching better your extended **CURE-Elderly-Personas** you may also change the profile photos.
3. **Visualization:** The visualization concept provides a short overview on basic level information. This includes family status and household size, social activity and contacts as well as the economic situation. The visualization concepts and the legend descriptions are shown in the Figures below (Figure 5, 6, 7, 8). These parts of the **CURE-Elderly-Personas** must not be changed!

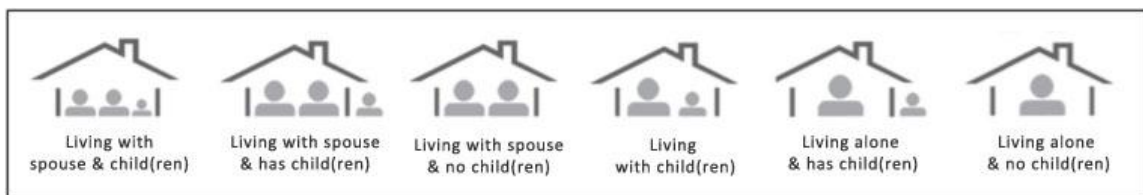


Figure 5. Visualization legend of **CURE-Elderly-Personas**: Family status and household size



Figure 6. Visualization legend of **CURE-Elderly-Personas**: Social activity and contacts

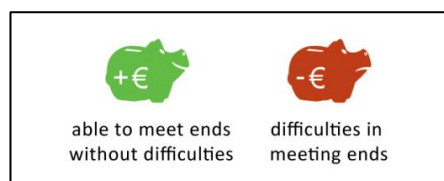


Figure 7. Visualization legend of **CURE-Elderly-Personas**: Economic situation

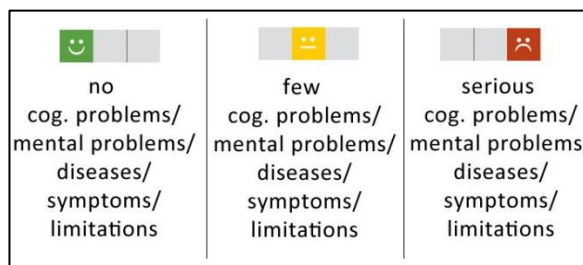


Figure 8. Visualization legend of **CURE-Elderly-Personas**: Cognitive & mental status; diseases, symptoms, limitations

4. **Detailed descriptions:** You may extend these descriptions with the information needed for the project you are working on (e.g. travelling habits). But keep in mind that the basic **CURE-Elderly-Personas** descriptions must not be changed!
5. **Overview lists for supporting detailed descriptions:** Here you can find details about limitations, diseases, symptoms and other information. You can extend these lists with project related information but the basic lists must not be changed since they represent data from the SHARE database!

Adding new data: You can create a new section (e.g. Goals, Frustration, Behaviors) where you can integrate your gathered data to complement the **CURE-Elderly-Personas** with project specific information. Further, you can also extend the existing detailed descriptions of the **CURE-Elderly-Personas** – but keep in mind that you only extend but do not change them!

Motto: As **CURE-Elderly-Personas** are prepared as basic level Personas, they do not have a project specific goal and a related motto. If you have defined your own project related goals for your **CURE-Elderly-Personas** you can add a motto that matches the defined goal (e.g. Goal: *“Stay independent and healthy”*. Motto: *“In my life, I look on my well-being and care for myself at home”*). Place the motto on top of the **CURE-Elderly-Persona** description right below the Name.

VI. Make the CURE-Elderly-Personas come alive in your project team

When you have chosen (and maybe extended) your **CURE-Elderly-Personas** it is important that all involved parties in your project team or consortium know the **CURE-Elderly-Personas** and start working with them in mind. To achieve this goal you have to introduce the **CURE-Elderly-Personas** in your project team. For you this means that you have to advertise and distribute the **CURE-Elderly-Personas** in the right way!

Strategies for introducing the Persona method can be summarized under the umbrella term *“Persona marketing”* [13]. See below a brief summary of possibilities how you can introduce the **CURE-Elderly-Personas** into your project team:

- Organize a workshop where you introduce the **CURE-Elderly-Personas** and the Persona method to your project team
- Create **CURE-Elderly-Personas** articles
 - Posters, flyers, coffee cups, drinking glasses, mouse pads, key fobs, cards and card games, cardboard figures, toys, screensavers, ...
 - E-mail, Twitter, social network accounts so that developers and designers can communicate with the **CURE-Elderly-Personas**
- Summarize your chosen **CURE-Elderly-Personas** in a presentation

- Include the chosen **CURE-Elderly-Personas** in user specific documents of the projects (e.g. in scenarios)
- Arrange a role play where designers and developers play the role of a specific **CURE-Elderly-Persona** in a specific scenario
- Use the **CURE-Elderly-Personas** in your brainstorming sessions
- Make **CURE-Elderly-Personas** visible and always available
- Place **CURE-Elderly-Personas** articles where communication takes place

In the end it is up to you: be creative!

