DESIGN4 HEALTH

Extract of the
Proceedings of the 5th International
Conference on Design4Health
Sheffield 4th – 6th September 2018

Editors: Kirsty Christer, Claire Craig & Dan Wolstenholme

ISBN: 978-1-84387-421-8
644. The Service Experience Framework

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ABSTRACT  This paper describes a Service Experience Design Framework. The paper starts by positioning the framework within the corpus of design, with a focus on practice. A rationale for emphasizing practice is given and also how the lens of ‘design doing’ potentially requires new kinds of knowledge and research outcomes. A case is then introduced relating to the design and delivery of a digital consultation service. As an example of a real-world service design for health, the case illustrates some weaknesses (and opportunities) in the current service design orthodoxy. Weaknesses in ways of working include philosophical predispositions on the relative value of human versus technological agency, as well as issues relating to practice. Enhancements are suggested including shifting focus from largescale, ‘blue-sky’ project work to smaller, data driven service tweaks that exemplify frugality. These various strands are bought together in the final section of the paper that introduces the framework itself.

Keywords: service design, design frameworks, co-design
Introduction

Donald Schön’s ‘reflecting in action’ (Schön 1983, 54) is a widely accepted description of design as a learning process of doing and reflecting. Buchanan (2006) shows how this recursive process manifests in designers continuously reframing problems. Simon (1996) and Chapman (2005) position this kind of ‘Design Thinking’ (Lawson 2009) as a utopian endeavour done by ‘futurologists’. These various accounts of theory highlight the unique value of design (as a primarily individualistic cognitive activity). Almost without exception, such works lack substantiating data. While theory has currency in a general sense, practice is where designers and researchers realise their own value and their chosen profession.

Then there is the practical end of design. Here, the messy, visceral, complexity of doing (Accounts of Practice) has the veracity of real world design, often providing reflexive and theory building potential for other practitioners and the broader community (e.g. Broadley and Smith 2018). Accounts of Practice understandably tightly focus on contextualizing design thinking through examples of design doing. Beyond cognitive process and studio activities, design work is integrated into the complex production (and consumption) of goods and services. As well as any ‘Overarching Context for Design’ (artisanal, craft, industrial, commercial etc.), there is also the specific one relating to the work at hand. Today any specific service design context is almost certainly highly collaborative, distributed and tightly coupled with technology.

Frayling’s (1993) research into, through and for design is some way distant from accounting for such diversity of practice and the kinds of knowledge that is produced. To do this, a fourth genre is needed (Reflection on Practice) which frames design as a continual process of learning (Reflexive Practice) done either by practitioners themselves or with them by researchers. This would entail revealing reflexivity as a process. From and with the doing there is the externalizing of thoughts, the checking to related (and less related) knowledge and to the continual evolution of practice itself over time. Whether practice is optimizable or in endless dialectical flux is irrelevant. Such ‘Reflection Cycle’s might enable generalize the specific into broader theoretical insights (Practice based Theory). These will evolve.

This paper provides a reflection on practice. It takes learnings from a project (Knight et al. 2018) involving a small team designing and developing a digital consultation service. Data from this work suggests that health design projects need to account for highly context specific goals of flow, value and quality. Broader insights were also developed from the case as well as number of other related projects during an eight-month reflection cycle. This reflexive activity suggests the service design orthodoxy is currently highly ritualized and needs specific contextualization for to the realities of health. These factors are operationalized at the end of this paper. Superscript characters denote linkages to framework elements.
Reflection on Practice – Real World Service Design

This paper reflects on the discovery phase of a project for the UK National Health Service (NHS). The project created a proof of concept for digital consultations between patients and healthcare professionals using Skype for Business. To do this, a classic service design approach was taken and combined with agile (Beck et al. 2001) methods. The core team (or pod) consisted of a Business Analyst, a Service Designer and a Skype Developer. The practitioners worked in sprints through a combined backlog, with some direction from a Product Owner and Design Strategist (the author). Patients, General Practitioners (GPs) and operational staff were involved in contextual inquiry, co-design and user testing sessions that were run during sprints. As part of the agile methodology, reusable assets (including design deliverables) were produced for use in future releases and other projects. Less commonplace project activities included applying The Technology Acceptance Model (David 1989) in the research sessions and also conducting a literature review of health consultation research. These had a profound impact on the direction of the work as they surfaced barriers and opportunities to adoption of the new service.

