Exploring the transformative impacts of service design: The role of designereclient relationships in the service development process

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Based on a multiple case study on Service Design (SD) projects, we discuss different levels of SD's transformative impacts, associated with three types of designereclient relationships. In the 'delivering' relationship, SD informs service planning and development practices based on user-centred insights, while affecting physical service resources/technologies. In the 'partnering' relationship, SD aligns actors with the target users' experience while extending the SD impact, beyond physical resources/technologies, to human actors. Finally, in the 'facilitating' relationship, SD helps client organisations build their own capabilities for sustainable user-centred innovation, while achieving a wider impact on physical resources/technologies, human actors, processes, and routines. The contextual factors and implications of the designereclient relationships for SD practices are also discussed, based on expert interviews.

Keywords: service design, designereclient relationships, new service develop-ment, case study research

The recognised benefit of integrating design to improve company per-formance (Gemser & Leenders, 2001) leads many companies to seek the expertise of professional consultants, which can provide an outside-in perspective (Gericke & Maier, 2011). Involving external design expertise in innovation processes entails two relevant, yet currently discon-nected, issues: The nature of designereclient interactions (Nikolova, Reihlen, & Schlapfner, 2009) and the design's roles and impacts on innova-tion processes (Junginger & Sangiorgi, 2009; Perks, Cooper, & Jones, 2005).

Design communities have studied designereclient interactions, focusing on developing taxonomies (Bruce & Docherty, 1993; Bruce & Morris, 1994) and identifying conditions or strategies for successful design management (Hakatie & Ryyn€anen, 2007; Maciver & O'Driscoll, 2010). However, little research has been conducted on different designereclient relationships in

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regards to the specific qualities of designers' actions, skills, and outputs. Also, although studies have indicated how design impacts innovation processes and how its outcomes may be affected by the way designer—client relationships are managed (Roy & Riedel, 1997; Verganti, 2003), design impact characteristics according to designer—client collaborations have seldom been articulated.

Compared to product innovation, service innovation involves organisational transformation as a critical condition for service implementation and performance (Karpen, Gemser, & Calabretta, 2017). As a service concept and specifications are operationalised through performances, processes, and deeds (Edvardsson, Gustafsson, & Roos, 2005; Vargo & Lusch, 2004), less-prepared organisational resources and capabilities may obstruct successful service delivery (Kowalkowski, Windahl, Kindström, & Gebauer, 2015). Therefore, service innovation can require a wide range of improvements in organisational resources, processes, structures, and cultures, often made by changing the fabric of an organisation (Andreassen et al., 2016). Accordingly, organisational transformation by SD draws growing attention (Andreassen et al., 2016; Sangiorgi, 2011) while empirical studies on that topic are increasing (Pinheiro, Alt, & Mello, 2012; Terrey, 2013).

In this study, we aim to explore SD practices and their transformative impacts which are influenced by designer—client relationships. A multiple case study on ten SD projects identified a typology of designer—client collaborations and different SD qualities and approaches. These findings were discussed in relation to SD's transformative impacts on organisational resources and capabilities. Further interviews with seven SD experts contributed to our understanding of the contextual factors and implications of designer—client relationships.

1 Related studies

I.1 Designer—client relationships

The topic of how to effectively utilise external designers to benefit from their outside perspectives is an integral part of designer—client relationships (Von Stamm, 1998). Empirical examinations of consultant-firm collaborations generated different taxonomies. For example, Bruce and Docherty (1993) categorised designer—client relationships in three ways: family, arms-length, and one-off purchase. The 'family' approach allows designers to proactively engage in creating corporate strategies and innovation solutions based on an understanding of clients' tacit knowledge, culture, vision and strategy, whereas designers in the 'arms-length' and 'one-off purchase' approaches work according to the client's requirements, remaining external to the client organisation's internal practices and processes. Bruce and Morris (1994) more simply classified designer—client relationships as short-term and long-term relationships.

More recently, Gericke and Maier (2011) conceptualised different ways of engaging Design Thinking with engineering design as passive coupling and active coupling. Passive coupling is design-led and active coupling is based on the two disciplines' co-creation. Generally, designer—client collaborations based on intimate, long-term relationship are preferable, since they allow designers to deeply understand clients' contexts, needs, and problems and generate better ideas and quality design solutions to meet clients' real needs (O'Connor, 2000).

Along with the taxonomies, prerequisites for successful designer—client relationships were also discussed (Bruce, Cooper, & Vazquez, 1999; Chiva & Alegre, 2009; Lewis & Brown, 1999). Studies often mention compatibility (Bruce & Morris, 1994), relational chemistry (Maciver & O'Driscoll, 2010), shared understanding (Gericke & Maier, 2011), and flexible and open mindsets based on mutual trust (O'Connor, 2000). While studies generally report that successfully managing designer—client relationships can help companies gain a competitive advantage, they do not necessarily specify how designer—client relationships may change the nature and characteristics of design practices or their impact on organisations.

1.2 Different roles of design in service innovation processes While there is a wide range of design roles in innovation processes, ranging from technical functions to potential drivers of transformational innovation (Junginger & Sangiorgi, 2009; Perks et al., 2005), the degree to which designers' full potentials are realised greatly depends on how designer—client relationships are managed (Verganti, 2003). For example, a close designer—client relationship can empower designers to work beyond the initial scope of projects and achieve radical design-driven innovations (O'Connor, 2000). Nevertheless, there is a lack of studies exploring how different designer—client relationships may characterise design approaches and differentiate design impacts.

We argue that design impacts on service innovation deserve critical attention and investigation. Unlike product innovation, where design impacts are generally related to the attributes of physical objects (e.g., style/appearance, functional/technical performance, or manufacturing/distribution efficiency) (Roy & Riedel, 1997), design impacts on service innovation require different dimensions. Literature indicates that service innovation is the domain where organisational capabilities and transformation can facilitate competitiveness and improve business (Karpen, Bove, & Lukas, 2011). For instance, Kowalkowski et al. (2015) point out how organisational elements that are less prepared for service (e.g., internal resistance, lack of overview and coordination, or product-centric sales force) may obstruct service growth trajectories. Conversely, an organisation's relational orientation towards customer

experience and proactive approaches to solving customers' problems are regarded as important facilitators for successful service performance (Johnston & Kong, 2011). Transformation at the organisation level is thus required for successful customer-centred service innovation (Karpen et al., 2017).

Accordingly, the impact of SD can be considered in relation to its contribution to organisational change. Service innovation is more about improved customer experience, which is affected by organisational performance, processes, and actions (Edvardsson et al., 2005). Service experience also involves human actors, physical resources/technologies, processes, and routines (Blackmon, 2008; Johnston & Clark, 2008). Therefore, we will look at how SD practices may affect organisational resources and capabilities.

