

## **Unpacking two design for health living lab approaches for more effective interdisciplinary collaborations**

REAY, Steve, CRAIG, Claire <<http://orcid.org/0000-0002-3475-3292>> and KAYES, Nicola

Available from Sheffield Hallam University Research Archive (SHURA) at:

<http://shura.shu.ac.uk/24130/>

---

This document is the author deposited version. You are advised to consult the publisher's version if you wish to cite from it.

### **Published version**

REAY, Steve, CRAIG, Claire and KAYES, Nicola (2019). Unpacking two design for health living lab approaches for more effective interdisciplinary collaborations. *The Design Journal*, 22 (Sup1), 387-400.

---

### **Copyright and re-use policy**

See <http://shura.shu.ac.uk/information.html>

## **Unpacking two design for health living lab approaches for more effective interdisciplinary collaboration**

Reay, S.D.<sup>1</sup>, Craig, C.<sup>2</sup> & Kayes, N.<sup>3</sup>

- 1. School of Art + Design, Auckland University of Technology, Auckland, New Zealand*
- 2. Art & Design Research Centre, Sheffield Hallam University, England*
- 3. Centre for Person Centered Research, Auckland University of Technology, Auckland, New Zealand*

Corresponding Author: [sreay@aut.ac.nz](mailto:sreay@aut.ac.nz)

## **Unpacking two design for health living lab approaches for more effective interdisciplinary collaboration**

This paper provides an overview of a research project to was to build understanding of resonances/differences across cultural contexts related to two design for health living labs, one based in a hospital in New Zealand and one in more community focussed from a university in Sheffield, UK. A series of collaborative workshops between designers and health practitioners and researchers during four exchanges were held in Auckland and Sheffield to unpack the approaches and projects of the two. Using the labs as case studies we explore how to best develop creative, dynamic and innovative approaches to developing new healthcare solutions. While the two labs operated in different contexts, we identified similar challenges when undertaking design for health projects, with respect to how to bring these different disciplines together for collaborative activities. From this we have identified and developed a concept for “Design/Health: a toolkit for collaboration”, as a means to hold space for teams to consider the necessary but often overlooked attributes that’s underpin successful design for health collaborations.

Keywords: collaboration; agency; interdisciplinary;

### **Introduction**

“Living Labs” emerged in Europe around 2005, as networks of small public-private partnerships that are normally characterised by user-involvement and real-life experimentation in the innovation process (Almirall & Wareham 2008). “Social labs” are open and collaborative platforms to support “social innovation”, through inquiry, analysis, and experimentation as a means to address complex social challenges. The issues tackled by such labs are generally ambitious and align with Buchanan (1992) described as “Wicked Problems”. Wicked problems are tackled using participatory or codesign approaches and practices that embrace the variety of skills and expertise that both designers and end users may bring. In these environments, “design innovation involves a complex blending of many different forms of knowledge, [and therefore]

requires us to understand a set of connections between sites and domains” (Sunley et al., 2008:678). Applying design as a collaborative process with end-users is not new. However, how co-creation and co-production approaches has been embraced by policy makers and politicians as necessary for innovative solutions is a relatively recent phenomenon (Voorberg et al. 2014). In order to manage the complexity of issues tackled by social labs may require the introduction of appropriate infrastructures. Some labs approach this by establishing collaborative networks between universities, industries, and governments. The shift from industry-government dyads to include universities helps engage higher levels of training and specialist knowledge to “generate new institutional and social formats and formats for the production, transfer and application of knowledge” (Ranga and Etzkowitz 2013:5).

This paper describes an initiative to build understanding of the distinct but complementary approaches and methods practiced by two living labs, to recognise their respective strengths and in doing so, build capacity, develop and expand the work through sharing best practice. In this paper we will present how this led to an opportunity to explore how best to develop and refine a working model for on-going collaboration when tackling key health challenges through innovation in design, which can be applied to other research in the area of design for health.

## **Methodology**

Through a series of week-long co-design workshops and symposiums, in New Zealand, the United Kingdom and Australia, we set out to collaboratively develop one hospital and one community-based design-led solution to promote wellbeing for people living with dementia. Through these research projects and the associated activities (symposia and workshops) we aimed to:

- Develop design-led solutions to promote well-being of people living with dementia in NZ and UK
- Help understand the distinct but complementary approaches and methods practiced by the two labs, build capacity, develop and expand the work through sharing best practice
- Develop a working model for on-going collaboration in tackling key health challenges through innovation in design which can be applied to other research in the area of design for health
- Engage with students in design and health to continue to build research capacity

Through the aims described above, we intended to explore how the intersection of knowledge between the partners could optimise what each group might achieve on their own, through the combined skills, expertise, resources, and infrastructure. Our ultimate goal was to bring design thinking to health in a novel way and in doing so, create positive healthcare experiences and improve wellbeing for people with dementia and their whanau (family). We recognised that the learning that arose from this partnership has the potential to advance knowledge and develop new methodological thinking that can be applied to a broad range of other health challenges.