The project consortium supports you by providing templates for different persona articles that you can use to create your own **CURE-Elderly-Personas** material. These artifacts help you in launching the Personas method in your project team and keep them alive!

Soon after you have introduced the **CURE-Elderly-Personas** the method supports developers and designers who stop talking about target groups and start talking about the Persona by calling his/her name. The **CURE-Elderly-Personas** give the team the possibility to see the human behind the target group and therefore focus more on the human itself. This process eases the work and helps to prevent misunderstandings. Also persons who do not work in the field of user research usually adopt this approach very fast!

VII. Keep the CURE-Elderly-Personas alive in your project team

Once you have introduced the **CURE-Elderly-Personas** you have to keep them alive. **CURE-Elderly-Personas** can become dynamic when included into a specific project scenario [13]. This means that you have to create scenarios where **CURE-Elderly-Personas** have the leading part. Scenarios that are written around the **CURE-Elderly-Personas** support the team by highlighting the impact of the design on the target users. Further, scenarios describe how your product or service will be used - from the users' point of view.

CURE-Elderly-Personas help you in:

- Planning the product, service or project
- Exploring design solutions or business models
- Evaluating design solutions or business models
- Discovering technical issues

CURE-Elderly-Personas represent your target users and help you in understanding and forming design solutions and business models!

5. Limits of CURE-Elderly-Personas

During the generation of the **CURE-Elderly Personas** set specific limitations of SHARE were be identified. These are:

- The database does not include information about technology use or ownership of technical devices that may be relevant to be included in the **CURE-Elderly-Personas**
- The database includes only data from older persons living at home. Data from hospitalized and institutionalized persons are not included.
- The **CURE-Elderly-Personas** build on data from wave 1, since this dataset includes more respondents in the selected countries as compared to wave 2. (Not all respondents could be interviewed a second time, some have died, some were not willing to answer a second time, some addresses were not valid any more.)
- **CURE-Elderly-Personas** concentrate on eight European countries and do not represent all individuals aged 60 years and more living in Europe.
- The **CURE-Elderly-Personas** include basic information about elderly persons living in Europe. They do not include context or project specific information.

6. Strategies for handling the Limits of CURE-Elderly-Personas

Additional information from other data sources referring to technology use has been integrated in the **CURE-Elderly-Personas** to compensate information not available in SHARE.

- Statistik Austria: <http://www.statistik.at/> (03.03.2011)
- Eurostat: <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/> (03.03.2011)
- SeniorWatch project: <http://www.seniorwatch.eu/> (03.03.2011)
- Österreichischer Seniorenbund, „Internet & Senioren: Fenster in die Welt versus digitaler Graben“, 2010. http://www.seniorenbund.at/img/894/unterlage_internet_110210.pdf (03.03.2011)
- GfK Austria Sozialforschung 2008, Generation 60 plus
- GfK Online Monitor 2010, Internetmarkt in Österreich
- Synovate Market Research on mobile telephone usage in Germany (2010): <http://www.telecom-handel.de/News/Markt-Analyse/Studie-Fast-drei-Viertel-der-Senioren-telefonieren-mobil> (03.03.2011)
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- Fessel-GfK, Institut für Marktforschung, Auftraggeber Raiffeisen Bausparkasse (2010) „Generation 50 plus: Wohnen und Pflege im Alter“ http://www.wohnbausparen.at/eBusiness/rai_template1/368291787774625710-368292205191760151-402849280646923718-NA-19-NA.html (03.03.2011)

The **CURE-Elderly-Personas** manual supports the user in including context and project specific information in the **CURE-Elderly-Personas**.

7. The project consortium

CURE with its broad knowledge and experiences in user requirements analysis and evaluation as well as qualitative methods, such as Persona generation and experience in AAL technologies builds the basis to achieve the goal of the creation of a **CURE-Elderly-Personas** set and the included manual. Together with **VID** experts in the field of statistics and demography and its large experiences and knowledge with large databases and data analysis methods complements the project consortium.

CURE - Center for Usability Research and Engineering (www.cure.at), is one of Europe's leading organizations in the area of user experience (UX) research comprising the fields of usability engineering, human-computer interaction (HCI), user interface design (UID), user centered design (UCD) and Ambient Assistant Living (AAL) research. CURE comprises a highly interdisciplinary team assembling all skills of contributing disciplines such as computer science, psychology, sociology, pedagogy, didactics, industrial design, communication science and management science.

VID - The Vienna Institute of Demography (www.oeaw.ac.at/vid) strives for the combination of scientific excellence with proactive relevance in analyzing and projecting demographic trends and in evaluating the social and economic consequences of population ageing. Thus, VID combines innovative methodological work with empirical analysis and communication of scientifically based insights. It gives special attention to the demography of Austria and to European comparative analysis. The Institute is embedded in the structure of the Austrian Academy of Sciences (ÖAW).

The **CURE-Elderly-Personas** manual gives a short introduction into the Persona method and provides information about the developed **CURE-Elderly-Personas**. If you are using the Personas method for the first time, are not experienced or have more interest in creating your own Personas, we recommend the cited books and scientific publications for further information and reading.

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