

Viewpoint: service design's promise in times of crisis

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Abstract

Purpose – This study aims to propose service design (SD) as a promising approach for mitigating crises. It also examines how SD has been applied to address crises originating outside the organization, with a particular focus on shifts in consumer behaviour.

Design/methodology/approach – This viewpoint draws on an exploratory scoping review and interviews with SD experts from small and medium-sized enterprises. The empirical context for the study is the COVID-19 pandemic, which serves as a representative crisis scenario.

Findings – There is limited research on the role of SD across different types of crises. This study develops a framework that positions SD as a human-centred, interaction-based activity during crises. It further suggests that SD can be used both before and after crises, indicating that organizations can build SD capabilities and enhance their resilience by learning from past crises and by proactively preparing for a range of potential future disruptions.

Originality/value – This viewpoint explores the importance of understanding consumer behaviour and shifts in the business environment during times of crisis. It proposes a framework that highlights the promise of SD in such contexts – emphasizing not only responsive actions during crises but also a forward-looking approach.

Keywords Service innovation, Crisis management, New service development, Service design, Behavioural insight, Health and well-being

Paper type Viewpoint

1. Introduction

The new millennium has seen a series of unprecedented crises, including financial, economic and health crises, demographic shifts, massive immigration, environmental challenges, terrorism and rapid technological change (Gryszkiewicz and Chen, 2012). A crisis refers to “an abnormal situation which presents some extraordinary, high risk to business”, in which “important decisions have to be made in a short time, where management procedures must be maintained” (Shaluf *et al.*, 2003, p. 29). It is hardly surprising that a rising number of researchers have reflected on how crises affect businesses and how companies respond to crises to maintain their competitiveness under exceptional circumstances (e.g. Mele *et al.*, 2021; Zuokas *et al.*, 2022). The recent COVID-19 pandemic demonstrated how far-reaching the consequences of an unexpected crisis can be for firms (Kabadayi *et al.*, 2020). Businesses of all sizes struggled to survive and, in many instances, were forced to shut down permanently. The pandemic particularly affected micro and traditional service firms, as well as minority and family-owned firms, due to their limited resources (Duncan *et al.*, 2023). In times of crises, firms must find ways to mitigate their impact not only to survive but also because firm

actions may help alleviate consumer suffering and assist the public sector in coping with the crisis.

Within service marketing, service design (SD) has been identified as one way to create uplifting changes in consumer well-being (Russell-Bennett and Rosenbaum, 2022). Widely seen as a human-centred, holistic and iterative approach used in service development (Holmlid and Evenson, 2008; Sangiorgi, 2009; Stickdorn *et al.*, 2018), SD tackles complex problems. It helps businesses find opportunities amid disruptions and crises by pivoting and leveraging innovative technologies and strategies to address customer needs (Duncan *et al.*, 2023). Studying SD and crisis is particularly relevant given SD's pivotal role in ensuring competitive strength during times of uncertainty and ambiguity (Liedtka, 2015).

Despite these suggested benefits, we believe that SD has received too little attention in conjunction with crises. Consequently, this viewpoint proposes SD as a promising approach for mitigating crises. We aim to explore how SD has been used in connection to crises originating outside the company. To do this, we first discuss SD and crisis, including

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the results of a scoping review on SD in the context of crises. Thereafter, we showcase how small and medium-sized enterprises (SMEs) used SD during the COVID-19 pandemic. We then introduce a framework that underscores the potential of SD in crisis contexts, emphasizing its role in addressing immediate challenges and forward-looking capacity to build organizational capabilities and resilience through learning from past disruptions and preparing for future uncertainties. Finally, we discuss implications for practitioners and researchers based on this proactive approach to SD.

2. The role of service design in mitigating crises

SD plays a crucial role in increasing the competitive edge of a company through its ability to foster innovation. The process involves gathering data about consumer needs, generating ideas based on those needs and testing these ideas with customers (Liedtka, 2015). This constitutes a process that can be integrated into broader innovation efforts. Earlier research reveals that SD helps service developers understand customer experiences (Mahr *et al.*, 2013) and activities (Gummerus *et al.*, 2021), envision new value propositions (Ostrom *et al.*, 2015), gain support for technology integration (Teixeira *et al.*, 2017), shift the focus from technology to human-centricity (Kustrak Korper *et al.*, 2020) and adopt a broader ecosystem perspective on innovation (Vink *et al.*, 2021). It also helps overcome cognitive biases such as overoptimism, egocentricity and endowment effects (Liedtka, 2015). SD typically takes place in close collaboration between people and builds on a deep understanding of the intended or current users of the offering – including, but not limited to, end consumers.

