
CONFERENCE ABSTRACT

Agder Living Lab: co-creation of inclusive health solutions for and with citizens

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Introduction: End-users have been usually placed at the end of the consumer chain regarding technology innovation. However, it is less common to appoint the user as a driver for innovation and new product development. End-user involvement is a central part in the strategy of public and private organisations that aim to generate user-driven innovative solutions to real-world problems, building upon the understanding of user's existing and future needs. The Living lab concept is an instrument to create user-centred solutions, with a large number of Living labs recognized in the European Network of Living Labs (ENoLL) since 2006. These labs cover different topics such as smart-cities, innovative learning and digital health. A national initiative in Southern Norway has funded the Agder Living Lab (ALL) for eHealth, a user-centred innovation environment participated by multisectorial partners. The ALL's goals are to bring services out of hospitals to home-living patients/end-users with different levels of health literacy, reducing hospitalization and institutionalization, while empowering patients to self-care through a co-creation model. These goals are aligned with three national research goals; Digital Healthcare, Digital Interaction and Digital Welfare and with the European Union (EU) Health Strategy, placing patients and citizens "*at the heart of the system and encouraging them to be involved in managing their own healthcare needs*" [1].

Methods: ALL implements a quadruple-helix model represented by citizens, industry, academia and government, offering an experimental arena for universal design to implement welfare technology, eHealth, telemedicine and mobile health solutions. The Living Lab employs a flexible methodology that allows for designing and testing new technology from problem definition to deployment. Procedures are based on the specifications and regulations provided by the Norwegian Directorate of Health within the national reference architecture. The eHealth centre at the University of Agder is the reference laboratory used for verification of technical systems and requirements; Frivolltun development centre for nursing and home care services in the East Agder region is used for verification and testing of use under real-setting and operating conditions. A steering committee sets the direction and defines the guidelines for the ALL's operation. An active user panel will plan and evaluate the current testing methodology, results and deployed solutions. The ALL methodology addresses: 1. Technology design and evaluation compliance with non-functional requirements and regulations. 2. Participation of representative users and selection of realistic user scenarios. 3. Test under controlled laboratory conditions and in real-life settings. 4. Clinical pilots for technology verification in operational settings. 5. Quality assurance and documentation of all steps.

Results: The methodology has been already successfully applied in the EU project United4Health (U4H), to design, develop and deploy a telemedicine solution for the monitoring of COPD patients at home after hospital discharge [2]. The solution is currently used by 3 telemedicine centers covering 23 municipalities in Norway.

Conclusions: ALL aims to catalyse inclusive innovation in the health sector by creating a multidisciplinary space where end-users (citizen, patient, relative, health professional) and health services can be interlinked making technology accessible and usable to everybody. Combining a regional influence with a national perspective, the ALL approach will meet the need for future development of Norwegian municipalities for welfare technology, with an emphasis on service innovation aspect, converging with the national welfare technology finished by 2016 (based on the letter of award from the Norwegian Directorate of Health).

References:

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