1.3 SD as a transformative approach

SD, as a human-centred and design-led approach to service innovation, has extended its focus from service interfaces to service systems and organisations (Polaine, Løvlie, & Reason, 2013; Yu & Sangiorgi, 2014). Along with contributions to designing for service systems, SD approaches to shaping people's behaviours, processes, and organisations have been conceptualised as 'transformation design' (Burns, Cottam, Vanstone, & Winhall, 2006; Sangiorgi, 2011). The transformative design approach focuses not only on creating final solutions but also on strengthening the ability to produce sustainable innovation (Bailey, 2012; Terrey, 2013). In public contexts, transformative SD contributes to changing the ways the public interacts with social systems, services, and policies (Burns et al., 2006), while in commercial contexts, it can trigger change within organisations by embedding user-centred perspectives and cultures with design knowledge and tools (Bailey, 2012; Lin, Hughes, Katica, Dining-Zuber, & Plsek, 2011).

SD can reform service systems and organisations, since customer-centred service development practices necessitate organisation-level changes (Andreassen et al., 2016). According to Junginger and Sangiorgi (2009), there are three levels of organisational changes that SD can facilitate: Artefacts/behaviours, norms/values, and fundamental assumptions. If designers practice SD by involving organisations in customer-centred conversations, the object of change may extend from artefacts and behaviours to organisational norms and cultures (Pinheiro et al., 2012).

Existing studies on transformation design, however, offer a limited view on how the different transformative SD approaches may be qualified in terms of designers' actions, skills, and deliverables. Also, as the transformative impacts by SD are not clearly conceptualised in relation to organisational elements (i.e., which organisational elements may be influenced by which SD

actions, skills, and deliverables), scholarly descriptions of transformative SD approaches remain abstract and conceptual.

2 Methodology

This study uses multiple case research, which explores ten SD projects in terms of designer—client relationships and a link between SD practices and the service-dominant logic (Yu, 2016). While the second topic is addressed in another article (Yu & Sangiorgi, 2017), the present paper focuses on the former, which is concerned with the transformative impacts of SD practices in relation to different designer—client relationships.

Limited empirical knowledge on service designers' activities, skills, and deliverables associated with client relationships led us to conduct a multiple case study on SD projects (Benbasat, Goldstein, & Mead, 1987; Eisenhardt & Graebner, 2007; Yin, 2008). SD projects were purposefully selected by using criterion sampling and maximum variation sampling (Patton, 2002). For criterion sampling, SD agencies were chosen within the UK, where SD has been actively practiced since SD agencies were first established in London (e.g., Livework and Engine) (Sangiorgi, Prendiville, Jung, & Yu, 2015). We selected cases in which service designers engaged in both the planning and execution phases.

Maximum variation sampling was conducted by choosing cases from different agency types and multiple sectors (Merriam, 2009; Patton, 2002). For agency types, we selected projects from external and internal agencies, as SD has been practiced in both and they have similar relational designer—client dynamics. While designers in external agencies work with an organisation as their client, designers in internal agencies work for the commissioning team as their client (Design Commission, 2013). Furthermore, cases were selected from a wide range of industry areas, including telecom, aviation, mental health, housing, etc. Considering theoretical saturation and practical constraints, as well as generally recommended sample sizes for multiple case studies (4–10 cases) (Eisenhardt, 1989), ten cases were used for our study.

After the case study, with the aim of validating and expanding our findings, we conducted expert interviews. We shared our empirical findings via email with seven SD practitioners who had been working at leading SD agencies in the UK for 4–8 years. The experts shared their opinions about the following points:

1. To what extent is our classification of the three patterns of SD practices that are associated with the three types of designer—client relationships valid and applicable in practice?

- 2. Considering that the 'partnering' and 'facilitating' relationships are found to facilitate SD's transformative impacts than the 'delivering' relationship, what may be needed to achieve the closer designer—client relationships?
- 3. What may be critical insights missing in our findings?

The result of this expert review is documented in Section 6.

2.1 Data collection

We conducted semi-structured interviews with 28 participants. We interviewed both designers and clients for 8 cases, but the clients for 2 cases declined to be interviewed due to their internal contexts and confidentiality issues. All interviews were conducted face to face, through video calls, or via telephone and they were audio recorded. Each interview lasted between 48 and 112 min. The interviewees were asked to discuss their project's background, service development process, key design activities and deliverables, design outcomes, and the interactions/relationships between designers, users, clients, and other stakeholders.

Our study also relies on a large amount of archival data about each project. The archival data includes project deliverables, such as recommendation reports, service specification documents, final project reports, service management guidelines, and service websites. It also includes communication materials, such as internal and external presentation documents, press releases, and Web-based platforms in which the history of designer—client communications could be tracked. Furthermore, the archived data contains many kinds of design materials, such as co-design tools, service blueprints, end-to-end service experience journeys, and prototypes.

The archived data complemented the interview data mainly in two ways. First, it provided written evidence for the events, activities, and processes reported in the interviews. Second, as most of the interviewees shared stories related to the project based on their memories, detailed descriptions in the archival documentation were used to complement the lack of information or to correct inaccurate information. Texts and visuals in the archival data were analysed to search for themes and patterns. Table 1 provides the overall data sources used in this study.

2.2 Data analysis

Data was translated and analysed using within-case analysis and cross-case comparison (Eisenhardt, 1989). For within-case analysis, each of the ten cases was examined to understand designer—client relationships and collaboration patterns during the service development processes. Next, the ten cases were

Table 1 Data sources

Case No.	Agency type	Project area	Interviewees D: Designer; C: Client	Number of Interviews	Main archived data
Case 1	External	Telecom	D: Founding partner C: Program manager	2	Developing project development report Final project documentation Agency website
Case 2	External	Aviation	D: Design director	1	Presentation document Service process map Agency website
Case 3	External	Mental health & wellbeing	D: Co-founder and managing director D: Design & communication director C: Head of mental health promotion	3	Project summary reports Online service platform Agency website
Case 4	External	Transportation	D: Strategy director D: Design researcher C: Stations program manager	3	Project reports Case study e-book Magazine article Agency website
Case 5	External	Mental health & social care	D: Senior service designer D: Evaluation unit designer C: Director of mental health services C: Community connector	4	Presentation document Community connecting impact brochure Online service platform Agency website
Case 6	External	Social care	D: Service designer C: Project manager C: Team leader	3	Final project reports Information provision guidelines Design deliverables Agency website
Case 7	External	Housing	D: Service design director C: Strategy officer C: Private sector housing team leader	3	Project reports Presentation document Agency website Online communication platform
Case 8	Internal	Employment	D: Service designer D: Service development executive C: Strategic projects team leader	3	Recommendation report Design materials for workshops Online service platform
Case 9	Internal	Insurance	D: Director of experience & service design (3x)	3	Presentation document Online article Service website Company website
Case 10	Internal	Social care	D: Program coordinator D: Project manager C: Head of strategic commissioning	3	Presentation document Agency website

cross-compared to recognise emerging patterns, which led to identifying three different patterns of designer—client collaborations.

During the cross-case analysis, we found that although SD actions, skills, and deliverables were seemingly similar, their detailed qualities and actual impact on organisations (i.e., how designers' actions, skills and deliverables were utilised or integrated in clients' day-to-day practices) were not necessarily the same. For example, although design teams in Cases 2 and 6 generated similar documents as service management guidelines, their actual usage or impact differed. While the former was used as a reference manual, the latter was embedded within the client's internal procurement process.

