

# Facilitating service interactions with design games

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## Abstract

It is argued that design for service aims at creating an “action platform” for service interactions to occur. Service research in the field of marketing, especially the perspective offered by Service Logic, highlights the importance of service interactions in facilitation of value creation processes of customers. Recent perspectives in the field of design, similarly, recognize the importance of user contributions during the use of an offering arguing for the completion of design by the user in-use. Therefore, this paper recognizes two modes of design in-use: *co-design in-use* and *independent design in-use*. Focusing on *co-design in-use*, this paper recognizes service interactions as a platform for *co-design in-use*. Further, it examines the facilitation of such interactions with design games through the presentation of two case examples focused on coaching service offerings. *Co-design in-use* differs from co-design events before use as it involves the actual users of an offering in absence of professional designers.

**KEYWORDS:** service interactions, co-design in-use, co-creation of value, facilitation, design games

## Introduction

The increasing involvement of non-designers in design process has made the facilitation of design process an important new role for design practitioners and researchers. This facilitation of co-design activities aims at leading, guiding and providing scaffolds for participants’ creative expressions and making capability (Sanders & Stappers, 2008). One of the tools utilized in this context is design games (Brandt, 2006; Brandt & Messeter, 2004; Vaajakallio & Mattelmäki, 2014). For example, design games have been utilized for facilitation of cross-disciplinary collaborations in participatory design processes by improving idea generation and communication between participants (Brandt & Messeter, 2004; Johansson, 2005). Design games, also, set the stage for sharing current and past experiences among co-design participants and enable them to envision future scenarios (Vaajakallio & Mattelmäki, 2014).

Co-design events (Brandt, 2001; Brandt, Johansson, & Messeter, 2005), in which design games are utilized, typically take place during design processes preceding the actual use of the design solutions. Sanders and Stappers (2014), as well, position design process prior to the point when designs are put into use. Their framework, therefore, does not recognise the potential of (co-)design outside of the official designer-run design process. Two prevalent perspectives may have contributed to this. One is the notion that designers (in collaboration with selective invited non-designers in the case of co-design) are the main agents in the act of designing. The other is that the designs themselves, as outcomes of the design process, are complete when the design activity of the design team is completed. Both perspectives are deeply rooted in a product-centric understanding of offerings. However, there are emerging views that consider design fundamentally unfinished until used. For example, Kimbell (2012), taking a practice-oriented perspectives on design, emphasizes the notion of incompleteness of design outcomes until use. In her perspective, design does not end when design process ends, but continues and gets completed by the user(s) in-use. This emphasis on the completion of design in-use is akin to the recent value creation discussions in the field of service marketing (Grönroos & Voima, 2013; Vargo & Lusch, 2006) arguing for the creation of value by the user(s) in-use.

Service research in the field of marketing has emphasised the importance of user participation in service production through concepts such as “inseparability” and “co-production” of services (Chase, 1978; Fisk, Grove, & John, 2008; Mills, Chase, & Margulies, 1983; Zeithaml, Parasuraman, & Berry, 1985). In fact, many service offerings cannot be fully designed before their use, as they are highly dependent on the inputs of their individual end users. This is especially true for the service offerings that help individuals develop a desired set of capabilities and skills over a period of time with the assistance of a coach. In such cases, it is impossible to have a readymade and predefined service solution that fits all. Thus, the service providers of such offerings meet individual service users for gaining an understanding of their circumstances, personal goals, interests, capabilities and needs. Only then, a developmental plan can be co-designed together with the recipient of service. This type of co-design occurs in-use and in absence of design practitioners or researchers. This is different from the co-design in-use described by Botero and Hyysalo (2013) or Johnson, Hyysalo and Tamminen (2010) extending the dialogue between the design professionals and users beyond the traditional design process into use-time allowing a continuous co-design or modification of an existing solution.

This paper attempts to recognize the importance of service interactions as a platform for co-design in-use during the offering of service. It also explores whether co-design tools such as design games can be useful in facilitating such interactions between service providers and customers in absence of design professionals. Given the attention service research in the field of marketing has paid to service provider-customer interactions, this paper first gains an understanding of such interactions through the lens of marketing with a special focus on the Service Logic perspective. Second, recent perspectives in the field of design recognizing the importance of user contributions to design are briefly reviewed and connections are made to the perspectives of Service Logic distinguishing *co-design in-use* from *independent design in-use*. Third, to better understand how design games can facilitate *co-design in-use* during service interactions, two case examples are examined. Finally, after presenting a summary of the themes observed in the documented game sessions and the conducted follow-up interviews, the key characteristics of *co-design in-use* and the required facilitation, as seen in the presented examples, are discussed.