Service design projects are rarely explicit in the technology that underpin them. In this case, a well-known, proprietary communications tool was used to underpin a new service. This technology was not tangential to achieving the project goals. Rather it was central to tangibly improving healthcare and the service experience. In other words, the core service use cases could not have been enabled without the specific technology used in the project. The decision to use Skype was a pragmatic one, where the advantages far outweighed the disadvantages. It is conceivable that this might have affected service experience quality, although this was not reflected in the research. In some ways the opposite happened; the quality of the platform contributed to high levels of usability and user satisfaction. These were measured with standard benchmarking tools such as SUS (Brooke 1996). Adapting an existing platform (rather than building a custom solution) meant that the service could be rapidly deployed at minimal cost and assured high levels of security, data integrity and support. This approach is somewhat contrary to the prevailing ‘Blue-sky’ thinking in service design.

There are good reasons service design has privileged human agency over technology in the past. With ubiquitous computing, this position is at best misdirected and at worst a break on progress. Harnessing machine agency for good should be the goal of any service design project. Instead, the focus is often abstracting surface-level (e.g. non-technical) signs of a service into ‘Blueprints’ (Shostack 1982). As static snapshots of activity these undermine the primacy of Living Services. Rather than partial mapping, we should unlock service flow, load and quality. This should be achieved through human-centred innovation within the ‘Living Service’ using ‘Innovation Games’.

Technology has methodological implications too. Service design artefacts don’t integrate well with the needs of service engineers and developers. While blueprints may exemplify design craft they don’t map to service architectures and platforms that are integral to service delivery and operations. Standardized tools to do this exist but generally lack adoption in contemporary service design practice (Sangiorgi 2009 is an exception). A more radical interpretation of this situation is that the gap between design and development is reducing. This could mean defining some hybrid,
standardized, systematic notation between design and development. This would both accurately model socio-technical activity, to the level where interactions can be designed, developed and help load and cost estimations to be made at an early point in sprint planning.

The prevalence of ‘scrum’ (Schwaber 2004) has driven the service design community to adopt agile practices such as sprints. The project used a lightweight agile framework involving sprints, scrums and a story backlog. The growing sophistication of agile tools, increasing reuse of assets (including Design Systems F2) and automated production meant that the pod was a fully self-organizing one. As well as digital production tools, the project used epics and stories to communicate requirements. Based on user research data, these ‘Service Stories’ F2,S1 were a common language that aided planning and documented current and future releases tasks.

Agile is not just a new addition to the domains burgeoning ‘Sticky-note’ design toolkit. Rather the nexus of lean and agility is arguably as big a break in modes of production as the factory method of manufacture. In this case, long in-depth ‘up-front’ research and design was condensed into short sprints where research, design and development worked in parallel. For service design, the implications of agile/lean on the service experience are more profound than changing how the work done. This is because of the unique properties of digital materials used in the production of products and services and the underlying philosophy of lean that takes a socio-technical approach to continuous improvement.

Digital products and services are endlessly mutable. Agile/lean exploits this affordance through iterative releases of increasing quality and personalization. This mutability challenges the fundamentals of service design orthodoxy where blueprinting new services (Green Field Design) wins out against fixing existing ones. Similarly, wholesale design oriented to an (unspecified but distant) time (Design Futurism) in prioritized over the here and now. The case was entirely different. Instead, the need to increase access, enhance the consultation experience, contribute to improving healthcare provision and cost of service through the pragmatic use of technology in the shortest time took precedence.

Speed of deployment and rapid, incremental enhancements make a lean/agile service design approach relevant to any domain. Lean’s focus on value, flow and frugality also make it particularly important to service design for health (also see Waring and Bishop 2010). This has repercussions for the service experience and modes of design, production and operation. In the first case, this means running short releases of incremental change that focus on unlocking value with minimal impact on resources at all points within the service ecosystem. In the latter case, it means industrializing the process and focusing on reuse. While this was partially achieved in the project, the broader implications of agile/lean service design are described for future development in the framework that follows.

Service design ought to frugally tweak services toward optimal flow, rather than focusing on big ticket projects that disrupt and cause unforeseen adoption issues. That is not just a pragmatic approach to framing any specific context for design, but it is also the embodiment of the ethical design tradition. Use the minimum of resources to extract the maximum of value. The focus on value
has two implications. Firstly, frugality ought to inform all our plans, methods, deliverables and interventions. Secondly, a focus on value should not just be the cornerstone of services in general (Vargo and Lusch 2004) but the experience too. While value could be realised through a thoughtfully envisaged future service it could also be more prosaic, increasing throughput of consultations as in the case.