To examine this difference, we employed 'finding intervening variables' (Miles & Huberman, 1994) as a data analysis tactic. This tactic involves looking for a third variable when two variables that are conceptually expected to be coupled actually do not represent the link (Eisenhardt, 1989; Miles & Huberman, 1994). In our study, designer—client relationships emerged as a third variable that was able to explain the unexpected relation between inputs (i.e., similar design actions, skills, and deliverables) and outputs (i.e., different design qualities and impacts). We therefore organised the patterns emerging from the cross-case comparison in terms of the designer—client relationships. Appendix A shows how the selected cases were classified into three different designer—client relationships.

We used Merriam's (2009) strategies for ensuring internal and external validity. Internal validity was achieved mainly by the use of triangulation; we collected data from multiple sources (i.e., interviews and archival resources) and had the original informants check back the summarised interview data. We also had the study result peer reviewed in the conference the first author attended. External validity was obtained by the use of thick descriptions of each case and maximum variation sampling.

3 The typology of designer—client relationships in SD In our data analysis, we identified three different types of designer—client relationships associated with different qualities of design actions, skills, and deliverables: Delivering, partnering, and facilitating. Compared to our previous studies that classified designer—client relationships with a focus on process (Sangiorgi et al., 2015; Yu, 2015), the present study identifies much richer qualities regarding designer—client relationships: 1) Designers' role and clients' role; 2) the interactions of processes; 3) core design practices; and 4) designers' perspectives. Figure 1 provides the typology of designer—client relationships we identified in our study, which is followed by detailed descriptions.

	Delivering	Partnering	Facilitating	
	Designer Client	Designer Client	Designer Client	
Designers' role / clients' role	Designers as experts in user- centred research and design / Clients as passive recipients of design insights	Designers as partners for collaborative user-centred design / Clients as participants in user-centred design practices	Designers as coaches to provide design knowledge and skills / Clients as user-centred design practitioners	
Interaction of processes	Going independently	Mutually affecting	Merged into a single joint process	
Core design practices	Developing detailed hand-over documentation	Organising collaborative workshops involving clients	Training clients and building their capabilities on the job	
Designers' Highly user-centred perspective		Mediating between users and clients	Highly staff-centred, not losing sight of users	

Figure 1 The typology of designer—client relationships in SD.

Adapted from Yu (2016, p. 138)

3.1 Delivering

In this relationship, designers served as experts with specialised competencies and skills for user-centred service innovation, while clients delegated most of the design work to them and hardly intervened during the design process. Clients seemed to be passive recipients of design output, generally giving feedback from the commissioner's perspective. Both parties worked in parallel while focusing on their own processes, rarely affecting the other's work. Designers' insight, ideas, and solutions were described and visualised in documentation with high fidelity, and it was communicated with and handed over to clients. The perspectives of designers were highly user-centred. They strongly focused on understanding and communicating users' contextual experiences and needs while applying the insights to development processes. Yet, designer consideration of client organisations seemed to be limited.

3.2 Partnering

In this relationship, while designers organised most of the design sessions for exploring users and ideating user-centred insights, clients also participated in design activities to engage with designers and users. While participating in collaborative sessions, clients provided their own contexts and organisational perspectives. Designers and clients worked together, contributing their own knowledge and specialties to each other's practices and processes. The design and organisational processes thus mutually affected each other. Core design practices involved collaborative work sessions where designers engaged not only with focal clients but also with other stakeholders and multidisciplinary functional teams. During the service development processes, designers considered not only users' experiences and needs but also the clients' contexts and requirements.

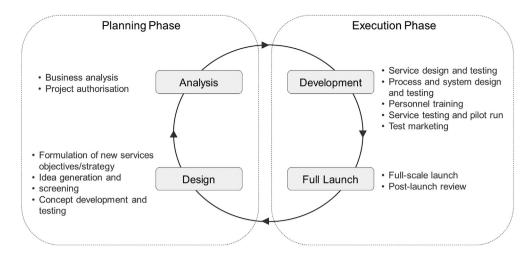


Figure 2 Two macro phases in the service development process.

Adapted from Johnson et al. (2000)

3.3 Facilitating

In this relationship, designers served as coaches, helping clients learn user-centred design approaches. While both parties worked very closely, clients tended to take the lead in some design activities. As designers embedded themselves into clients' practices for strong engagement and one-to-one interactions with employees, the design process and organisational process seemed to be merged into a single joint process. While training clients on the job, designers supported clients and helped them foster their own abilities and capabilities for user-centred service development so that the clients could act as independent practitioners. In this relationship, as design materials were the product from designer—client co-creation activities, they were used an instrument to facilitate the gradual transition of ownership. While developing solutions, designers took into account clients' capabilities to implement and manage them.

4 SD patterns associated with the designer—client relationships during service development processes

In our study, SD represented different qualities and impacts based on the three types of designer—client relationships in service development processes. While there are different process models identifying and structuring key stages and associated actions for service development, the cyclic model by Johnson, Menor, Roth, and Chase (2000) synthesises existing processes into a four-stage model: Design, analysis, development, and full launch. These stages are subsumed under the planning and execution phases (Figure 2). A similar division (fuzzy front end and execution-oriented back-end) is also suggested by Menor, Tatikonda, and Sampson (2002). While the planning phase involves strategic positioning, idea generation, and service concept development, the

execution phase relates to service development and launch, for which personnel, information technologies, physical facilities, and other service system resources are configured and deployed. According to this framework, we investigate SD actions, skills, and deliverables during the planning and execution phases.

4.1 The planning phase

In this phase, SD was mainly related to exploring users' contextual and holistic experiences for service concept generation, but the three types of designer—client relationships diversified the patterns of designers' actions, skills, and deliverables as in Table 2.

4.1.1 Delivering: Offering detailed documentation as a user-centred basis for service propositions

In this relationship (Cases 6, 8, and 10), designers conducted extensive user research based on ethnographic and empathic research techniques and codesign workshops without their clients' direct involvement. The designers in Case 6, for example, held a range of creative co-design workshops with different age groups to understand their different needs and contexts regarding care information services. While their key deliverables were co-developed with users, client participation seemed limited. In this relationship, while clients rarely attended the design sessions, designers instead presented the results of user research to clients. While clients expected designers to intensively engage with users to ideate service concepts suitable for user needs and experiences, they had no intention of affecting or learning the design research, as said by some clients:

'I don't think it's appropriate sometimes for clients to participate in workshops, because if you want things to be co-produced (by designers and users), it is better (for clients) to step back as commissioner.' (Client, Case 10)

'I didn't have the expectation that we would learn the design methodology.' (Client, Case 6)

As for design outcomes and impacts, design deliverables were used as background data to provide clients with solid evidence to justify the service, thereby facilitating internal communication and decision-making for project authorisation. With the user data, clients had confidence to say that the service concept was grounded in real user stories and experiences:

