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FIT4WORK

SELF-MANAGEMENT OF PHYSICAL AND MENTAL FITNESS OF OLDER WORKERS

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Including end users in the design and development process

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1. Introduction

This report contains short explanation of the methodology used to include the end users (older adults) in the design and development process within the Fit4Work project. This inclusion does not refer to the overall approach of involving users in the research and development conducted within the framework of the project. It instead refers to the work of those teams that design and develop those modules of the system that are to be directly interacted with by the users (e.g. users' gateway).

The methodology is being introduced to the relevant members of the consortium based on the training done with the use of the PowerPoint presentation and accompanying multimedia materials. This presentation is the attachment to the current report.

The theoretical background of the methodology is presented herewith in Chapter 2. It should be understood as a background used to adapt for the needs of the Fit4Work project.

2. Theoretical background of the users' e-Inclusion methodology

2.1. ELITE: designing new ICTs for the over 80s

As a way of including the elderly users in research driven innovation, Waterworth & Waterworth introduced an approach called ELITE[1,2]. There are many design approaches that stress the importance of user participation and evaluation but there are several dimensions of user participation. Some approaches (sometimes called user-centred design) see the users as the object of study, indicating that the designer designs from what she thinks is and experiences as the user needs and ability, gained from studying and discussing with the users. Other approaches (for example participatory design) do indeed include the users in the design process, but often not as a full member of the project team, since the elderly do not understand the technology and the language used. In this case the user may feel trapped and does not have any specific opinion about the design.

In ELITE a prototype or a mock-up is used as the communication medium instead of using complicated flow charts or other formal descriptions. By using a prototype or mock-up the user can try, look at, touch and feel the object and by doing this they can more easily express their opinion.

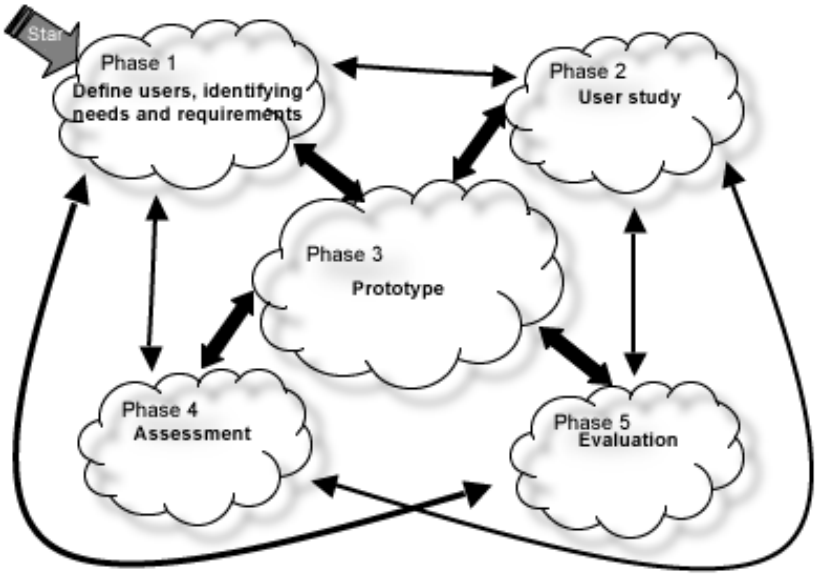

Figure 2.1. The ELITE approach

ELITE is thus based on a general iterative design approach where the prototype is in the centre and continuously evaluated and improved (Figure 2.1). The approach also includes the following general guidelines:

[1] Waterworth, E. L. & Waterworth J. A. (2009). Designing ICT for the over 80s. In Topo, P. & Östman, B. (eds): Dementia, Design and Technology: Time to Get Involved. Amsterdam: IOS Press, ISBN 978-1-58603-950-9.

[2] Waterworth, E L & Waterworth, J A (2006). The ELITE approach to designing IT for the elderly. Gerontechnology,5(2), 2006

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- *Become an anthropologist*, i.e. the researcher should observe and participate in the elderly person's life. It is necessary to take part to understand.
- *Base the design on earlier artefacts*, i.e. base the design on metaphors of technologies that the elderly has past experience of using. For example, an interface that is like a simple transistor radio.
- *Hide the technology*, i.e. as far as possible hide the technology behind a well-known object. For example, the device appears as a book (with added features) not as a computer.
- Provide motivation and challenge, i.e. motivate the elderly to use the technology by including the right level of challenge.
- Create a coherent hardware/software package. For example, if the computer hardware is designed as a book develop the software as chapters and pages of the book.

This approach is a good step in order to include the elderly as a member of a project but is not enough. In the e-Inclusion the approach takes a step further by including the elderly as full members of the project team and as experts in the area of study.

2.2. End users e-Inclusion

To create a user driven research project it was found necessary, in addition to adopting the ELITE principles, for the elderly to change their view of themselves as "computer illiterate" and become more assertive and with the role of true experts.

In order to run a truly user-driven project where elderly are the target group one faces several challenges. First of all, elderly users with no or limited experience of ICT find problems to express their needs, demands, requirements and priorities. At the same time the developer, designer and technicians have no experience of being in an elderly person's position with what it means in terms of views, needs and so on. In addition the elderly are not a homogeneous group and there are big differences between individuals in the group. There is no suitable method to include elderly users in a user-driven project.

The e-Inclusion approach reinforces the elderly's full participation in the project by building up their experience of technology in order for them to have and to express their opinion about the designed products. The approach is to build around the following challenges:

- Get access to the elderly's everyday life and preferences;
- Help the elderly to express their expert knowledge;
- Handle the tension between the technician and the elderly;
- Change attitudes.