

*Promoting mobility, autonomy and cognitive skills*

M-M. BERNARD, R. BARTOSOVA, W. BREIPOHL, J. CHOMAT, V. DE LEONIBUS, P. ENSTE, M. EPSTEIN, A. GIRAULT, P. GUIN, J. HILBERT, C. LOVIS, S. MERKEL, E. PASCHE, S. ROELANTS, K. VAN DEN BRANDEN, A. VERBEEK, R. WIPFLI, Y. ALAYLI. **Promoting mobility, autonomy and cognitive skills using integrated multiplayer solutions.** *Gerontechnology*2014; 13(2):168; doi:10.4017/gt.2014.13.02.411.00 **Purpose** The aim of this project is to promote mobility, autonomy and cognitive skills amongst seniors, including people with chronic conditions, using two ICT solutions. First, participants engage in an indoor and outdoor multigenerational navigation gaming environment. In addition, they use a customized videoconferencing system to talk with health professionals for the purpose of tele-coaching, tele-evaluations and monitoring of indicators of mobility and cognitive performance. **Method** A robust research program is being conducted in Germany, France, Switzerland and the United Kingdom, with potential primary end users (active seniors and seniors at risk of losing their autonomy) and secondary end users (health professionals) for better identification and understanding of their needs in these countries. The system uses a state of the art 4D contact (verbal/non-verbal communication, and the reading/writing of shared documents) software (Intergenerational Tele-mentoring for people with handicaps<sup>1</sup>. This system will be upgraded in a Living Lab environment, for the purpose of tele-coaching and educational therapy, with the objective of behavioral changes, as assessed in previous pilot studies<sup>2</sup>. The application will provide accessible, customized, symmetric and synchronized interfaces, allowing for the simultaneous combination of 4D elements. Various tele-monitoring indicators of mobility, such as a Video Conference Goniometer® for tele-measures of ranges of motion, will be integrated into a multiplayer GPS navigation game. The gaming scenarios will be customized to meet the medical needs of the participants, providing a truly innovative and fun approach to healthy living and ageing (*Figure 1*). **Results & Discussion** This multidisciplinary solution requires close collaboration between institutional and industrial researchers, whose use different approaches. The overall challenges reside more in the successful, user-friendly integration of relevant and validated tools, and in the selection of targeted versus universal programs, than in the innovation of single components. Commitments to business viability, as well as sticking to developments that are “close to market,” are on-going challenges and opportunities. The development of a dynamic interactive videoconferencing platform accessible to partners, testers and end users, will promote collaboration on an “equal footage footing,” and the co-creation of values, paving the way to a health care mutation from services for the seniors to services with the seniors.

**References**

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Figure 1. Mobility Motivator concept diagrams