'That gives me the evidence base. When we start building things, people say "why are you doing that?" Then, we'll say we are doing that because we have the evidence that people like this. This is what people think about interacting with these services.' (Client, Case 6)

Table 2 SD patterns for the planning phase					
Designer—client relationships	SD patterns	Representative quotes			
Delivering	- Designers engaged with users in various co-creation activities, but clients did not directly participate in user engagement activities	in co-designing the new service.' (Designer, Case 6)			
	- Designers briefed clients on user insights that were gained from user engagement activities.	'We always do weekly project updates, like here's what we've achieved this week.' (Designer, Case 6) 'The SD team pulled all the evaluation together and produced a presentation, which we put forward to the project board.' (Client, Case 8) 'They brought the product back to me from those workshops, and my job was to look at it from my perspective as commissioner.' (Client, Case 10)			
	- Designers' way of working did not influence clients' practices.	'My role was piloting and evaluating. The SD part was creating those activities, which were not what I do, part of my job.' (Client, Case 8) 'I think my start of co-production is to take a back seat. I want to know what people think.' (Client, Case 10)			
	 Design output from user research provided clients with a solid evi- dence base to justify the service and facilitated clients' internal communication and decision- making processes. 	'Even within my team I had people who were resistant to the change, [] but I was able to, with the report, say "look, this is what people were saying".' (Client, Case 6) 'I had confidence to take these out to the school, to say we have met with other teachers, we have involved them in various sessions, workshops, prototyping and so on.' (Client, Case 8)			
Partnering	- Designers helped clients engage with users either by inviting them in co-design sessions or by exposing them to user stories and experiences.	'What we tried to do was to illustrate what the customer experience was going to look like.' (Client, Case 1) 'We also organised co-creation sessions where we invited some of the train travellers we have been interviewing and also people from our client team that was completely new to them to openly work for together.' (Designer, Case 4) 'We worked with them in terms of the ideas and they knew what we wanted. They were involved in meetings, so they knew what kind of things we were looking for.' (Client, Case 7) 'We will elicit feedback from customers via different surveys, focus groups, interviews, whatever, but equally from service providers, so I try to engage with frontline			

- Service ideas/opportunities from user insights were co-created by designers and clients.

'The designers facilitated a lot of meetings between ourselves and Barclaycard, some of the technical partners, device manufacturers, and SIM suppliers, and sat around and resolved, talking to highlight some of the challenges.' (Client, Case 1)

staff who is delivering across different channels.'

(Designer, Case 9)

(continued on next page)

 SD output helped clients feel empathy for users and motivated clients to create enhanced service experiences.

Facilitating

Designers helped clients incorporate user insights and opportunities into business and translate them into action plans.

- Some design sessions to explore user insights or service opportunities were led by clients, while designers served as a facilitator or coach.
- Clients learnt how to approach users in a user-centred way and began to apply the lessons to their own practices.

'During the SD project, we continuously concentrated on the experience of the passengers and how they used our products and services.' (Client, Case 4)
'All of these (multidisciplinary) practices come together to deliver good experiences people like to use, but also influence their behaviours.' (Designer, Case 9)
'We documented experiences of how we thought it would work. [...] We thought we could help them overcome those barriers.' (Client, Case 1)
'The other is having users interact directly with clients and enabling clients to raise empathy and listen, being confronted with the stories of their users.' (Designer,

'The tangible outcome was we are working differently, we learnt different ways of working, we've worked with different partners, we continue to work with those partners.' (Client, Case 7)

Case 4)

'We developed a needs spectrum to understand passenger variability and to provide more sophisticated understandings of passenger requirements. We then overlaid the perspective on the organisation. "Okay, therefore, what role does the airport need to play to deliver value to those customers?" (Designer, Case 2) 'This was a conceptual idea, so, we went away and started to look at feasibility and the game mechanics, but also looked at how the whole service was drawn, like "who would deliver this game?", "how would they be trained?", "how would they distribute it?" (Designer, Case 3)

'Collaborative sessions and workshops worked very well, but there were always softer things, which were things like being present within the organisation, [...] so actually embedding yourselves within the organisation.' (Designer, Case 2)

'We were involved in some of the refining and testing of the DIY (Do It Yourself) happiness game.' (Client, Case 3)

'We did a mini ethnography. The way that we ran that was we didn't do any ourselves. We trained the innovation team to do these interviews.' (Designer, Case 5)

'This project was about how we would change the organisation through design, [...] so we could bring people along the journey.' (Designer, Case 2) 'The approach we needed to take with the service was to learn from the things that people who use mental health services had been telling us.' (Client, Case 5)

4.1.2 Partnering: Increasing clients' empathy for users and commitment to better user experiences while getting clients on board

Within this category (Cases 1, 4, 7, and 9), designers directly or indirectly involved clients while conducting user research and organising user engagement workshops. Clients therefore were able to understand users' contexts and experiences as well as their barriers to engaging with the service. In Cases 4 and 7, designers directly involved their clients in the workshops, exposing them to user voices. This allowed the clients and users to mutually understand each other. In Case 4, while participating in workshops and listening to users' real experiences, clients empathised with them and felt more motivated to improve user experiences, as witnessed by a designer:

'We have been telling clients, we have been showing them our research, but now they are confronted directly. I think that works very well.' (Designer, Case 4)

During co-designing sessions, design materials were used to vividly represent user stories and experiences, helping clients immerse themselves in the users' contexts. In Case 9, user personas and experiences helped clients empathise with users. Similarly, in Case 7, the videos capturing elderly people's emotional experiences of tripping and falling provoked clients' motivation and commitment towards improving their experiences:

'We recorded four videos. [...] I think it is a quite powerful video. It is one of the strongest things we still use throughout to demonstrate the effect of a fall on older persons, what it means to them.' (Client, Case 7)

Thus, clients' participation in collaborative design activities resulted in higher commitment towards creating superior user experiences. A client remarked how design approaches and methods impacted on their perspectives on user experiences:

'This (SD) approach revealed a lot of new information to us about how the passenger really values our product and how logical they consider our system.' (Client, Case 4) (Enninga et al., 2013, p. 62)

In Case 7, designers organised a workshop where they invited users and stake-holders to review the whole landscape of support and services for elderly people who trip and fall. Since this workshop allowed clients to gain a wider perspective on their service, they decided to collaborate with other sectors beyond the housing sector. They embarked on a new community platform called 'falls hub', where key players and voluntary sectors collaborated to provide a wide range of information and support:

'We are having a next event, visioning event with all bodies involved in health and social care to see how this hub can be set up. [...] This work has come out as one of the key results of the work that we actually started with the Design Council and commissioning group.' (Client, Case 7)

4.1.3 Facilitating: Integrating user research insights into organisational strategy building and service planning

In this relationship (Cases 2, 3, and 5), designers helped clients integrate user insights into internal practices. During collaborative workshops, designers helped clients reflect on user insights and link them to their business, by mapping organisational roles and capabilities in opportunity areas. For example, after the designers in Case 2 observed and interviewed people at Lisbon Airport, they developed a strategic framework with the client to relate the values sought by passengers with the client's contexts and roles. The user insights were integrated and translated into organisational business and action plans.