This frugal attitude is in many ways at odds with much of the literature. Here the holistic nature of services rationalises expansive research where everything needs to be known before anything can be done. This knowledge is then abstracted into design deliverables (Kimbell 2009). These complete, complex and appealing ‘Pixel Pushing’ produced ‘maps’, blueprints’ and schemas demonstrate ‘Deliverables Bloat’ rather than leanness. Not only should we focus on minimalistic and lean descriptions, but we should rigorously question how deliverables aid service production. That could mean defining the most expedient deliverables (reused or custom cut-downs) for the case at hand using the Shaping Game50. This workshop activity involves team members regularly checking back on project fundamentals through a collaborative question-based game that asks members to reflect on:

1. What resources are available for service design, delivery and operation activities
2. What is the precise agreed problem/opportunity?
3. Is the agreed problem/opportunity, the right one(s)? If not, what is?
4. What are the 6As? –
   
   Agents – people, systems and technology involved in the service ecosystem
   Attitudes – Data pertaining to agent insights
   Activities and Actions – The atomic and sub-atomic (user stories) service interactions
   Artefacts – Tangible manifestations of the services
   Axioms – Rules (implicit and explicit) that underpin the living service
5. What is possible/impossible?
6. What is fixed/changeable?
7. What can be reused/designe?d?
8. How might flow, load and quality be improved?
9. What does the minimum viable service, living service and sustainable service look like?
10. Which solutions are likely, possible, desired and best?

There is a deeper question on service design deliverables. Why do we need them at all? If the goal is to improve an existing service (i.e. not Green Field Design), then practitioners should operate ‘In Service’ rather than separate from it or via any form of abstracted knowledge. This would mean truly participatory design (with service agents) not before production but within it. There is a risk is that
short, incremental change may not build to strategic positive service transformation. The project evidenced this danger. The research pointed to the need for a Service Roadmap\textsuperscript{10} that tackled three service adoption thresholds. These started at broadening access. Then the service would need to reach critical mass (and with the necessary features to do that) and then finally, it ought to surpass the quality offered by the non-digital service.

Not only is design work a service production cost but cost to value ought to be a factor in practice. Without this boundary, design becomes not only utopian but disconnected from its real-world context in the here and now. To do this, any agile/lean service operations project should deliver high Sprint Value to low Sprint Cost. Similarly, the impact of a release should be to provide increase Service Utilization and lower Operational Cost. These rather dull factors should be both a spur for designers’ creativity and critical be areas to tackle through design thinking. This also means that all design work should be continuously estimated, and outcomes measured in order to maximize value and to steer further sprints. As happens in lean/agile.

**Reflection on Practice – Real World Design Research**

Frugality has implications for any necessary design research, rather than starting from scratch, this important foundational work should minimise impact: validating rather than eliciting. One way of achieving this is to use ‘Story Card’\textsuperscript{2} approach. This uses cards to describe service agents, insights features, components and interactions. These can then be used as a common set of elements in research and then also translated into service stories that map back to the ‘6As’\textsuperscript{1}.

The mission of any service designer ought to be to evidence the touchpoints of any given service but to identify points at which data\textsuperscript{3} can be continuously collected ‘in service’. This service data is likely to pertain to flow, load\textsuperscript{2} and quality levels and would be collected by chaining together data from the living service itself. Not only would this kind of data facilitate design work, but it would also frame any other research activities that might be needed.

This could be derived through observations. However, despite the vogue for ethnographic style studies, ‘backstage’ service activity is hard to evidence. In reality, such interactions involve socio-technical networks that are partially hidden within machines. Thus, understanding the role of human agents is only part of the story. Immersive research should therefore be more closely coupled with digital anthropology. Here, data could be collected and triangulated approach for qualitative studies, analytics from service usage and service load data (e.g. number of consultations).
The Service Experience Framework

Resolutions to the theoretical challenges within service design orthodoxy have been discussed in previous sections; these build on practical insights gleaned in the case to form the framework below:

![Image of the Service Experience Framework]

The practical implications of the case and broader reflections on practice outlined in this paper suggest a fundamental shift in how we design (deliver and potentially operate) services. This shift is predicated on the affordances of digital technology, agile/lean ways of working and the continual evolution of practice. Future work will focus on testing and iterating the framework in this real-world context.

References

