Exploring service design as an emerging organizational capability

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Abstract:
This empirical paper examines a process, starting with the managerial decision to make service design an organizational capability, and following it as it unfold over time within one organization. Service design has become a well-established business practice of how firms create new products and services to promote differentiation in an increasingly uncertain business landscape. Implicit in the literature on service design are assumptions about strategic implications of adopting the prescribed innovation methods and tools. However, little is known about how service design evolves into an organizational capability enabling firms to transform their existing businesses and sustain competitiveness. Through a longitudinal, exploratory case study of service design practices in one of the world's largest telecommunications companies, we explicate mechanisms through which service design evolves into an organizational capability by addressing the research question: *what are the mechanisms through which service design develops into an organizational capability?* Our study reveal the effect of an initial introduction of service design tools, identification of boundary-spanning actors and co-alignment of dedicated resources between internal functions as well as through co-creation with customers. Over time, these activities lead to adoption of service design practices, and subsequently these practices spark incremental learning throughout the organization, alter managerial decisions and influence multiple paths for development of new capabilities. Reporting on this process, we are able to describe how service design practices was disseminated and institutionalized within the organization we observed. This study thus contributes by informing how service design can evolve into an organizational capability as well as by bridging the emerging literature on service design and design thinking with established strategy theory. Further research will have to be conducted to confirm if the same mechanisms are observable across contexts and in other firms, and several future research directions are identified. In addition, the study also have implication for practice as it demonstrates how service design methodology can be implemented and have strategic implications for organizations.

Key words: Capability development, design thinking, organizational capabilities, service design practices, strategy-innovation link.

1. Introduction

Service design is a rapidly evolving business practice - a buzzword 'du jour' of service innovation, which has created a significant business and research attention over the past years (Brown, 2009; Kimbell, 2014; Lockwood, 2010; Reason, Løvlie, & Flu, 2015; Stickdorn & Schneider, 2012). Empathy with users and co-creation, rapid prototyping, iterative learning and tolerance for failure are essential elements of how services are designed, delivered and experienced according to a service design framework. For some industry giants such as IBM, Samsung and GE, among others, service design has become more than a means for innovation. These firms have embraced service design as a core competence (Prahalad & Hamel, 1990) to discover new markets, create new organizational forms and ways of work, and manage change in increasingly volatile and complex service ecosystems (Yoo & Kim, 2015). Essentially, design thinking has become a primary set of management principles enabling large industrial organizations to servitize their business and transform into the modern entities of digital age (Kolko, 2015).

Despite the strategic implications of service design (e.g., Brown 2009), theorizing it as an organizational capability has largely been missing in the management and strategy literature (Gruber, de Leon, George, & Thompson, 2015). We still know little about how service design processes are routinized in the organization, and what implications they have on organizational structure, culture, work practices or performance (ibid). Consequently, extant literature has not sufficiently elaborated on the service design – strategy link. Bridging these two research areas may provide an end-to-end process understanding of capability development in modern organizations.

Given that actors (customers, employees and third parties) are at the epicenter of design thinking (Kimbell, 2014), the lens provided by service design literature may also reveal how actors contribute to capability life-cycles and multiple development paths for organizational capabilities (Bingham, Heimeriks, Schijven, & Gates, 2015; Helfat & Peteraf, 2015).

In this paper, we theorize service design as a recipe for organizational capabilities in-the-making. We seek to explain *when* (under what conditions) and *how* service design practices are diffused throughout an organization, become institutionalized (Crossan, Lane, & White, 1999), and affect decision making processes and performance. More specifically, we ask: *what are the mechanisms through which service design develops into an organizational capability?*

The context in which we seek answers is the Telenor Group – one of the world's largest mobile telecommunications company that has been undergoing strategic transformation from a traditional telecommunications operator – to a mobile (and later digital) service provider since 2000s. Faced with increasingly high uncertainty and disruption of the business mode (Christensen & Johnson, 2009; Osterwalder & Pigneur, 2010)l, Telenor Group aim at continuous innovation and defined service design as a core capability of the firm. We gathered data over a period of 8 years, both retrospectively and in real time, within multiple markets of operation. Our findings show that gradually, through the use and co-alignment of dedicated resources, service design tools, training programs and boundary-spanning activities, service design emerged into customer-centric business practices throughout the organization, new ways of work and, increasingly, into a commonly shared language of service innovation. This study contributes by bridging the emerging theory on service design with established strategy theory on organizational capabilities.

In the first part of the paper, we provide a critical overview of service design and organizational capability literatures where we specify research limitations. The second part of this paper describes our research setting, the method, data collection and analysis. In the third part, some of our emerging research findings are provided. Finally, we discuss how service design and design thinking literature contributes to the management domain, and *vice-versa*.