In the partnering relationship, design activities and deliverables contributed to clients' user-centred mindsets or attitudes by building their empathy with users' experience, and motivating them to improve their services. In the facilitating relationship, design practices affected not only the clients but also the organisational routines and practices. Designers helped clients understand users' experiences through design research and helped them apply their knowledge to organisational practices. For example, the designers in Case 5 carried out mini ethnographies in such a way that it trained their clients to conduct a series of user studies and interviews. They also helped the clients organise codesign workshops, where users were invited to discuss the basic principles and ideas about the services. During this process, clients recognised the need to change their existing practices and built their own capabilities for user-centric innovation, as reported by a client:

'These were the eye opener to me. [...] We did two co-designing sessions, we invited the organisation sitting in Lambeth Borough and asked them what sort of things they were expecting to get as a service [...] so they obviously told us what they wanted and it was quite inspiring really. That's the base of the community connecting that is how we can design the service.' (Client, Case 5)

4.2 The execution phase

While SD actions, skills, and deliverables during this phase were mainly aimed at developing service specifications and launching services, their qualities in the three types of designer—client relationships were different as in Table 3. We characterised the SD patterns associated with the designer—client relationships as follows.

Table 3 SD patterns for the execution phase

Designer-client
relationships

SD patterns

Representative quotes

Delivering

- Designers developed detailed documentation for service specifications and management to hand them over to clients.
- As the transition from the design stage to the development and operation stages was not so smooth, clients needed additional communication with designers.

Partnering

 Designers had development/implementation workshops where they shared customer experiences and formulated service processes with operations teams.

 Design documentation was used as a facilitating tool for communication and discussion during the workshops.

- 'We produced a big report with the service blueprint and everything. [...] We gave them all the report.' (Designer, Case 6)
- 'We started doing things like requirements gathering and writing very detailed technical requirements for the service.' (Designer, Case 8)
- 'This first prototype was shared back with all contributors and the program board to share back with their organisations.' (Designer, Case 10)
- 'We finished everything we were doing and they still hadn't started anything so they had to catch up with us. Then maybe in four months, they came back to us and said "right, we need your help in figuring out how to implement some of your proposals and how to actually make the service changes".' (Designer, Case 6)
- 'There have been some issues in them feeling confident enough to go away and develop new materials to upload to the site. [...] There has to be a better or smoother transition from development to implementation and maintenance.' (Designer, Case 8)
- 'I don't know about the evaluation of the service. The last conversation I had was that the service was too difficult to evaluate.' (Client, Case 10)
 'There were some big issues that were highlighted
- very early on. [...] We tried to put new processes in place as soon as possible.' (Client, Case 1) 'Every workshop was moderated together, so we facilitated the process together.' (Designer, Case 4) 'We got all the different providers, so the GPs, the health professionals, people from the voluntary sector and users together. [...] So, we identified about ten different opportunities from doing that
- 'The target employee experience has to be multidisciplinary to achieve the customer experience itself. [...] Every day when I go to work I am used to working with other people collaboratively to achieve things.' (Designer, Case 9)

collaboration.' (Designer, Case 7)

- 'The SD approach was successful, partly because the designers were giving a lot of attention to the communication internally.' (Client, Case 4)
- 'The design output helped actually buy in the trust of the doctors and the NHS staff, because they could see the quality.' (Client, Case 7)
- 'The document was shared internally and externally. I told these guys and the client. Half of SD is communication.' (Designer, Case 9)

 Workshops and design documentation contributed to aligning stakeholders with customer experiences and mobilising them by clarifying each actor's role and responsibilities.

Facilitating

 Designers considered organisational capabilities while codeveloping service elements and functions with clients.

- Workshops and documentation contributed to a gradual role shift between designers and clients.
- Design practices helped clients manage services and continue user-centred innovation activities.

'SD role was to represent the customer and to be the customer experience guardians to keep telling their story and documenting what other parties are doing.' (Designer, Case 1)

'I asked some of the colleagues to be part of the workshops. It was a good approach. Because of that they knew what we were doing.' (Client, Case 4) 'The main thing is whenever we are looking at any piece of work, not just looking at the solution, but actually going back and looking at the discovery of what that problem actually is, being more delved into what the problem is and defining where we want to focus resources on.' (Client, Case 7)

'We had discussions with head of marketing about what might be the right mix in terms of skill set within the services management team.' (Designer, Case 2)

'I think it's not only particularly design, we were more talking about things that we needed to do to ensure the website keeps going, and how we generate new work.' (Client, Case 3)

'The main output was the website, but we did have recommendations which were about how to set up the team and how to position the service within the rest of the other services that they were creating.' (Designer, Case 5)

'I guess documentation is mainly a representation of something of the moment in time.' (Designer, Case 2) 'What happened when everyone came together, there was another thing that was beneficial, they gained ownership of what they were involved in.' (Designer, Case 3)

'It was also intended to be capacity building for us as an organisation about how we could approach future innovations and design.' (Designer, Case 5)

'Yes, the client is using them all, I know some of them were briefed into their procurement, [...] the second part has been built into training for frontline staff. '(Designer, Case 2)

'We trained them and gave them a very accurate plan. [...] We developed tools for each role to develop and deliver their role, but also for them we designed the team agenda.' (Designer, Case 3) 'Community Connecting is now the language that commissioners and other providers and big agencies are using.' (Client, Case 5).

4.2.1 Delivering: Developing documentation for service specifications and reference manuals for service management Design activities for service execution in this relationship (Cases 6, 8, and 10) focused on developing detailed documentation for service specifications and

management. Service structures, content, and functions for the specifications were largely determined by user feedback rather than the input from the clients. The service elements were iteratively developed and refined by user feedback from user engagement sessions.

Since the documentation was the key means of communication with clients, the thoroughness of documents was very high. For example, the designers in Case 8 made a lengthy document to inform the commissioning team of service specifications (e.g., information about the service concept, stakeholders and relevant teams, and technical to-do lists). Similarly, the designers in Case 6 developed information provision guidelines consisting of a series of service principles, which aimed to support service implementation and operations.

When design outputs were handed over to clients as final deliverables, clients had difficulties implementing the designed solutions immediately. Case 6 for example reported some language problems between designers and clients:

'They say 'use case' and we are like 'do you mean a journey map? What do you mean?' It's like people use different terms.' (Designer, Case 6)

'One of the documents that the design team produced is called "information guidelines" and people just look at it and go 'What? Why have we been given information guidelines? We're a website development organisation. We know about delivering information'. (Client, Case 6)

The manager in Case 8 recalled that receiving documentation was not sufficient for her team to implement the solution and they needed additional design support as follows:

'Once the documentation was handed over to me, it was a big lengthy document. [...] I wasn't convinced about that process. [...] You need a period of transition. You know, it's not just you put everything down in a document and they hand it over to me. [...] So, all I did was, because I had the relationship, I just went back and said No, I still need you (designer) into it.' (Client, Case 8)

In the studied cases, successful transition from the planning to implementation phases had not occurred until designers provided clients with additional support. In Case 6, designers made a second contract for supporting service implementation, while in Case 8, designers had informal conversations with the operations team to implement the service.