### **The two labs**

The Design for Health and Wellbeing (DHW) Lab, a collaboration between the Auckland DHB and AUT's Faculty of Design and Creative Technologies, was a co-design studio located within Auckland City Hospital (Figure 1). It was established with the vision of introducing the principles and methods of experience-based co-design into a healthcare environment (Reay et al. 2016). The DHW Lab was a relatively new

initiative formally launched in 2015. It is viewed as a new type of embedded innovation pathway, employs a small interdisciplinary team of designers and researchers, and had up to 11 postgraduate students, working on a variety of design for health projects. It was co-funded by the ADHB and AUT. The DHW Lab worked closely with the Centre for Person Centred Research (CPCR) at AUT. CPCR's focus is on 'rethinking rehabilitation'. This AUT collaboration brought together an interdisciplinary team at the intersection of a person-centred research approach and experience-based co-design, augmenting potential for innovation in health systems and service delivery. CPCR augmented the DHW Lab's potential to translate new design solutions by connecting to a broader network of health providers, funders, community rehabilitation and advocacy groups.

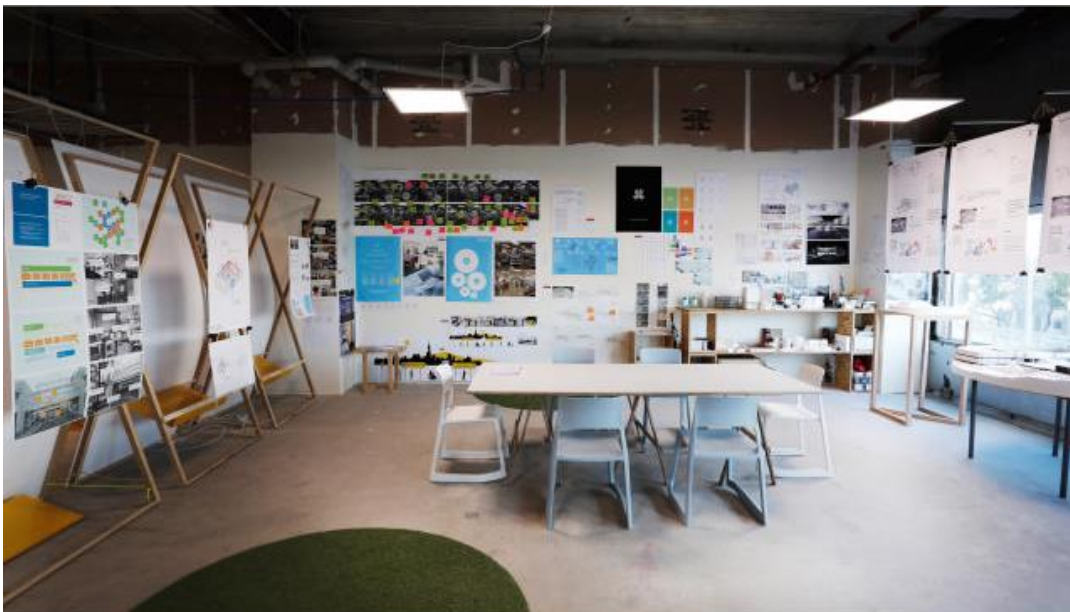


Figure 1. The DHW Lab studio in Auckland City Hospital (from Reay et al. 2016)

In contrast, Lab4Living is a trans-disciplinary research cluster based in the UK. It is a collaborative community of researchers in design, health-care and creative practices.

The lab works locally, nationally and internationally to develop products, services and interventions that promote dignity and enhance well-being and is part of the European Network of Living Labs. While the DHW Lab was relatively new, Lab4Living is one of the most established and respected living labs member of the European Network of Living Labs. In the recent Research Excellence Framework (the criteria on which research in the UK is measured) 81% of the ADRC's research was deemed to be 'World leading' or 'Internationally excellent', one of the highest in the United Kingdom.

At the time of the research<sup>1</sup>, both labs were successfully established and add value to healthcare through patient and family focussed innovation. The labs shared the fundamental belief of the value of design in the context of health. They have demonstrated that no one profession can solve challenges facing health-care in isolation, and that a holistic and sometimes tangential view of systems, processes and pathways may be required to ensure responses are appropriately flexible and adaptable to maximise their impact. While both, throughout a range of successfully executed projects, offer multi-methods of enquiry utilising a variety of research tools to identify needs and to define and understand complex problems, the approaches adopted by the two Labs are very different. The DHW lab was hospital based and largely focussed on Auckland DHB problems. Lab4Living is physically located in the Art and Design Research Centre (ADRC) at Sheffield Hallam University, with researchers engaging nationally throughout healthcare networks, local councils and voluntary sector.

