

CENTRE FOR DESIGN INNOVATION

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Editors: Deirdre Barron and Kurt Seemann

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Preamble

Welcome to the first Design4Health Conference in Australia, convened by the Centre for Design Innovation, Swinburne University of Technology, on behalf of, and jointly chaired with, the conference founders, Lab4Living, Sheffield-Hallam University, UK.

The Centre for Design Innovation investigates and validates the key factors that underpin the design of products, services, systems, spaces, and symbols to improve the chance of user uptake and impact.

Lab4Living, who established the conference, is an interdisciplinary research initiative that develops products and environments, and proposes creative strategies for dignified, independent and fulfilled living for all.

This international event invited the world of health and design practitioners and researchers to come together between the 4th and 7th of December, 2017 in Melbourne, Victoria, Australia.

About the conference

Design4Health is an international conference that brings together designers, health professionals and creative practitioners with researchers, clinicians, policy makers and users from across the world to discuss, disseminate and test their approaches and methods in the ever-changing nexus between design and health.

The conference hosted a series of different events that provided an active forum to explore how the disciplines of design and health might intersect to bring forth new ways of thinking and working in what is a dynamic, innovative and increasingly important area of research and practice. The central question has been:

How can we work together to achieve positive and sustainable impact on the social, economic and cultural factors within our communities and beyond?

The range and insights presented at the D4H Melbourne event has revealed both the enormous value of this movement in research, and the benefits from undertaking serious, applied, and critical efforts that design and health expertise generate when they come together.

We invite you to browse the innovative ideas and critiques scoped in these proceedings

Sincerely



Associate Professor, Kurt Seemann, PhD. | Convenor | Design4Health 2017

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Lab4Living, Sheffield-Hallam University, UK.
Melbourne Cricket Ground, Melbourne.
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Developing the Double Diamond process for implementation—insights from a decade of Inclusive Design projects

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Keywords

Inclusive Design, Design Management, Implementation

Introduction

This paper details overarching methodological insights resulting from several Inclusive Design projects in healthcare spanning ten years. The insights draw on projects undertaken in partnership with a range of partners (commercial, public sector and charitable), differing in scope, funding and degree of implementation. A number of lessons have emerged, both practical and methodological, and are applicable to future design work in healthcare and the implementation of innovation.

Background

The projects informing these insights are the result of funding partnerships and collaborations. This is an important context, as the work is research driven; it does not follow a consultancy model, nor is the design work beholden to the client's agenda.

The Double Diamond methodology (Design Council, 2015) was used in all projects. This well-established approach follows four phases: Discover (divergent thinking, researching problem), Define (convergent thinking, refine problem), Develop (divergent thinking, generating concepts) and Deliver (convergent thinking, refining concepts down to one or more). There are many variations of this model, and this methodology is increasingly run in parallel / mixed with an agile approach and PDSA cycles (Speroff and O'Connor, 2004), where rapid iterations of the methodology are run in series.

Another important contextual note is that projects tended to run for a year or more, allowing more time for a thorough user research period. An important remit of the work is to reflect upon practice, and the insights detailed here are not only retrospective but collected as the projects were in progress.

Methodological benefits

The Double Diamond is a known framework, and lends itself well to interdisciplinary working (West et al, 2014) as it is relatively easy to articulate the shared goals of each phase, particularly to front line clinical partners, in order to achieve a common understanding. Within this established framework, it is then easier to tailor co-research and co-design methods to suit specific user groups. The divergent and convergent

phases also offer opportunities for designers to immerse themselves in a given context, but also to withdraw and reflect.

These methodological benefits can be added to by further work at the start ('Discover') and more extensively at the end ('Deliver') phases.

Initial setup

The Double Diamond typically starts with a 'problem statement', with the 'Discover' phase involving co-research by the design team with relevant stakeholders and users to explore the problem from numerous different viewpoints. In order for this to be fully effective, much of the administration must be done in advance. The setting up of user groups, identification of gatekeepers, and importantly, obtaining any necessary ethics for the project can take time. With an engaged clinical partner, such steps can be taken in advance of (or early on in) the 'Discover' phase to reduce any delays in research (ICU journey).

Implementation

The final phase of the Double Diamond concerns delivery. The exact form that 'delivery' takes is unique to each project and partnership, but merits careful examination. Implementation of innovation is notoriously difficult in healthcare (Morris et al, 2011). Typically this is seen as post-'design', and necessarily requires the commitment of any healthcare project partner. Whilst some of the best innovations win design awards, many award-winning designs are not adopted into front line use. There may be more to be done in design terms. The practices of co-research, co-creation and co-design are well used. Could co-implementation be an additional focus? This opens the door to the debate about where 'design' ends, though clearly the end point at present is not leading to large scale implementation. Co-implementation efforts should start well before the end of the 'Discover' phase. These efforts may involve the identification of implementation stakeholders (standard practice in much co-design), but also funding bodies (Foyle Bubbles, Foyle Reeds), the development of business cases and the adoption of commercial constraints in the design (SlowMo/Mo).

Longer term implementation efforts may not be the focus of design, which then points to the need for a proper definition of an 'end' point. For startups, this might be the exit strategy, but for design projects it is context dependent. A service design improvement might see initial demonstrations in context (Patient Flow) as an end point; a product design might seek clinical trials, or a licensing agreement. As the technology for designing and prototyping improves, the fidelity of the output of such projects also increases. In a competitive innovation market, this means the level of necessary evidence behind an innovation in order to attract buy-in and adoption increases. This level should be scoped out during the 'Develop' and 'Deliver' phases. Accepted good practice in forming a brief (typically at the centre of the Double Diamond) is to embed measurables into the brief statement (Zenios et al, 2010). In the same manner, an end point for design efforts should be defined during the 'Deliver' phase or earlier, to ensure an agreed plan for implementation. Without this, there is the risk that the design project

results in a prototype being handed over to an implementation partner with no understanding of the means of adoption.

Conclusion

The Double Diamond is an accepted design research methodology, increasingly adapted and tailored to include other methodologies. It is a useful framework for interdisciplinary collaboration in that it can form a ready basis for a shared understanding of aims and work plans. The benefits of this approach are increased by advance preparation, and by thoroughly scoping implementation factors and stakeholders towards the end of the project.

Adoption of innovation in healthcare takes time, and is fraught with many complicating factors. Many lauded design outputs are not in use, pointing to poor implementation strategies. The above benefits of the Double Diamond must be applied to implementation in order to help adoption. Much more can be done during the design process to make the outputs better positioned for implementation. This not only means involving the relevant stakeholders and identifying the relevant funds for implementation earlier in the process, but crucially designing the output with an implementation strategy in mind. This practice of 'co-implementation' will improve future adoption of innovations.

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