Despite this promising evidence of SD's role in supporting innovation work, less is known about how SD can help firms handle crises. When consumer behaviour changes fundamentally, as it did during the COVID-19 pandemic (Kirk and Rifkin, 2020; Sheth, 2020; Mele *et al.*, 2021), it seems plausible that firms need to respond to such changes and innovate to stay competitive and relevant in the changed business environment – and that SD can support them in doing so.

To explore how current research addresses the role of SD in handling a crisis, we searched Scopus using the search words “service design” AND cris*s in the publication keywords, limited to the categories of Business Management and Social Sciences. This search yielded 40 articles. After initial scanning, 18 articles were excluded because their abstracts did not reference “service design”. Of the remaining 22 articles, a further 15 articles were excluded due to a lack of clear evidence of SD being used concerning a crisis. The final sample of seven articles is presented in Table 1. The low number of studies suggests that, to date, limited scholarly attention has been given to the role of SD in crisis contexts.

The studies address various types of crises, including the logistics crisis following the COVID-19 pandemic (Wang *et al.*, 2023), the ecological and social crisis (Huang and Chen, 2024), the financial crisis (Salinas, 2022), the environmental crisis (Touloum *et al.*, 2018) and the refugee crisis (Nasr and Fisk, 2019). These crises are complex and involve multiple stakeholders (Touloum *et al.*, 2018). Most of

the research uses qualitative methods, particularly interviews with tourists, civil servants, workers, professionals or experts. These studies reveal SD's potential for understanding consumer behaviour (Touloum *et al.*, 2018), fostering innovation during crises (Huang and Chen, 2024) and grasping the scope of crises while improving tools for alleviating them (Nasr and Fisk, 2019). Moreover, SD has been shown to enhance service performance (Megawati *et al.*, 2024) and support understanding both the present and the envisioning of possible and desirable future scenarios (Salinas, 2022).

Despite the strengths identified in these studies, it is noteworthy that many largely overlook the human-centred nature of SD. Only three out of seven papers explicitly discuss human behaviours (Huang and Chen, 2024; Nasr and Fisk, 2019; Touloum *et al.*, 2018). SD methods such as the double diamond process (Huang and Chen, 2024; Salinas, 2022; Touloum *et al.*, 2018), World Café (Huang and Chen, 2024) and user journey mapping (Touloum *et al.*, 2018) were applied in the data collection and analysis to understand the case studies. However, there is limited insight into consumer behaviour itself. For instance, consumer trends in the textile industry were briefly mentioned in Huang and Chen (2024) as emerging but marked post-pandemic anxiety. Refugee needs were emphasized by Nasr and Fisk (2019) as important, yet the study did not elaborate on specific needs beyond the basic human necessities. Touloum *et al.* (2018) used persona-UX techniques to illustrate user behaviour patterns, noting a general lack of studies in this area. Across the literature, no study has provided in-depth empirical data on changes in consumer behaviour.

Overall, there is a lack of empirical evidence on how companies use SD to handle crises. This highlights the need for further exploration of how SD is applied in practice during such events. In the following section, we present a small exploratory study among SMEs in Finland – a European country significantly affected by the COVID-19 pandemic. As a global crisis, the pandemic had a profound impact on both customer behaviour and firm operations.

3. An example of service design in times of a crisis: the COVID-19 pandemic

We chose a qualitative exploratory approach, which is suited to understanding a phenomenon that has not been widely explored and that occurs in a non-controlled environment, such as a crisis involving unexpected changes. The data were collected from SMEs that develop digital technologies. The main themes in the interview guide (see Appendix) focused on the changes in SD that the firms had made in response to consumers' changed behaviours during the COVID-19 pandemic.

SMEs play a dominant role in the economy in most countries. For example, in Europe, they account for 99% of all enterprises, 72% of total employment, 50% of total value added and 55% of exports (European Commission, 2022). Moreover, new technology is the main driver of service innovation (Toivonen and Tuominen, 2009), which makes this field particularly relevant for research.