---

<sup>1</sup> The DHW Lab project ended in early 2018.





who work in healthcare to think differently about future healthcare possibilities requires considerable effort to renegotiate relationships between the users of healthcare and the systems (and people) that deliver it. We explored the potential of a design for health collaboration for tackling these challenges, and suggest how we have navigated this interdisciplinary space to identify opportunities to make health more person centered, collaborative and generous. We reflect how system attributes (i.e. lack of resource, complexity and power), as well as personality driven attributes (culture, values, confidence) result in barriers to more innovative approaches. We argue that the reimagining of healthcare services and delivery takes collective impact and requires us to transcend disciplinary boundaries (Figure 3). While challenging, successful design for health collaborations can lead to holistic solutions that help to rethink how care can be considered or delivered in the future.

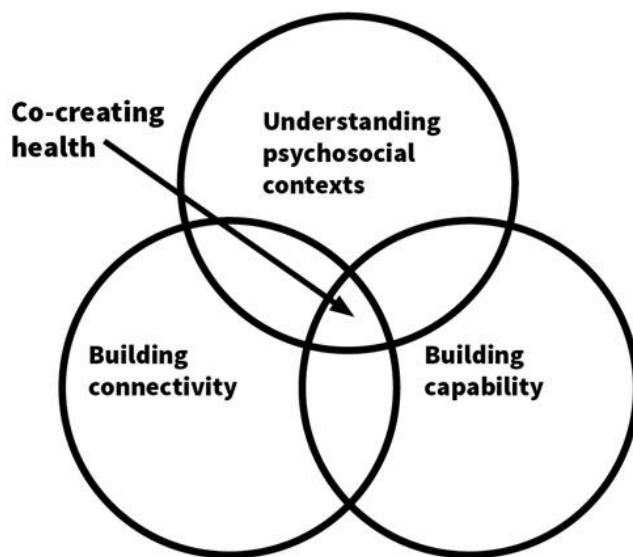


Figure 3. Framework for co-creating health

### **Design/Health: a toolkit for collaboration**

As discussed, this collaboration explored how global health challenges require new

ways of thinking and innovative approaches to how and where care is delivered. Design for health opens up new possibilities. It allows us to draw on a tradition of creative and divergent thinking to address these fundamental yet practical challenges to our society's health and wellbeing. This requires ongoing collaboration between practitioners in design and health.

Like other collaborations, we identified design for health is often marked by: A sense of stepping into the unknown, an ongoing learning curve, a clash of worlds and disciplines, a lack of understanding, constraining systems and structures. At its core, design for health is about understanding and empathising with the experiences of those who use health services, products, and interventions. This involves acknowledging that people who access healthcare often feel anxious and vulnerable. Where possible design for health collaborations try to involve end users in the design process, empowering them to take charge of their health and wellbeing and to support the growth of better health services. The purpose of the design/health toolkit is to initiate and grow strong design for health collaborations by introducing the principles and methods of experience-based co-design into a healthcare environment (Figure 4). Through carefully curated activities, the toolkit facilitates the development of products, services and interventions that promote health, dignity and enhance wellbeing.