## Service interactions through the lens of marketing

Service research in the field of marketing has long recognized the importance of customer participation in production and delivery of service offerings. The perspectives offered in this regard are nowadays viewed based on their goods or service orientation. This paper focuses on the customer-centric, service-oriented views of Service Logic (Grönroos & Gummerus, 2014; Grönroos & Voima, 2013) after a brief review of earlier provider-centric, goods-oriented perspectives.

User participation in service provision became a focus area in service marketing because in contrast to goods, service offerings were deemed “inseparable” (Fisk et al., 2008; Zeithaml et al., 1985). This meant that unlike product offerings, the production and consumption of service offerings were viewed to occur simultaneously without any separation in time and space. Therefore, service offerings were considered co-produced with the customers. This made customers an essential participant in service operations. As these earlier views were more provider-centric, there was a concern over the impact of this user participation on the efficiency of the operations run by service providers. Therefore, an early approach to address the uncertain consequences of service co-production was to limit customer interference in the provider’s processes (e.g. Chase, 1978). Another approach was to consider customers as “potential employees” of service organizations whose productive contributions to service co-production could be motivated, guided and managed (e.g. Mills et al., 1983). Numerous forms of self-service schemes, such as airline self check-in and various forms of automated retail, are examples of this line of thinking that lowered operation costs of service offering through the engagement of customers in serving themselves. This attention to the “productive efforts” of service users can also be seen in the concept of co-production introduced in the field of public policy and administration (e.g. Ostrom, 1996; Parks et al., 1981). In recent re-introductions of the concept of co-production, citizen engagement in co-design in addition to service production and delivery is emphasized (e.g. Boyle & Harris, 2009), however, governance and logistical/feasibility drivers remain as main motivations for citizen engagement in co-production (Bovaird, 2007; Joshi & Moore, 2004).

In the recent value creation discussions in the field of marketing, Service-Dominant (S-D) logic and Service Logic (SL) perspectives emphasize the importance of interactions in creation of value. Instead of separating offerings into products and services on the basis of their physical attributes, both perspectives focus on the service received and the value (co-)created by the customers in-use. In both views, the user plays a significant role by not only determining the value in-use, but also (co-)creating this value (Grönroos & Gummerus, 2014; Grönroos & Voima, 2013; Vargo & Lusch, 2008; Vargo, Lusch, Akaka, & He, 2010). While the interactionality of value creation in S-D logic is implicitly expressed (Vargo & Lusch, 2008), customer-provider interactions in SL, divided into two categories of direct and indirect interactions, play important roles in value creation. In SL, value is created by the customer in-use and the provider is a facilitator of this process (Grönroos, 2008, 2011). Direct interactions, considered as the only avenue for providers to take part in co-creation of value with the customer, are defined as “joint processes where two or more actors’ actions merge into one collaborative, dialogical process. The actors can be human actors or intelligent systems and products” (Grönroos & Gummerus, 2014, p. 209). During indirect interactions, however, “one actor, such as a customer, interacts with a standardized system or product. No merged collaborative, dialogical process occurs, and therefore, the other actor, such as a provider of such resources, cannot actively influence customers’ value creation” (Grönroos & Gummerus, 2014, p. 209).

What distinguishes the SL’s view of customer-provider interactions compared to the earlier concepts in service marketing, such as co-production, is that SL defines these interactions in

terms of their facilitatory role in support of the value creation processes of the customer as opposed to the benefits the provider might gain as a result of the customer's productive contributions in service provision. Looking more closely at the value creation of customers can shed light into the importance of customer-provider interaction during self-development service provision.

