

Towards an understanding of the challenges for design management and service design

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Traditional product industries have developed design management systems over a long period of time. In software and systems industries the main concern of design management have been software engineering, and not digital interaction design. Moreover, for a design discipline such as service design, or for service organizations utilizing service design, design management is a fairly young practice. In this paper we outline a set of challenges facing design management in organizations that involve service designers.

Background

Traditional product industries have developed design management systems over a long period of time. Some of the effects of the work performed during the 80's and 90's can be seen in standards, such as the British Standards series, in classical texts (Gorb, 1990; Svengren, 1995; Ulrich & Eppinger, 2003), or in best-practice books (Bruce & Bessant, 2002; Bruce & Jevnaker, 1998). Typically these assume a product development process where (re)production is separate from design.

On the other hand, for the software and system development industries, where digital interaction design is the predominant design discipline (Edeholt & Löwgren, 2003) few studies have been done on design management. The focus has primarily been on design philosophies (Winograd, 1996; Ehn & Löwgren, 1997), operative design methods (Löwgren & Stolterman, 2005), different design techniques and expressions (Arvola & Artman, 2007) or characteristics of the designed object (Löwgren & Stolterman, 2005). Studies concerning design management issues for digital interaction design have identified problems for interaction designers to find a stronghold in organizations (Carlshamre & Rantzer, 2000), differences in view on design in IT-acquisition and system development (Holmlid & Lantz, 2006), how business development could have influence

on IT-development through interaction design (Markensten, 2003), or characteristics of the software development context that is distinct for management of interaction design (Holmlid, 2006). As their point of departure these studies have taken organizations that develop IT-systems as if they were products.

Still, there are few actual studies of design management issues and challenges emanating from working with service designers in service organizations.

Buchanan describes differences between design disciplines, or orders as he calls them, in terms of different design objects, such as signs and products. For the order interaction design, all interactions are included, so the design discipline digital interaction design would be a part of this order. If one views services as co-construction of value through interaction between provider and client, service design would also be part of this order. Attempts of comparing design orders have been done, such as Edeholt & Löwgren (2003) that compare (digital) Interaction Design with Industrial Design, the differences are partly construed as an aspect of the design material. Other authors provide similar interpretations (Petersen et al, 2004; Hallnäs & Redström, 2002). In Holmlid (2007) a comparison between (digital) Interaction Design and Service Design is added to the model presented by Edeholt & Löwgren. Candi (2007) provides a descriptive framework of design issues on the border between service design and digital interaction design.

The similarities between digital interaction design and service design provide a backdrop to draw experiences from design management within digital interaction design, to service design.

Digital interaction design takes as its starting point the use of an interactive artefact (the software), and thus on the interaction with and around the artefact (Löwgren & Stolterman, 2005; Winograd, 1996; Bannon & Bødker 1991; Holmlid, 2002; Hallnäs & Redström 2002). Interaction Design gained popularity during the 90's, together with its sister discipline Experience Design. Especially web-development companies focused on interaction and experience design. Both these

design disciplines utilize user-centered design methods, but rely heavily on the creativity and sketching/design/expressive abilities of the designer. For the design methods a lot of inspiration has been sought from design researchers such as Jones (Jones, 1992).

It has been an important research venue within the interaction design community to show that the material which an interaction designer works with is a material with attributes that sets it apart from other materials with which other designers work. In Löwgren & Stoltermans book (2005), with the original title of the Swedish edition “The material without qualities” (Löwgren & Stolterman, 2004), the authors try to argue that the interactive material, as opposed to other physical material, possess few qualities as a material: They argue that most qualities will be the task for the designer to create with the help of the material. Establishing support for interaction design within engineering methods has been important during the 1990’s. In the beginning of the 21st century the Usability Engineer/Architect could be found as a role in some of the large software development process standards, such as the Rational Unified Process, RUP. As part of the engineering methods approach Carlshamre & Rantzer (2000) identifies problems and opportunities to establish interaction design. The strategies needed is similar to those suggested by Dumas & Mintzberg (1989); design champion, design policy, design program, design function and infused design.