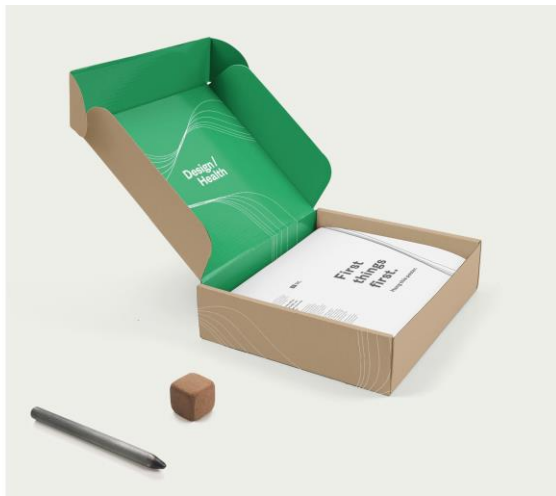
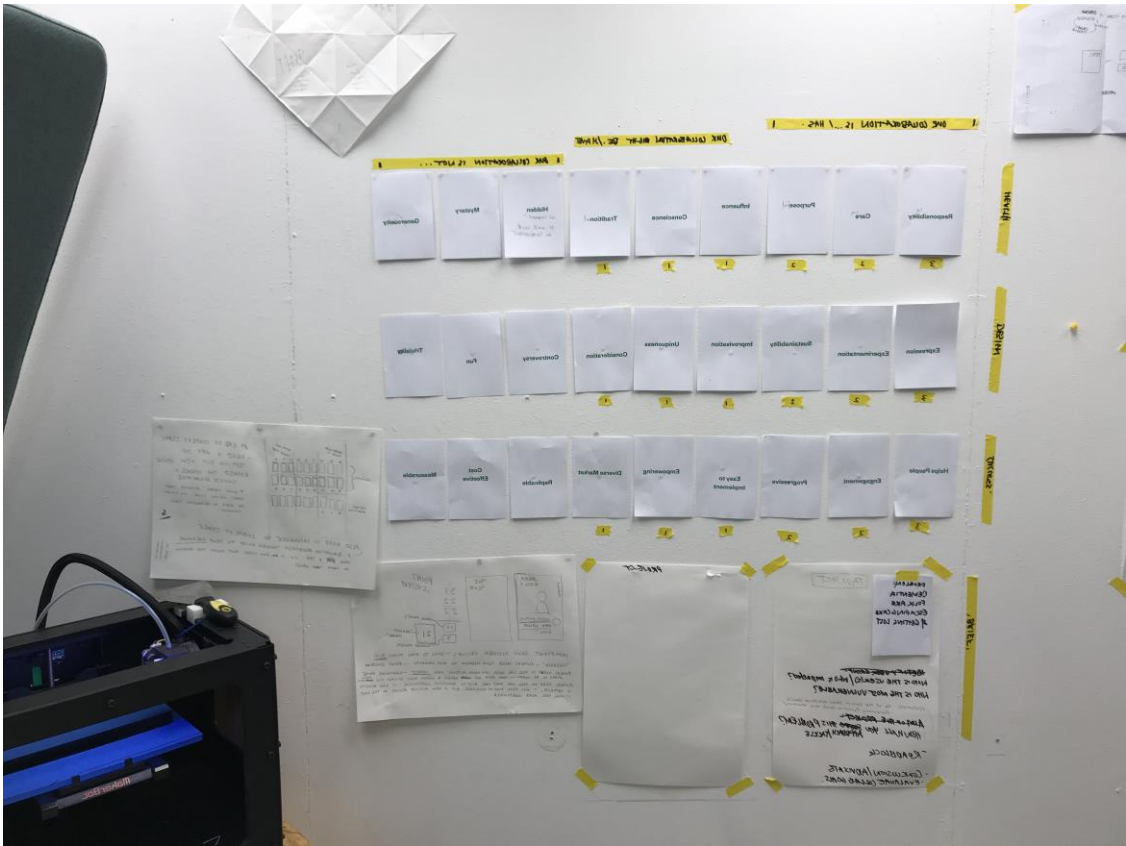


Figure 4. Early prototype and final concept of Design/Health: a toolkit for collaboration

## Discussion

The programme of research and engagement allowed a critical unpacking of how the different design labs operated. This helped us to learn from our experiences to identify how to more effectively navigate design for health collaborations. This revealed a number of challenges to how research activities might more effectively work across the very different disciplines and contexts. From this, several opportunities were identified to reframe opportunities for how designers can more effectively engage with health contexts when undertaking collaborative design-led projects. This included developing a toolkit to support the successful initiation of design for health projects.

## References

- Almirall, E., and J. Wareham. 2008. "Living Labs and Open Innovation: Roles and Applicability." *The Electronic Journal for Virtual Organizations and Networks* 10 (3): 21–46.
- Buchanan, R. 1992. "Wicked Problems in Design Thinking." *Design Issues* 8 (2): 5–21.
- Ranga, M., & Etzkowitz, H. 2013. "Triple Helix systems: an analytical framework for innovation policy and practice in the Knowledge Society." *Industry and Higher Education*, 27(4), 237-262.
- Reay, S.D., Collier, G., Kennedy-Good, J., Old, A., Douglas, R. & A. Bill. 2016. "Designing the future of healthcare together: prototyping a hospital codesign space." *CoDesign*, DOI: 10.1080/15710882.2016.1160127
- Sunley, P., S. Pinch, S. Reimer, and J. Macmillen. 2008. "Innovation in a Creative Production System: The Case of Design." *Journal of Economic Geography* 8 (5): 675–698.
- Voorberg, W., V. Bekkers, and L. Tummers (2014). "Co-creation in Social Innovation: A Comparative Case-study on the Influential Factors and Outcomes of Co-creation." *Proceedings of the IRSPM Conference*. Ottawa, Canada, April 9–11.