## (Co-)design in-use through the lens of design

In recent years, design literature has increasingly recognized the importance of use and user activities in-use. Redström (2008) distinguishes between the design activities “before use” and “after design” characterizing acts of defining use before the actual use (for example through potential user involvement in prototyping) as “use before use” and the acts of design that occur in-use of an offering after design (for example, modification or redesign of the offering by the users) as “design after design” (p. 421). Ehn (2008), consequently, distinguishes between participatory design that attempts to “design for use before use” and meta-design that aims at “design for design after design.” For Ehn, “meta-design” recognizes the possibility of a chain of subsequent independent design activities in-use by unforeseen users after an earlier design activity during a design project lead by professional designers. Therefore, meta-design views every use situation as a potential design situation that can be facilitated through the infrastructure provisioned at project time. This attention to “infrastructuring” in “meta-design” is similar to what Manzini (2011) describes as “action platforms” in “design for service.” Manzini suggests that a service with all its interactions cannot be fully designed; what the design outcome creates is “an action platform [...] that makes a multiplicity of interactions possible” (2011, p. 3). Both “meta-design” and “design for service” recognize the importance of what occurs in use and view the role of a primary designer-lead design process as one that facilitates subsequent user activities in-use. In this way, the SL concepts of indirect interactions and the facilitation of user's value creation processes through the resources provided by the provider find commonalities with the aims of “meta-design” and the “action platform” of “design for service.”

Kimbell's (2012) pair of concepts of “design-as-practice” and “designs-in-practice,” also, foreground the importance of use and user activities offering a different way of understanding the activity of design. “Design-as-practice” de-centers the design professionals as the main actors in design activity by recognizing other actors such as the employees of service organizations as well as customers and end-users who constitute what design is through their practices. “Designs-in-practice” highlights the notion of incompleteness of design outcome and process and the notion that there is no singular design as the user, “[t]hrough engagement with a product or service over time and space, [...] continues to be involved in constituting what a design is” (Kimbell, 2012, p. 136). Therefore, combining this perspective with SL, one could identify two modes of design in-use: *co-design in-use* and *independent design in-use*. *Co-design in-use* involves both users and providers in designing during direct provider-customer interactions. This occurs in joint sphere of value creation in SL framework. *Independent design in-use* is the involvement of end-users in completion of design in-use through their indirect interactions with the resources provided by the provider. This occurs in the customer sphere of value creation in SL framework. Redström's (2008) “design after design” falls into the second category. This article focuses on the first category, i.e. the service interactions that can function as *co-design in-use* events.

## Two examples of (design) games for service interaction facilitation

The following two examples serve as test beds for the investigation of service interactions and the role of design games in facilitation of co-design in-use. The examples are based on a collaboration between master's level service design course and an organization that provides coaching and support services to youth who are outside education and working life. The design brief the two student teams received were open-ended with the aim of empowering the youth served at two separate units within the collaborating organization. The students were asked to study the activities and the people (both providers and customers) in each unit and engage them in the exploration and co-design of potential solutions that would serve their needs.

### Example one – breaking the ice

The first team, in collaboration with the staff and participating youth at one unit's activity centre, proposed a solution that followed the framework of design games. The challenge faced by the staff at this unit was that the youth were either too shy or seemed reluctant in sharing personal thoughts and stories. The staff also faced difficulty in motivating the youth to give feedback on activities held at this unit. This was important to the staff as they felt the youth's input would help them better plan and organize future activities.

After observing the youth and interviewing the activity centre staff and a number of youth who had taken part in the unit's activities, the student team identified the need for helping the youth in developing their communication skills in group situations. Therefore, as a design solution, the team aimed at creating a playful and safe environment through the use of a board game. This board game was called "Oletko Kartalla?" or "Are you on track?" (see Figure 1). The game aimed at lowering the communication barriers faced by the youth and encouraging them to get to know each other through sharing personal stories and interests. This was achieved through the game mechanics of taking turns, throwing a dice, advancing one's game piece on the board and answering a question, read by the next player, from one of four colour-coded themes matching the colour of the position on which the player's game piece has landed. The themes in this game were selected based on the typical topics discussed with the youth at the activity centre. These themes included Sports & Nature, Cooking & Living, Arts, Crafts & Music, and Travelling & Culture. Another aim of the game was to learn about the interests, favourite activities and routines of the youth and help the staff members in planning future activities with the youth based on the information uncovered from the youth while playing the game. This game was the result of two design iterations that engaged both the staff members and the youth representatives in testing game prototypes and providing feedback and suggestions to the design team.