4.2.2 Partnering: Aligning clients to superior user experiences and mobilising them by assigning roles and responsibilities

In this relationship (Cases 1, 4, 7, and 9), designers had workshops with clients to discuss and decide on the issues for service specifications. Clients participated in formulating service processes, highlighting any operational issues and challenges. The designers in Case 1 held regular collaborative workshops over a six-month period to formulate detailed processes for a new mobile payment service. They used the workshops as opportunities to share and discuss potential difficulties and challenges that users reported in prototyping sessions. The client remarked how the customer experiences affected the development of the service process:

'Service design not only drove change on the product we tried to deliver, but also drove change back into the business, in terms of some of the business as usual standard procedures, like SIM swopping update firmware, device, and various things.' (Client, Case 1)

Design documentation was utilised as a tangible tool to facilitate discussions in the workshops rather than final hand-over output. It was developmental, since it began as rough sketches and developed into complete documents during co-developing workshop:

'We used these tools (e.g., blueprints and journey) in the workshop. The workshop was engagement and collaboration on top of those tools. So, my point really is that the document doesn't manage and engage. We have to work on it with people.' (Designer, Case 1)

Collaborative work on service specifications was generally conducted in an agile, multidisciplinary way. For example, in Case 9, while the target customer experience was converted to introduce new interfaces, functions, and brand messages for the service, multidisciplinary teams developed and implemented small changes quickly and checked if they worked with live data.

Design work was acknowledged as formulating detailed service processes and elements and keeping different actors recognise their roles and responsibilities, dictated by the service concept and process. For instance, in Case 1, design workshops for developing service specifications aligned different stakeholders' roles and tasks with the customer experience journey. Similarly, in Case 9, designers informed the operations team of its role in implementing the online service experience:

'He was in charge of the website, but no one was telling him what the website needed to do to make customers happy. [...] You need to rewrite all

these contents, you need to do the information architecture differently and also you need to motivate people to visit more often. And he was like, "oh great, now I know what to do, I'll just go and do".' (Designer, Case 9)

Workshops and supporting documentation for service specifications also helped clients manage the service after designers left the project. Specification documentation served as a roadmap to help clients continue further developments after the initial service launched. As this documentation was codeveloped by both parties, clients could have confidence to develop the remaining functions and elements of the service independently.

4.2.3 Facilitating: Fostering clients' ownership and organisational capabilities for continuing user-centred service innovation

As in the partnering relationship, designers in the facilitating relationship (Cases 2, 3, and 5) used collaborative workshops to develop service specifications and development. However, designers in this relationship particularly focused on considering and building client capabilities alongside design practices. For example, in Case 3 when specifying the detailed mechanism of the DIY happiness game, designers considered the client team's limited resources, which would not allow the team to facilitate gameplay. That was why they came up with an alternative mechanism:

'We had to take their capacity into consideration. Because initially they were like, this is not possible because we don't have time, we are only four people, we don't have time to go and deliver it. So, that's why we came up with the model of training the trainers.' (Designer, Case 3)

The design team in Case 2 complemented the client's limited capabilities by advising on desirable skillsets for the services management team. Besides, for building the team, they organised one-to-one engagement sessions to train employees.

'It was about skilling up that team across the projects. [...] One thing was what we called "on-the-job training", aligning the team to various work streams. [...] They would co-facilitate workshops and be involved in concept generation sessions.' (Designer, Case 2)

On-the-job training allowed clients to learn about user-centred approaches and activities, contributing to a gradual change of ownership and responsibility between designers and clients. This transition was achieved over a long period through different co-creation activities. With this transition process, design output continued:

'That (documentation) wasn't really a hand-over. It simply carried on. So, some of the documentation that we developed was developed earlier in conjunction with them or was developed with them over a long period.' (Designer, Case 2)

Designers also supported clients in continuing user-centred service innovation. For example, the designers in Case 2 offered their client a customer service standard that specified how great customer experiences were defined for the service, in terms of staff behaviours, facilities, information, and communication. The service management guidelines were integrated into the client organisation's internal procurement process while being used in frontline staff training programs. In Case 3, designers offered the client even more specific service management tools for customer segments, internal meeting structures, and prioritisation grids on a monthly basis. The designers in Case 5 formulated a 'community connecting' model as a concrete instruction to scale up and replicate the initial service across the organisation. They also helped the client operationalise a 'community connecting' approach in the client organisation's strategy developments and service innovation practices.

5 Characterising transformative impacts of SD associated with designer—client relationships

Earlier in this paper, we pointed out extant studies' unclear conceptualisations of organisational transformation that can be facilitated by SD approaches. To address this, we adopt a resource and capability perspective as a conceptual tool to better describe SD's transformative impacts. Service innovation is often discussed from the resource and capability perspective (Blackmon, 2008; Santos & Spring, 2013), which implies the nature and quality of services depend on how organisational resources (Froehle & Roth, 2007) and innovation capabilities (Lawson & Samson, 2001) are configured. Organisational resources include materials, equipment, staff, technology, and facilities (Johnston & Clark, 2008). Organisational capabilities mean a capacity, ability, or competency that enables a company to develop innovative offerings or processes so that it can respond to market needs (Teece & Pisano, 1994). Considering that service concepts are processed and converted into service performances through the interplay of organisational resources and capabilities, the actual SD contributions to service development can be discussed in terms of how SD affects organisational resources and capabilities. We now discuss how SD in our studied cases achieved different transformative impacts.

In the delivering relationship, SD mainly served as a key input to service planning and development, but not necessarily to service implementation. The core objects of change by SD were physical resources (e.g., physical touchpoints in Case 10) or technologies (e.g., service websites in Case 6 and in Case 8). SD was involved in defining user-centred service concepts and specifying/

visualising user experience journeys and service processes. The defined service concepts and specifications were mirrored by the attributes of physical products/prototypes or the design for service websites' interfaces/interactions. They were also integrated into the contents of service management guideline documentation. Thus, service designers' insight and output were mainly used to develop physical resources or technologies, serving as useful referential data to support clients' decision-making and communication processes. However, they seemed to have limited impacts on actual service implementation and operations, as they were not directly related to clients' practices for service performance.

In the partnering relationship, SD served as a tool for collaborative service development. The primary objects of change by SD ranged from physical resources/technologies (e.g., a mobile application in Case 4 and a service website in Case 9) to human actors (e.g., service providers and suppliers in Case 1 and team members in Case 7). While creating service concepts, specifying service experiences, and producing touchpoints, SD also affected human actors by getting stakeholders on board and establishing common ground for collaborative actions. User-centred design approaches in collaborative workshops motivated clients and other stakeholders to be more user-centric when generating service concepts and implementing them. Also, as design outputs and documentation were co-developed with service delivery actors, they seemed to be applied to organisational development and implementation practices with little resistance from clients. However, whether SD affected clients' daily practices or organisational routines was not clearly reported, as one designer implied:

'I don't know (whether the client is doing the designerly way of working). They've seen it, appreciated it, but it doesn't mean they do it themselves. Hopefully...'

