

LIVING LAB AS A FRAMEWORK TO CO-CREATE A PERSONALIZED USER EXPERIENCE FOR THE PROMOTION OF ACTIVE AND HEALTHY AGEING

LifeSTech



C. López, G. Cea, I. Lombroni, P. Abril, I. Mallo, A. Dantas, G. Fico, Member, IEEE, M.F. Cabrera-Umpierrez Member, IEEE, M.T. Arredondo, Member, IEEE

INTRODUCTION

Designing adequate solutions to support senior's autonomy, health and well-being represents a global challenge where all sectors of the economy can be benefited.

The work presented in this paper describes a personalized interactive experience co-created in a living lab to promote Active and Healthy Ageing (AHA) in a friendly and entertaining way for older people.

Our facilities



Co-creation sessions



METHODS

This work was developed using UCD with the aim of empowering people in their health by creating an interactive experience that aligns with their needs and values.

Based on the identified user types, a personalized research and intervention protocol was created including the Heuristic Evaluation and System Usability Scale (SUS) for the evaluation of the proposed solution.

Re-design of the inside

Personas definition

Age	55-65	Under 75	75-85	85+
Needs				
Good health				
Chronic conditions or isolated				
Complex needs				

RESULTS

The Figma design tool was used for the creation of a high-level prototype consisting of a welcome and registration process, self-assessment, a tour of activities, and feedback, culminating in a farewell experience.

LIFE space

maha LAB



The activities collect metrics that are used to provide feedback to the user at the end of the experience, along with advice and motivation to continue taking care of their health and well-being.



Based on the data collected in the user's self-assessment, the system suggests a set of activities that integrate innovative technologies to help the user improve aspects within **four categories**:

- health & wellbeing
- active body
- cognitive training
- friendly environment

To ensure the usability of the solution, it was tested by six heuristic usability experts, and refined based on their feedback. Additionally, a System Usability Scale (SUS) study was conducted with nine participants to further evaluate the solution's effectiveness.

DISCUSSION AND CONCLUSION

This study highlights the potential of Information and Communication Technologies (ICT) in providing personalized attention to older people, who are often overlooked in the implementation of new technologies. By offering access to personalized care for both physical and cognitive health, the solution has the potential to improve the quality of life and independence of older people.

The high System Usability Scale (SUS) value of 90,56 indicates that the solution was well-received by users. It will soon be validated with real users.