**Figure 1 – "Oletko Kartalla?" board game. Copyright 2013 by Brecht Vandevenne.**

## Example two – a systematic check-up

The second team worked with a unit that supported youth reintegration in the society through one-on-one coaching aimed at helping the youth in finding their path to employment. This team, also, ended up with an interactive game as their design proposal. The game was called “Qué pasa?” or “What’s up?” Focusing on the one-on-one coaching sessions held between a career coach and a youth at this unit, this game guided the conversations during the coaching sessions through a number of themes graphically represented on cards. Also, three card categories of challenge, achievement, and wild cards encouraged the youth in settings challenges and goals in relation to each theme (see Figure 2). The themes selected for this game were inspired by a list of key dimensions of participation in society discussed in an article on reintegration of veterans in the society (Resnik et al., 2012). The overall aim of the game was to support both the youth and the coach in their coaching interactions through the facilitation of their learning and reflection processes and supporting them in co-identification of their next course of action. The challenge and achievement cards also allowed them to set challenges and acknowledge achievements through tangible cards the youth could collect. Similar to the first game, the design of this game took into account the input received from participating staff and youth in co-design and feedback sessions.



**Figure 2 – “Qué pasa?” game sample cards (challenge, achievement, and wild cards) and card themes. Copyright 2013 by Sarasati Kushandani.**

## The trial of the (design) games in-use

Since both service units were eager to implement the games, a follow up study was set up to document and understand the impact of use and incorporation of these games into the practices of the service units involved. Both units conducted a number of trials of the games with clients who were not involved in the initial design process. Post-trial interviews of the participating staff members were conducted to get a sense of how the games worked in practice. The staff members were also asked to record the participating youth’s opinions on the games after each trial.

The documented game sessions and the interviews were first studied by both authors of this paper individually and then discussed in order to analyse the gained insights. The analysis was supported by the extensive research done by Brandt (2006) and Vaajakallio (2012) on the use of design games in co-design events. The following depicts the two main themes observed in the use of the games presented here. The first theme highlights the qualities of the (design) games as a facilitator of dialogues. The second theme emphasises the collaborative exploration, sense making and co-planning facilitated by the game and the

coach. The themes are demonstrated with quotes from the documented game sessions and follow-up interviews.

### Magic circle, Play, and Game rules

In her research, Vaajakallio (2012) proposes three perspectives for experiencing design games: as a tool, a mindset, and a structure. As a tool, design games helps to organise a dialogue and support empathic understanding of the participants. As a mindset, it aims at creating a temporary atmosphere for the players called a “magic circle” (Huizinga, 1950) and as a structure it aims at facilitating interactions between the participants. A “magic circle” is a “physical and ideal playground with a special ordering of time, roles and rules” (Vaajakallio & Mattelmäki, 2014, p. 69).

These elements are most visible in the first game, “Are you on track?”, where several youth played the game with an activity coach. The ideal playground created by the game presents the youth with a fun and safe environment where they can practice and learn new social interaction skills without the fear of negative consequences. One activity coach recalls being surprised at the level of laughter during the game and the other shared his perspectives on how the game acts as an ice-breaker:

*Coach 1: I think there was some funny questions and I think there was some laughter and like some funny stuff that don't come up so often in our group maybe*

*Coach 2: Yeah, it broke the ice so to say! [...] Because I think [...] every one of us would like to tell something about ourselves to [an]other person; like to tell who we are; why [we] like this; what we love. But for [...] many of these young persons, it's very hard to tell. For example, being bullied in school so they don't open their mouth in a group. That's why they are here; why they are not in a school or in a working place. I think one of the biggest reasons why they don't talk is that especially when [they] talk about themselves, [...] they might [be] afraid that if they give something out of them, something personal, someone might attack to them. That would be a very big bit, so I think the game creates certain security that it happens ... there are these limits in this game, so I can tell something about myself. It happens in this game and there are rules in this game, [...] but I think it's a good thing.*

Similarly, the comments written by the youth after playing the game confirms the creation of a “magic circle” and fun atmosphere by the game. When asked if they recommend playing this game in future sessions, the response was positive. Here are few sample responses from the youth:

*Youth 1: Playing was quite nice and relaxed. It was fun that it was easy to discuss with others with the help of questions and answers. In the beginning, I was a bit nervous*

*Youth 2: Yes, the game helped throwing oneself in the conversation.*

*Youth 3: With the help of the game, it was easy to talk with others and spend time so that would be sensible [to use the game in future sessions].*

*Youth 4: I think the game is good for situations with many newcomers. It might work as a kind of an icebreaker between us. Why not on other occasions as well – those topics are not necessarily discussed very often, so the game is a nice way to get to know more about each other.*

As Brandt (2006) suggests, game rules such as turn taking can have a levelling effect for participants giving each player equal opportunity to take part in playing the game. This also breaks the existing hierarchies that may exist between a coach and the youth giving the youth an equal footing in interactions with the coach. This presented the coaches with a new

scenario as the youth got the opportunity to pose questions written on the question cards to their coaches when it was their turn to play.