In the facilitating relationship, SD served as an approach to business and culture transformation. The main objects of change by SD were not only physical resources or technologies (e.g., a service website in Case 5), and human actors (e.g., employees in the services management team in Case 2) but also operational processes and organisational routines (e.g., input into the establishment of services management team in Case 2 and service implementation tools in Case 3). SD focused on building organisational contexts and environments to maintain user-centred service development and management. Part of SD's consideration was concerned with how to seamlessly transfer designers' user-centred perspectives, skills, and techniques to clients' daily practices and organisational process. SD activities and skills were used as tools to train staff and facilitate the shift of ownerships and responsibilities from designers to clients.

Organisational capabilities enable firms to implement innovation processes, facilitating successful product, service, or business development (Lawson & Samson, 2001). As service is increasingly considered a customer-supporting process (Grönroos, 2006), organisational capabilities for service innovation can be related to the organisation's potentials or competencies to perform customer-centric actions at various levels. Given that organisational capabilities are rooted in employees' tacit knowledge for properly executing their role and responsibilities on a daily basis (Grant, 1996; Winter, 2003), designers' skilful embedding of user-centred approaches with technical knowhow and tools is recognised as a potential builder of the organisation's user-centred innovation capabilities.

Table 4 summarises the different SD approaches associated with the three types of designer—client relationships and characterises the different extents of SD impacts on organisational resources and capabilities.

6 Contextual factors and implications of the different designer—client relationships

The analysis of interviews with SD experts after the case studies led to expanded discussion about contextual factors that may affect the three types of designer—client relationships. The discussion also includes the implications that the different SD approaches can have for future SD practices.

6.1 Contextual factors

There are various contextual factors that may influence designer—client relationships. For example, the nature of a project could be one. A short-term project that requires creative insights from designers may lead them to work in the delivering relationship, since this mode allows for more creativity and requires less time managing relationships with clients. In Case 6, clients' expectations that designers may bring new insights into creative interactions with younger user groups led designers to work in the delivering relationship. In contrast, program-based services based on long-term relationships may lead designers to work in the partnering or facilitating relationships. In Case 3, the designers and their client developed their relationship through a larger program-based project over five years. The designers therefore could serve the client as a coach based on mutual trust.

Also, client knowledge or experience about SD may affect designer—client relationships. Mangers with no background knowledge or experience about SD, or procurement departments with no capacity for SD, are likely to be acquainted with SD in the delivering relationship. If their perceptions of SD propositions are positive, they may open their internal processes to designers so that the relationship may progress into the partnering or even facilitating

Table 4 The transformative impacts of different SD approaches associated with designer-client relationships

	Deliveri	ing	Partnering		Facilitating	
	SD as a key input to service planning and development		SD as a tool for collaborative service development		SD as an approach to business and culture transformation	
	Planning	Execution	Planning	Execution	Planning	Execution
SD patterns during service development processes	Offering detailed documentation as a user- centred basis for service propositions	Developing documentation for service specifications and reference manuals for service management	Increasing clients' empathy for users and commitment to better user experiences while getting clients on board	Aligning clients to superior user experiences and mobilising them by assigning roles and responsibilities	Integrating user research insights into organisational strategy building and service planning	Fostering clients' ownership and organisational capabilities for continuing user-centred service innovation
SD impacts	Supporting clients' service development process with user-centred referential data and specifications		Motivating clients to envision and actualise user-centred and superior service experiences		Transforming clients and organisations for continuing user-centred service innovations	
Objects of changes	Physical resources/technologies		Physical resources/technologies, human actors		Physical resources/technologies, human actors, processes, routines	

relationships. In our study, the project manager of Case 1 recognised, based on his prior experiences, that SD can not only contribute to creative user insights but also to back-end business processes. Therefore, he allowed designers to engage deeply in the business process and navigate conflicts between stakeholders.

Furthermore, client organisational structures may serve as an enabler for or barrier to stable designer—client relationships. For example, frequent structural or personnel changes within organisations may obstruct the establishment of intimate designer—client relationships. In our study, the designers of Case 3 remarked that the stability of their client team (i.e., staying the same with no change in team members) contributed to building the long-lasting and intimate designer—client relationship.

6.2 Implications

Meanwhile, the different SD approaches associated with designer—client collaborations have some implications for future SD practices. The different SD approaches imply the need for different designer skillsets. The experts we interviewed pointed out that research, observation, empathy, and creativity are particularly required for the delivering approach, while coaching, mentoring, facilitating, and change management skills are needed for the facilitating approach. They suggested that designers seeking to change the nature of their practices from delivering to partnering or facilitating need to be more knowledgeable of organisational contexts, practices, processes, and culture.

The shift of the nature of SD practices from delivering to partnering or facilitating may no longer be an option for service innovation. Traditionally, designers were commissioned to develop creative concepts, but product engineers generally led the manufacturing process with designers playing a limited role (e.g., a concept guardian against technical constraints). In service innovation, as designers' concepts and specifications are implemented through employees' behaviours, physical touchpoints, and service processes, the conceptual design output needs to be well integrated into organisations (e.g., communicated to staff, reflected by physical/online resources, and operationalised into the service processes). In this sense, the facilitating approach, able to touch on both organisational resources and capabilities, is more likely to contribute to successful service innovations.

7 Conclusion

Whereas the impact of integrating design into innovation processes was mainly discussed in relation to firms' financial performance (Gemser & Leenders, 2001), our study related SD impacts to a different value: Transforming service systems and organisations. SD has long been recognised as a user-

centred approach to shaping service experiences, but little attention has been paid to how the user-centred approach can be integrated into organisations at different levels, which can result in different SD qualities and impacts on actual service development and operation. Our study indicates that the user-centred design in the delivering relationship informs service development processes with referential user research data, having limited impacts on implementation. However, in closer designer—client relationships, it can affect actors' perspectives and behaviours, and even can catalyse organisational transformation. Therefore, we suggest designers maximise the potential of their user-centred design approaches by using their sensibilities to interpret users' needs, not only for idea/concept generation but also for service implementation and system change. This extended usage and design impact may be greatly facilitated by closer designer—client relationships.

The different transformative SD approaches we studied can be partly associated with the different design roles as defined by Perks et al. (2005): Functional specialism, part of multifunctional teams, and a process leader. According to the study, though design as functional specialism benefits from designers' creativity and visualisation skills, its impact on organisational innovation processes is limited. However, while design as a multifunctional team or process leader requires designers' extended skillsets, including communication, management diplomacy, or persuasion, its impacts are extended to managing the entire innovation process as well as integrating multidisciplinary functions. In service development processes, while SD for delivering is related to traditional design skills, with its actual impact restricted to service concepts and specifications, SD for partnering or facilitating involves designers' extended skillsets, including interfacing, communicating, coaching, or training with wider impacts on service implementation and system change.

