

Innovating health: can living labs succeed?

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Abstract. We reviewed 275 international living laboratories in relation to project and research outcomes. We outline successes and failures for the living lab model, from 33 laboratories, for health and discuss laboratory frameworks that appear more likely to succeed. We introduce new work in Australia that is aimed at capturing and supporting innovation in healthcare and creating an ecosystem for ICT adoption in Health.

Keywords. Living Laboratory; eHealth; Change-management

Introduction

There is a pressing need to capture innovation within the Australian healthcare system [1]. This need manifests as a requirement for “change-management” within healthcare. This is called co-design in European research: where end-users, community and developers are brought together. A common approach to co-design is the living laboratory.

“Living Labs are open innovation environments in real-life settings, in which user-driven innovation is fully integrated within the co-creation process of new services, products and societal infrastructures. In recent years, Living Labs have become a powerful instrument for effectively involving the user at all stages of the research, development and innovation process, thereby contributing to European competitiveness and growth ... Living Labs have made the innovation process more efficient by bridging the gap between R&D and market entrance, supporting better and faster take-up of R&D results.” [2]

We reviewed 275 current living labs across the world and found for general laboratories less than 30% were clear successes. Of the 275 labs, 33 had a health focus. Of these 33 approximately one third were an ongoing success. Three particular cases are:

- Austria [3] has an entire city as a living lab for aged care
- Ireland [4] has the “Apartments for Life” for aged care and
- Germany has five successful health living laboratories (three of which are in the area of ambient assisted living).

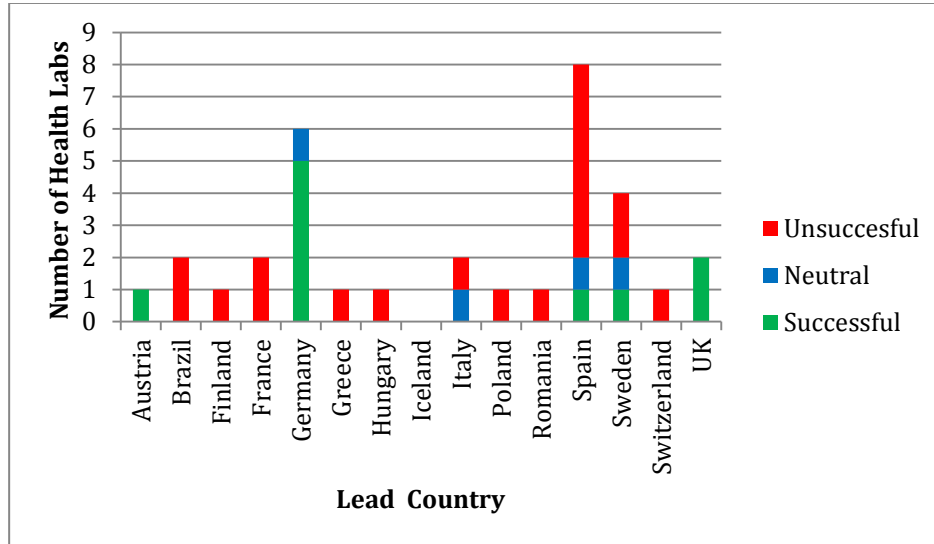


Figure 1: Outcomes of 33 Health related Living Labs. Approximately 30% of all health-related living labs may be considered an ongoing success.

All successful labs have well-defined, ongoing projects (research interest). Additionally, they continue strong community and end-user engagement (including media); are funded by notable organisations/businesses; are well-managed and have significant research citations.

Unsuccessful/neutral living labs have vague or no project outlines. Unsuccessful living labs in Spain and France were part of consortia that received initial EU-research funding. Academic applications dominate the unsuccessful labs.

Technology Brief

In partnership with the Australian National University, University of Canberra and ACT Government, NICTA is developing a living laboratory to include clinicians, clinical teaching and care providers as well as developers, vendors and researchers. This environment leverages engagements in the eGovernment technology cluster and collaboration with several university partners across Australia, multiple vendors

including CISCO, IBM and HP and health jurisdictions. The laboratory is also supported by AEHRC¹, ACBI², IBES³ and VERSI⁴ among others.

The laboratory operates across multiple centres supporting distributed collaborative design and innovation in remote care delivery. One centre is the Faculty of Health Clinics Building at the University of Canberra, part of a dedicated health precinct that incorporates a variety of facilities linking health education and community health with a particular emphasis on preventative health.

Conclusion

This paper is a call for partners from the health informatics community: researchers, vendors, developers and clinicians to join the laboratory as part of an early engagement model.

References

- [1] L. W. Hanlen, Tele-health and pervasive broadband; Australian & International experience, *Global Telehealth*, Perth, Australia, Nov. 2010.
- [2] A. Peltomaki, European Commission Deputy Director General, *Living Labs for user-driven open innovation: an overview of the living labs methodology, activities and achievements*, June 2009 <http://bit.ly/wxYdeO>
- [3] Living Lab Schwechat, Austria <http://www.ceit.at/ceit-raltec/aal-living-lab-schwechat>
- [4] CASALA Living Lab, Great North Haven, Ireland <http://www.casala.ie>

¹ Australian E-Health Research Centre

² Australian Centre for Broadband Innovation

³ Institute for the Broadband Enabled Society

⁴ Victorian e-Research Strategic Initiative