Table 1 Current research on service design concerning a crisis

	Aim of the study	Crisis type/ description, definition	Method	Service design definition	Service design use in relation to a crisis
Megawati et al. (2024)	"Examine the impact of green service design, sustainability governance, and information analysis on public service performance and local SDGs" (p.4361)	Challenges due to rapid economic growth include "high energy consumption, rising greenhouse gas emissions, and severe air and water pollution" in Indonesia (p.4361)	Quantitative surveys, data collected from civil servants in Italy	"Service design is a cross-disciplinary approach... emphasizing a customer-centric iterative approach to developing new services... and to create and optimize services to be more effective, efficient, and satisfactory for users" (p.4363, citing Eghball et al. 2022, Fan et al., 2022, Pemicci et al., 2008)	"Designing services that pay attention to environmental aspects to minimize negative impacts on nature", green design principles can be applied to improve public service performance through resource efficiency and reducing carbon footprint (p.4369)
Huang and Chen (2024)	"Explore service design the underlying problem (pain) points, how professionals think in action, and develop feasible business service innovations" (p.226)	The pandemic as a global crisis impacting SMEs in the textile industry in Taiwan	Empirical case study. World Cafe conversation method with focus group interviews with 18 experts and professionals from industry, academia and research in Taiwan	"Service design is a problem-solving method or an exploratory innovative process" (p.226, citing Kimbell, 2011)	Using the World cafe method of SD to develop an innovative business model during the pandemic, following the double-diamond model with four stages of discovery with discovery, definition, development and delivery
Wang et al. (2023)	"Determine the arising challenges due to COVID-19 and pandemics in general and subsequently propose several solutions to tackle these challenges in rail transport" (p.1)	The COVID-19 pandemic and post-pandemic unprecedented issues, such as changed travel behaviour, lost profits and a lack of personnel in the rail sector	Conceptual study based on literature on COVID-19, public transport and particularly rail transport	N/A	Rail service redesign: "rearrange the planning strategies and goals to adapt: (1) under pandemic conditions but also (2) during the post-pandemic phase, to still provide sustainable and socially valuable public services" (p.10)
Liu et al. (2023)	"Examine whether social distancing can increase tourists' preferences for anthropomorphism" and "reveal the underlying mechanism of this effect" (p.384)	Social distancing during the COVID-19 pandemic on tourist behaviour	Three experimental studies with Chinese tourists on their preference for anthropomorphism under conditions of social distancing vs non-social distancing during the pandemic	N/A	Service design is proposed "to convey warm feelings and improves service experience, promote tourists' trust in self-service machines or service robots" (p.893)

(continued)

Table 1

	Aim of the study	Crisis type/ description, definition	Method	Service design definition	Service design use in relation to a crisis
Salinas (2022)	"Exploring how critical service design might innovate local policy-making" and "seeking to increase local government capacity and capability for innovation" (p.517)	Unprecedented challenges such as the global climate emergency, the global health crisis caused by the COVID-19 pandemic and the global financial crisis that required local government services to innovate	A case study with the participation of 2 academic leads, 3 design researchers and 30 postgraduate service design students from the University of the Arts London advocate for their preferable futures	"Service design is a human-centered, creative, collaborative, iterative and systematic process applied to the development of services, creating interactions within complex systems in order to co-create value for relevant stakeholders" (p.519, citing Sangiorgi and Prendiville 2017; Malpass and Salinas, 2020)	Based on SD methods, different creative facilitation and co-design methods were used in the case study to "afford anticipatory and collaborative innovation, better equipping local government to tackle highly complex challenges" (p.525)
Nasr and Fisk (2019)	"Propose an innovative methodology for designing public transport services based on a rational decision-making process with stakeholder engagement, aiming to perform a sustainable development perspective" (p.6303)	The global refugee crisis	Conceptual paper with a transformative service research approach to solving the global refugee crisis	"Human-centered, creative, and taking an iterative approach to the creation of new services" (p.691, citing Blomkvist <i>et al.</i> , 2010)	Service design is used to answer questions related to the refugee's needs and the problems "at the three levels of the service ecosystem (micro/individuals – meso/organizations and agencies – macro/governments)" (p.695)
Touloum <i>et al.</i> (2018)	Identify a "methodological framework that use a correlated tools and techniques from both UX design and SD for purpose of narrowing the gap between UX and SD practices"	A flooding crisis	Conceptual paper based on a case study with the participation of 24 civil protection agents in a flooding crisis in Algeria	"Holistic, co-creative, and user-centered approach to understanding customer behavior for the creation or refining of services" (p.49, citing Polaine <i>et al.</i> , 2013, Stickdorn and Schneider, 2013)	The study proposes a UXD-IS framework for the capture and integration of UX into the service design process to improve overall service design practices with four stages: (1) service context discovery, (2) UX characterization, (3) touchpoint analysis and (4) service-UX prototyping

Source(s): Authors' own work

To capture empirical variability while ensuring that the companies are not too different from each other, we selected similar-sized companies, with the number of employees ranging between 50 and 100. The companies' offerings pertained to digital technologies within e-commerce, mobility, energy, health care and wholesale. Only companies that provided evidence on their webpages of having used SD before and after the pandemic outbreak were included in the sample. After the initial screening, 12 companies were contacted, of which 10 agreed to participate in the study.