Although this study described designer—client relationships and SD qualities and impacts as having a causal relation, we consider our finding as context-specific, restricted to the selected ten cases rather than context-free and universal. Our initial finding therefore can be tested or complemented based on a larger set of samples to be developed into more generalisable theories (Tsang, 2013; Welch, Piekkari, Plakoyiannaki, & Paavilainen-Mäntymäki, 2010).

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Appendix A. The classification of ten cases into three patterns of designer—client relationships

Pattern A

Designers' role vs clients' role

- Designers act as an expert who is specialised in usercentred design and innovations.
- Clients delegate design work to designers and hardly intervene in design activities.

Case 6

The designers intensively engaged with different target user groups during various co-design workshops and briefed their client on design insights and output, while the client gave their feedback.

Case 8

The designers led user research, content creation, and user interface design and they communicated the result to the commissioning team, who was responsible for the testing and implementing of design output.

Case 10

The designers developed an insight gathering report about the target user's daily experiences and offered the commissioning team the report. While overseeing the project, the commissioning team assured the quality of the design concept and solution.

Pattern B

- Designers organise design workshops and involve clients in co-developing user insights and service solutions.
- Clients participate in design workshops, engaging with designers and users to provide organisational perspectives.

Case 1

The designers refined the service concept and specified the service process, while the client participated in collaborative working sessions as both informants and co-producers.

Case 4

The designers focused on identifying users' true needs and goals through ethnographic research, and they organised workshops where the client participated and co-developed ideas and solutions.

Case 7

While exploring the target user's process and experience journey, the designers developed service concepts and prototypes. The client participated in the design activities and workshops.

Case 9

The designers developed target customer experiences and aligned organisational resources with them. They used an agile approach to service development in collaboration with multidisciplinary teams.

Pattern C

- Designers serve as a coach to help clients learn a usercentred design perspective and approach.
- Clients are involved in most of the design activities and take the lead in some design activities.

Case 2

The designers integrated user insights into organisational practices and trained the client team by involving them in one-to-one design sessions, where the client team could learn design approaches.

Case 3

The designers developed service concepts in collaboration with users and the client, and they also served as a coach to support the client team in managing the service by offering service management tools.

Case 5

As the client aimed to develop the service based on co-production principles, they were receptive to design approaches and learnt design-centred user research and codesign approaches.

Pattern A

Pattern B

Pattern C

The interactions of processes

- Designers and clients work in parallel, focusing on their own practices, and rarely affect the other's process.

Case 6

While the designers took the lead in user research, concept design and part of developments, the client separately focused on their own practices.

Case 8

The designers generated service concepts using user interviews and workshops, and the commissioning team implemented the design solutions by piloting them and communicating them to their partners.

Case 10

While designers' role was to co-design service ideas and co-develop the solutions with users, the commissioning group' role was to support setting up the co-production group and to give feedback on design solutions.

Core design practices

 Designers' insights and solutions are represented in design documentation with detailed and visual information, which is handed over to clients. Designers and clients work in partnership, contributing their own knowledge and specialties to each other's process.

Case 1

The designers and client had frequent communications and interactions via regular workshops over six months, where they coshaped the service processes and settled business relations between stakeholders.

Case 4

The designers and the client coshaped the user experience journey and service process while deciding on the direction of the project based on user insights and organisational requirements.

Case 7

While the designers and the client team together engaged in every phase of the service development process, the designers' holistic and contextual approach to user experience affected the client's perspective.

Case 9

The designers integrated their own design process with the existing organisational process by using an agile development approach, which is based on repetitive cycles of implementing and learning.

- Core design practices involve collaborative workshops where designers engage not only with focal clients but also with other employees and functional teams.

 Design processes and organisational processes could be merged into a single joint process.

Case 2

The designers had an office within the client's office and they had intense communications and interactions through one-to-one engagement while supporting internal advocates of the SD approach.

Case 3

Based on a long-term relationship built from doing different projects, the designers and the client worked together like a same team, sharing the same goal for people's behaviour change and the same vision toward social impacts.

Case 5

Frequent interactions and communications between the designers and the client helped the two parties learn back and forth, and facilitated informal information-sharing and knowledge exchange.

 Designers train clients on the job, helping them build their own user-centred design capabilities, aiming at a gradual transition of ownership.

Pattern A

Case 6

User insights and ideas from co-design workshops were represented in detailed reports using visual information, which were handed over to the client.

Case 8

The designers' insights into user needs and specifications for the service website were represented in a recommendation report and delivered to the operations team.

Case 10

The design insights from the research into the dementia diagnosis process and associated users' experiences were converted into the dementia checklist, which was shared with different stakeholders.

Designers' perspectives

- Designers' perspective is highly user-centred, as they capture users' contexts, experiences, and needs and apply them to service design and development.

Case 6

The designers focused on helping users better express their needs and ideas for the service during co-design workshops by utilising various creative design materials.

Case 8

The designers represented a highly user-centric

Pattern B

Case 1

The designers organised coproduction workshops, where the designers, the client, and other stakeholders shaped the end-to-end customer experience and specified operational elements.

Case 4

Along with ethnographic research and a pilot test, the designers organised co-creation workshops, where the client and users were invited together to explore service experience journeys.

Case 7

The designers organised workshops, where the client, users, and other stakeholders identified users' current service experience and opportunities to improve the experience.

Case 9

While collaborating with multidisciplinary teams, the design team developed target customer experiences, which were aligned with multidisciplinary functions and tasks.

- While taking a user-centred perspective in engaging with users, designers take a client-centred perspective to develop and implement user insights.

Case 1

While applying users' needs gained from prototyping sessions to refining the service process, the designers also considered the client's requirements and business relations.

Case 4

While understanding the client's internal contexts, languages and culture, the designers also kept being a representative of customers to provide an outside-in perspective.

Pattern C

Case 2

Through one-to-one engagement sessions, the designers helped the client teams develop and implement the defined services based on the organisational capabilities.

Case 3

The designers engaged in the client team's internal practices by developing a business case, marketing strategies, and providing service management tools.

Case 5

The designers helped the client build a service team model and identify the team's roles and responsibilities, and they built the team's internal capabilities for user-centred service innovations.

 Overall, designers take a client-centred perspective to consider clients' abilities and organisational capabilities for service development and management.

Case 2

The designers spent much time with the client integrating user insights into the organisation's strategy and innovation process and developing actionable solutions.

Case 3

While considering the client's resources and capabilities for service delivery, the designers changed the original service delivery model into more practical one.

Pattern A Pattern B Pattern C

perspective during focus group interviews and codesign sessions and also applied the same perspective when designing the service website.

Case 10

To understand and improve the target user's experience journey, the designers engaged with users by interviewing them and empathising with their experiences.

Case 7

While involving users in collaborative workshops with the client, the designers also helped the client apply the user-centred perspective to the client organisational practices.

Case 9

While integrating customers' needs into service development, the designers also aimed to change customers' behaviours based on the organisation's needs.

Case 5

While inspiring the client to take a fresh view on users and a user-centred approach to service development, the designers built the client's business strategies and service models.

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