In Holmlid (2006) a set of characteristics for digital interaction design of importance to design management was identified, using the arena framework from Svengren (1992, 1995) , coordination issues from Felber (1984), and others (Gorb, 1987, 1990; Lawrence, 1987; Sebastian, 2005). The characteristics were:

The Usage/Product Perspective: The difference between viewing the end-result as a product or as a resource for computer usage.

Design Tools and Practice: The different tools, such as guidelines, programming design tools, design reviews, critique systems, design patterns, templates etc., used as formalizations of design knowledge in software engineering practices.

Modularized and Distributed Processes: The way that software production processes are set up, as modularized and distributed processes, and the practices used to manage these, such as verification driven development, integration driven development, and feature based development.

Method

The methods utilized were participant observation and semi-structured interviews. Four service development projects involving service designers were the subject of study.

Results & Discussion

The results from the projects will be presented in a thematic manner.

Conception of service

In the studied projects the conception of “service” range from being tightly coupled to Internet, over a system development paradigm, over functions of the organization to that which the customer gets from the organization. Apart, or on top, of that, the distinction between e.g. core-services, and after-market services makes the picture even more complex.

There seem to be a similarity between this and the usage/product perspective of digital interaction design. That is, on a general level the conception of the design object varies between stakeholders, and thus provides a definitive challenge to design management.

Multiple service channels

The same services is carried out through several different channels, such as internet, telephone, or person-to-person.

Moreover, customers tend to switch between channels opportunistically, and expect that there is some knowledge transfer between channel operators. In the study performed some organizations deliberately provided clients with the possibility to get telephone support while browsing the web. This puts technological challenges, if it should be possible for the service provider to see what the client is looking at, and to give support in finding what she needs. For other organizations in the study they experienced that clients would perform parts of the service online, while waiting in the telephone cue to finish what would remain when they were put through. Several other combinations of opportunistic channel switching were identified.

For digital interaction design modularized and distributed production processes were a challenge. For services, where the service is co-produced by a client and there are multiple service channels, the modularization goes beyond the internal production process. For design management the challenge becomes one of both coordinating multiple service channels, and the coordination between service channels

Viewpoints

As services, and especially professional services, are so tightly coupled to a particular person's competence, and the activities and business processes defined, internal views on what constitutes a service and how it should be performed often dominate. The typical statement would be a variation on the theme "we know what the customer wants because we talk to them everyday".

The "we" in this could refer to different people and roles within the organization, highlighting the complexity of services and customer orientation.

Service design takes the outside-in perspective, and aligning the customer journey with the business process is a delicate matter of co-design in multidisciplinary teams.

In digital interaction design the tools and practice have been used as a solution to similar issues, and have been proved to be not so effective. For design management in service design the experienced distance between designing the service experience and defining the service

operations is larger than in digital interaction design (because the software interface is also programmed).

Chains of evidence

The tangible evidence and touch-points that make up the obvious parts of the service interface, often is connected with each other in sequences and chains. Evidence from one part of the process could be a complement for earlier evidence, or the new evidence make the earlier evidence obsolete or faulty.

These chains of evidence become a distribution of the service experience, and the collection of these, not only the singular pieces of evidence, becomes a challenge for design management.

Design results

When the result of the design process is a new way of handling people over the telephone, how does the result of the design process look like? How do we ensure that this new design is used, and how do we communicate and evaluate the new design when used?

The challenge of getting the design results into working practice is similar to that of digital interaction design, in the sense that it is people that need to use the results of the design work.

The added dimension of service design is that sometimes the only way to experience the design is through the performance of people in the service situation.

Conclusion

Given these observations, we conclude that in service organizations that utilize service design one needs a well-structured and ordered design organization, well developed design management and a high quality and coordinated design work-process.

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