2. Theoretical background

The literature on service innovation considers service design as a capability enabling firms to adapt to their changing environments and stay competitive sustainably (Kimbell, 2014; Ostrom et al., 2010). Various individual and organizational factors have been identified that facilitate or inhibit the service design thinking in an organization (Krinsky & Jenkins, 1997). Yet, surprisingly little is known about how individual and organization interacts in the development of service design capability. The tension in individual-organization interaction may vary at different stages of innovation process (Lane, Koka, & Pathak, 2006). Overall, the process dimension is often implied in these studies, but not studied in depth (e.g., Hertog et al. 2010). The dynamic capabilities literature (e.g., Teece et al. 2016) has recently argued that a life-cycle view and a process approach to capability development may enrich the organization research (Helfat & Peteraf, 2015; Laamanen & Wallin, 2009). In this paper, we seek to link the insights gained from service innovation studies to a capabilities view of the firm. More specifically, we aim to explain the underlying processes and 'higher-order' routines (Winter, 2003) through which service design evolves as a dynamic organizational capability.

2.1 Capability dynamics

Organizational capabilities have in extant research been suggested to be stable in order for the organization to utilize the capability to harvest rents over time (Winter, 2003). However, organizational capabilities are also expected to be amendable in order for the capability to support activities that are relevant for the organization to perform in an externally changing market (Teece, Pisano, & Shuen, 1997). This can potentially lead to a rigidity paradox constituent in the conceptualization of dynamic capabilities (Schreyögg & Kliesch-Eberl, 2007). Some conceptualizations of this amenability explain how capabilities follow a life-cycle, much similar to product-life cycles, where capabilities develops, matures and decline at different stages (Helfat & Peteraf, 2003). Others suggest that some firms are better at changing their capabilities than other organizations when facing shifting external market conditions (Eisenhardt & Martin, 2000). These firms are suggested to have dynamic capabilities that act on, and change, underlying ordinary capabilities (Helfat & Maritan, 2007; Teece, 2014; Winter, 2003).

The term dynamic capabilities was coined by Teece et al. (1997). It refers to a pervasive framework in strategic management that attempts to explain sustained competitive advantage. The motivation behind the dynamic capabilities perspective was to integrate previous approaches such as competitive forces (Porter, 1980), strategic conflict (Shapiro, 1989), and the resource base view of the firm (RBV) (Barney, 1991; Penrose, 1959; Wernerfelt, 1984). The concept of dynamic capabilities is defined as the "*capacity to renew competences so as to achieve congruence with the changing business environment*" (Teece et al., 1997: 516). The extant literature is adamant that dynamic capabilities are built and cannot be bought in a market (Collis, 1994; Makadok, 2001; Savory, 2006; Teece et al., 1997). In this respect, the dynamic capability literature clearly shows the connection to the theoretical origins of the RBV, and the underpinning assumption that resources and capabilities explain competitive heterogeneity (Helfat, 2000). According to the RBV the resources that lead to competitive advantage are "*unlikely to be available from others under terms that do not strip them of the net present value of the rent stream they are capable of generating*" (Rumelt, 1987: 143), and should abide to the Valuable, Rare, Inimitable and Non-substitutable (VRIN) criteria (Barney, 1991).

Dynamic capabilities have been claimed to be central to innovation (Tidd, 2012), and the issue of how firms develop and renew their strategies (Volberda, Baden-Fuller, & van den Bosch, 2001) has been linked to organizational learning (Crossan & Berdrow, 2003) and the development of organizational capabilities (Helfat & Peteraf, 2003). The dynamic capabilities literature has recently called for a life-cycle view and a process approach for improved knowledge on capability development (Helfat & Peteraf, 2015). Extant theory on capability development have emphasized how incremental, concurrent learning and managerial decisions influence the development of capabilities (Bingham et al., 2015). Researchers also argue that the development of new capabilities is related not only to the portfolio of exiting capabilities but to the actions of competent individuals that enact organizational capabilities (Laamanen & Wallin, 2009).

2.2 Service design as an organizational capability

Despite being increasingly addressed amongst business practitioners, a concept of service design has received rather limited attention in the research community (Johansson-Sköldberg, Woodilla, & Cetinkaya, 2013; Liedtka, 2014). Service design is often described as "what designers do", referring primarily to methods and tools for problem solving (Johansson & Woodilla, 2009; Kimbell, 2011) that are particularly relevant in contexts of high uncertainty and ambiguity (Liedtka, 2014; Waddock & Lozano, 2013). Several management scholars have turned their attention to design in strategy (Dunne & Martin, 2006; Liedtka, 2014). Researchers draw on the foundational tenets of design thinking, such as iterative cycles of learning (Seidel & Fixson, 2013) and value co-creation which, as they argue, enable firms to adapt to changing environments and stay competitive sustainably (Kimbell, 2014; Ostrom et al., 2010).