*Coach 2: what we think what was new [in the game interactions] was usually when we are in a group, [...] youngsters talk to us when we ask something, but it's very rare that anyone would ask something from us... like someone would ask us [...] how are you? What do you like? or what is your favourite? ... so-and-so. It's very rare, so even though we think that they might be interested to know more about us, [...] usually never so that they would ask [...] so we're not so in different levels [during playing the game] that brings us closer also.*

#### Holistic exploration and co-design in-use

Both games provided tangible game pieces and tasks that touched upon different areas of life. Especially in the second game, “Qué pasa?”, the themes indicated on the cards enabled a systematic examination of various elements in the youth’s life. In addition, guided by the game rules, the placement of the theme cards on the table created a visible and concrete representation of the youth’s life. This enabled both the coach and the youth to take a holistic view at the youth’s capabilities, challenges and desired achievements in relation to selected themes. Having a designed space for writing on the cards invited the youth to add their own notes allowing them to reinterpret the topic at hand and reflect on their circumstances. The coach played an important role in asking the right questions, guiding and facilitating the youth’s reflections. In addition, the ease of moving the cards around on the table and pairing them enabled both the coach and the youth to create links across the themes and gain new perspectives into underlying causes of some of challenges faces by the youth. Here is an excerpt from the trial of the second game demonstrating this process of exploration, reflection and co-design in-use.

*Coach 3: You mentioned that you have learned skills to help you with being in contact with friends. How would you define this friend card? Are there challenges concerning friends. Time for an example!*

*Youth 5: For example, travels – some [friends] live further away; in other countries. To me also social media is important. Through, it is easier to be in contact with those far away; I don't know!*

*C3: “To live far away?” and that you “keep contact with some” (the coach helps the youth in thinking about what to write down on the card). Are there changes coming up?*

*Y5: But you needed to write a challenge [on the card]! All the friends don't live that far, but many do.*

*C3: So it is good to have foreign friends! How do you keep contact?...in English?*

*Y5: English and Swedish. Regularly. Mostly in writing. [it's] easier to write [because of] time differences.*

*C3: How do you evaluate your [English] skills? Can you write fluently? (Y: yeah) Could you link this with your job seeking? Or finding your own field? Could you look for a job in where you could use English?*

*Y5: I could. For example, in a place where there are foreigners. serving foreigners. In here, (pointing to a card) we could add languages (C: Sure, good!)*

*C3: Sure, good! What could be next?*

*Y5: Maybe this- (taking a card)*

*C3: What interests you at the moment? E.g. hobbies? What would interest you the most?*

*Y5: Free time. I could put [on the card] what I have studied and how I apply those skills in my free time. (an issue that was raised in earlier discussions)*

The coach's feedback on the trial of the game underlined his appreciation for the way the game facilitated reflections and systematic examination of important issues in the youth's life. What the coach found positive about the game was that despite knowing the youth for some time, the game allowed them to focus on issues, gain a holistic understanding of several areas in need of attention in youth's life and create new links that allow them to address unresolved issues with a new perspective.

*Coach 3: we just know the youth and then we talk with him and the game gives us a more systematic tool to discuss about it in a way we just don't discuss about it during our meetings because we just focus on some topics. [...] When you like get more systematic insight from those topics, so you can make the new links and then you realize that okay maybe this is what we have to do for the next time.*

The service interactions in this coaching context aim at finding solutions that help the youth in taking steps toward a good and independent life in the society. The coach gently seeks possibilities in which the youth can be supported and helped. It is, however, the youth who should eventually take the responsibility in taking the steps toward change. During the game session, the coach probes potential avenues around sensitive topics and poses questions in order to trigger reflections rather than pointing at specific solutions. It is easy to recognise that there is much more understanding, professional competences and history underlying the exchanges than what is said aloud in the actual dialogue. Although the game was co-designed following the principles of design games, the presence of designers for facilitation of the game session is not needed in this type of coaching services that the examples represent. The designed artefacts, i.e. the game pieces and rules, aid the professional practitioner in the coaching process of seeking, sense making, and at best co-designing a better future with the youth.