The scant research on service design practices has been limited to the discussions of the importance of design thinking to management (Gruber et al., 2015; Ostrom et al., 2010; Seidel & Fixson, 2013). We still know little about how service design (and design thinking) evolves into an organizational capability, though issues of the development and change of service innovation capabilities (among others) have received increasingly high scholarly attention (Helfat et al., 2007; Helfat & Peteraf, 2015). Various individual and organizational factors have been identified in the literature that facilitate or inhibit design thinking in organizations (Kimbell, 2014). Yet, surprisingly little is known about how individual and organization interact in the development of a service design capability.

In contrast to product innovations, service innovations have "game-changing" characteristics (Nordin, Kindström, Kowalkowski, & Rehme, 2011), implying that even small changes to a service offering may require considerable changes within an organization as well as in interaction patterns with the end-users (Breunig, Aas, & Hydle, 2016). Implementation of service design, therefore, requires orchestration of complex processes that may help to create a holistic service experience for customers, employees and business partners (Ostrom et al., 2010). Overall, the process dimension at multiple levels of analysis is often implied in these studies, but not studied in depth (e.g. Hertog, van der Aa, & de Jong, 2010)

In this paper, we seek to uncover how multiple actors enact service design capabilities throughout an organization. By exploring the implementation of a service design initiative within one large international

organization, we contribute to the life-cycle view of dynamic capabilities, and respond to the call for improved knowledge of the service design-strategy link (Michel, Brown, & Gallan, 2008).

3. Methodology

We use a revelatory, theory-building case (Yin, 1994) in this paper and justify our approach by the lack of knowledge of service design-strategy link (Eisenhardt, 1989; Eisenhardt & Graebner, 2007). We analyzed service design processes in a theoretically sampled research context – the Telenor Group – one of the world's largest mobile operators with more than 200 million subscribers and 33,000 employees operating in 13 markets across Nordics, East Europe and Asia. Faced with high uncertainty and disruption in the telecommunications industry since late 2000s, Telenor embarked on a journey of implementing service design as a corporate capability. A number of strategic initiatives were taken at the Group and Business Unit level that led the company to discover new markets and business models in the digital service ecosystem.

We used a longitudinal, exploratory case study approach because it allowed us to capture how service design practices evolved and led to multiple organizational outcomes, several of which were only observable over time. Examples of such outcomes are new leadership attitudes, incentive systems and ways of work. These organizational changes contributed to the creation of new interaction patterns with external stakeholders, thereby matching internal resource development with the demands of rapidly changing business environment.

In particular Customer Journey Mapping (CJM) is one of the key tools within the practice of service design that helps to capture customer perceptions and experiences of the service over time (Miettinen, 2009). This method enables designers to visualize different touchpoints that characterize customer interactions with the service. In Telenor, individual customer journeys are visually reconstructed based on customer insights that are generated through interviews, diary studies and process tracking.

Our longitudinal data consists of both historical and real-time data, which we gathered at different points of time, over a period of 2008-2016. The use of service design methods and tools in various projects at the Group and Business Unit level served as multiple episodes. We conducted over 100 interviews with Telenor managers in corporate headquarters and in Business Units, participant and non-participant observations, took notes from site visits and training sessions and collected other archival data. This approach allowed for triangulation of multiple data sources (Jick, 1979). We developed case narratives, used systematic analysis of informant stories and intuitively induced theoretical insights to identify and make sense of the emerging constructs (Gioia, Corley, & Hamilton, 2013).

4. Findings

Due to size limitations of the paper, in the following section we present implementation of customer journey mapping framework as one of the early episodes (within a series of other events) in the development of service design capability in Telenor.

As a response to Telenor's strategic intent to offer superior customer experience, the Customer Journey mapping Framework (CJF) was initiated in 2009. The framework was piloted in several Business Units and further developed in-house over the next four years (2009-2013). These pilots identified gaps between actual and planned customer journeys, and the implications to business in terms of, e.g., churn possibilities, overthrown customer service, and, ultimately, bad customer experience. This insight caught management attention and contributed to some key managerial decisions that, in turn, brought institutional changes throughout the Telenor Group. One of the first changes was launch of the Net Promoter Score (NPS) metric of customer satisfaction throughout the organization.

Alongside new corporate knowledge, the use of CJF increased consciousness regarding the root causes of bad customer journeys. Tensions between different corporate functions emerged, and a lack of end-to-end responsibility was highlighted. In parallel, and partly due to experiences gained from the CJF projects, an initiative to leverage strategic value of service design thinking was brought by Telenor HQ. The CJF was launched as a corporate strategic tool across Telenor Group, and service design was defined as a core organizational capability. Over time, NPS reporting standards were introduced throughout the entire organization and used as a non-financial KPI at different management levels. Executive training programs on service design (including CJF) were

also launched. One example of how service design tools was utilized is from Telenor Pakistan. In this project the challenge was to develop to develop digital services in the untapped market with 50% of the country's working population in rural areas. Telenor Pakistan is one of the countries leading mobile operators, and the project aimed at improving the livelihoods of farming households by empowering them with better access to information and financial inclusion. This ambition raise several challenges for the innovation project since tapping into this potential market involves limited literacy and technical experience as well as very limited purchasing power by the potential customers. Therefore, the project team needed to involve local farmers in a way that enabled the team members to understand how the services could be designed in a way that would be intuitively understood by local potential users, yet maintain a low cost structure. Faced with a complex value chain in the industry and unknown customer base, Telenor Pakistan project relied on service design methodologies to change leadership attitudes, incentive structures and organizational routines for service innovation, thereby matching the demands of rapidly changing environments. Thus the introduction of service design methods and tools resulted in an increased awareness of the criticality of customer-centricity, as illustrated by the following quote by a project team member in mAgri, Telenor Pakistan: *"When you give a farmer a mobile and ask her to ring up a number, she listens to the service. Because we talked to her, we realized that the buttons were too hard for her to press. Insights like these are valuable for the process of creating new services."*

The key finding from our studies is that customer journey mapping has gradually become a commonly shared, institutionalized practice of service design across Telenor. As one of our informants underlined, *"People are talking a lot more about the customer journeys. This is a radical change."* Our study also shows that customer journey mapping has contributed to an increased understanding and practices of resource integration among different business actors. Through the use of CJF, a cross-functional collaboration was induced and a mutual understanding of superior market offerings from a customer perspective was created. One of our informants emphasized CJM implications to the ways of work and thinking in Telenor: *"[The customer journey maps] have helped us to think from a customer perspective, by bringing together process owners and customer-facing personnel. (…) For an organization that is used to thinking [of] profit perspective as the simple truth, it has changed our way of thinking."*

Last, but not the least, customer journey mappings have stimulated Telenor managers to integrate customers as key resources in the value co-creation. As one of our informants argued: *"We are now talking with the customers directly one-to-one (…) and the customers also appreciate this much more (…). We probably have a smaller sample size, but we can really dig more into it when we interact directly with the customer."* Over time, customer journey mapping practices have stimulated new and more creative ways of work and contributed to the creation of shared language of service design and innovation throughout the organization.

5. Concluding discussion

The goal of this paper is to enlighten the mechanisms through which service design develops into an organizational capability, and by doing so, to bridge the emerging theory of service design with established strategy theory. Through a longitudinal, exploratory case study of one of the world's largest telecommunications companies, we focus on how scattered service design practices become shared and replicable patterns of service innovation throughout the organization.

Our findings show how the initial pilot project was underpinned by a service design thinking related to customer centricity. As the CJF proved valuable to the way organization members understood, interacted and made decisions concerning their customers, this way of work became increasingly diffused throughout the organization and institutionalized through new performance measures and training. Implementation of customer journey framework was only one episode in the development of service design capability in Telenor, but it revealed critical dimensions of service design (such as customer co-creation, actor engagement across various components of a service) beyond the methodology itself. For example, a standardized use of NPS metric and subsequent KPIs demonstrated an increasing ability (and shared language) to handle customer centricity. As such, service design thinking gradually disseminated throughout the entire organization. In this context, it is thus evident that managerial intentionality affect the multiple paths to capability development, as the service design initiative was a managerial decision. It is however, also important to point out that management did not have a direct role in all the customer-centric projects and subsequent learning situations, thus management intentionality can be understood as an initiating condition but further research is required to unmask the role of management throughout the process of building organizational capabilities. Further research should emphasise

on explicating how design thinking competence becomes diffused and institutionalized above organizational level e.g routines the individual- and group-levels (Crossan et al., 1999). Moreover, as the project is still ongoing, we currently seek to identify to what degree locally built best practices and capabilities are transferable to other business units within the Telenor group, or to what extent they are susceptible to knowledge stickiness (Szulanski, 1996). There are also potential implications to practice from this study as it demonstrates how service design methodology can be implemented and have strategy implications for organizations.

Current research on organizational capabilities calls for an increased understanding of the emergence of organizational capabilities and their life-cycles (Volberda et al., 2010; Helfat & Peteraf, 2015). Our study contributes to this stream of research by exploring the emergence of service design capability and theorizing the design-strategy link.

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