*Coach 3: [...] these are the issues we are working with everyday, so... and with the person we think we know, but it is easy [...] to concentrate on certain topics and if you play the game, you can always get some new insight from there. like [in] the first session I have with the girl and there was this health card so [s]he didn't want to discuss about that at all, and I knew that!*

*Coach 3: [...] it definitely helps to realize that what is the life the whole life situation. What are the topics avoided, and what are those he is comfortable speaking in the way he is maybe talking about those.*

As seen here, the coach's role in facilitating the session with the help of the game is crucial. The knowledge the coach has of the history and the background of each youth, guides the coach in steering conversations in a way that triggers thinking and activates reflection in the youth. This would have been difficult to achieve if the youth were to play the game individually. A comment by another youth, participating in the game trial, emphasizes the importance of carrying a dialogue with the coach while playing the game.

*Youth 6: You need two people for this game. If I had this game in front of me, I would have not had [any] thoughts.*

## Discussion and future research

As stated earlier, the engagement of potential users in co-design and the application of design games in facilitation of co-design interactions and process have mainly been studied and discussed in before-use design contexts. An example could be a service design process that concludes before the implementation and eventual use of the design outcome. While design for service typically involves the (co-)design of various touch points of service provider-user interactions as part of service journeys, what is (co-)designed is merely an “action platform” (Manzini, 2011) that enables and facilitates eventual service interactions in-use. This is inline with the recent views on design practice that consider designs unfinished until used (e.g. Kimbell, 2012) highlighting the importance of user input and activity in constituting what the offering becomes in-use. As seen in the review of Service Logic literature (e.g. Grönroos & Gummerus, 2014), service interactions also serve as a platform for co-creation of value with the service users allowing them to affect the service offering, for example, through their involvement in co-designing the offering for themselves in-use. An extreme example for service offerings with such characteristics is coaching service offerings where clients are expected to interact with coaches and engage in facilitated learning, reflection and self-development.

We believe that contexts such as coaching offer a fruitful platform for examining how designer contributions to design for service (before use) can create “action platforms” for supporting service interactions, facilitating the user and provider efforts in co-design in-use, and positively impacting the experience and quality of service. All of these, arguably, lead to a better value co-creation by the participants. Therefore, this paper highlights the need for diving deeper into service interactions as the context for co-design in-use. However, as each service context presents itself with its own unique characteristics and sensibilities, care must be given in applying the findings to other contexts.

The two examples presented here were our first attempt at observing the role of design games as action platforms for facilitation of service interactions and co-design in-use. These examples focused on service settings where professional coaching aimed at triggering reflections, mutual learning and co-design of action plans for positive developments in the clients’ lives. The follow-up study demonstrated key differences in the facilitatory role design games played in this context compared to typical co-design events during a design process before use. One key difference was that the participants in these service interactions were the actual service users who were there to improve their own conditions. Unlike typical co-design events (before use), these participants did not need to imagine the lives and use scenarios of other users out there. Neither were they required to step into the shoes of these imagined others. Instead, the first objective of the games was the break the ice by creating a safe, trusting and non-judging environment where each participant would feel at ease volunteering personal thoughts and experiences. Therefore, instead of facilitating their ability to imagine the world outside of their immediate experiences, the games aimed at helping them see the world within, re-examine their personal experiences, and gain awareness of their own patterns of behaviour before they could imagine different approaches and future practices to follow. Another difference, as highlighted in the second game, was the key role of professional coaches in this process. The personal nature of arriving to a developmental plan required the facilitator of such co-design in-use sessions to have more knowledge about the client’s life. This allowed the coach to better steer conversations and trigger self-reflections and thoughts in the client.

The analysis of the service interactions in these cases and the feedback received from the participants strengthened our views on the importance of co-design in-use during service interactions. Further studies are needed to examine other forms of co-design in-use and the

types of facilitation the design for service approach can offer. Understanding the facilitatory roles of designs in support of value creation processes of the service users will also shed more light into this topic.

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