The informants worked directly with SD in developing services (design, tech and IT consultants). Semi-structured interviews were conducted from April to September 2021. The interviews took place either in person or online, lasted approximately 60 min and were recorded. After transcription, the data were classified and labelled, starting with base categories and then abstracted to identify patterns and groups. The categories were compared across cases.

The data analysis followed an inductive reasoning process. To capture "the most empirically grounded and theoretically interesting factors" (Azungah, 2018, p. 391), the data were carefully examined line by line and coded as sentences or paragraphs that uncovered concepts. This approach is suitable because it facilitates rich interpretive data analysis, which is necessary for discovering previously unidentified themes and frameworks of SD in crisis management. This led us to identify two main themes: changes in consumer behaviour during the crisis and navigating the crisis with SD. Sub-themes are discussed under these main themes. Next, the results will be discussed, starting with the changes in consumer behaviour that shaped the companies' business environment.

3.1 Consumer behaviour changes during the COVID-19 pandemic

Substantial adjustments in consumer behaviour became prominent during the pandemic and can be roughly summarized in four themes.

3.1.1 Health safety compliance

Consumers adhered to COVID-19 safety regulations, adopting behaviours such as wearing face masks, frequent handwashing and sanitizing and maintaining social distancing:

The users (EC) avoid very close contact with the driver, and they prioritize safety issues, and they kind of prefer the taxi over public transport like buses and metro in [city name omitted] [...]. The driver has a glass screen between them and the passenger[...]the driver wears a mask so that the passenger can more comfortably choose their services (Digital product designer, mobility service).

3.1.2 Localized mobility

Due to lockdown-related travel restrictions, consumers favoured domestic travel and local vacationing. Many also returned to their hometowns during the lockdown period:

It [COVID-19] changed more into a local environment because people can't travel much, they can't do so many great experiences, and spending has dropped a lot. Some people have moved back to their home cities or towns and maybe enjoy a more normal life, which is not so busy (CEO, mobile application).

3.1.3 Remote work adoption

With office closures, consumers were forced to switch to remote or hybrid work models. Many struggled to adapt to this new way of working:

Once the office is closed, it's 100 percent online. Some of the customers had a really hard time coping with that new reality. I've heard that for some, it has been a real problem because not everyone is used to working online so much (Service designer, IT consulting service).

3.1.4 Increased digital integration

Consumers significantly integrated their use of digital services and online purchasing. This trend spanned all age groups with some – particularly the elderly – requiring assistance to navigate digital tools:

There has been quite high demand for teaching elderly people to use digital devices to keep in touch with their relatives (Service designer, healthcare service).

3.2 Service design changes in response to changes in consumer behaviour

Informants from the studied companies reported significant changes to SD, driven by shifts in customer behaviour and limitations on employees' ability to work on-site. These changes were categorized into three main themes: *market intelligence*, *management workflow and tools and methods*. Each theme is elaborated below with illustrative quotes (C = companies using SD, BC = business clients/customers, EC = end consumers).

Market intelligence refers to the collection, analysis and communication of market and user information to support decision-making in SD. Due to restricted customer contact, activities such as interviews, workshops and user testing transitioned to virtual formats. This shift required enhanced online tools and settings to replace in-person communication:

When the work was transformed to remote and online engagement, we tried to improve the materials and presence online. For example, demos with customers used to be personal, but now they're all done online (CEO, Customer application).

The move online also demanded increased digital readiness among staff to collect customer feedback. Communication shifted from deep, in-person interactions to more frequent but less personal online exchanges, using tools like email and Microsoft Teams for project briefs, drafts and deliverables.

Management workflow encompasses the SD tasks and processes that ensure efficient operations. As SD work moved online for all stakeholders (C, BC and EC), companies faced challenges in adapting their workflows. Traditional methods for user research and testing were replaced or modified:

Because of remote work, closure of local shops, restrictions on traveling and events, we can only look at the statistics data rather than going to observe and talk to customers (EC) face to face (CEO, Customer application).

Engaging consumers became more difficult, as virtual methods lacked the excitement and depth of in-person interactions:

For understanding users, like problem-solving or mapping customers, the pandemic has made it a little bit harder. Even though we have good remote tools for [understanding users] but it's not the same. People are not as excited for those kinds of workshops compared to in-person ones at our studio (Digital product designer, mobility service).

SD tools and methods had to evolve to accommodate changes in consumer behaviour, particularly in testing, evaluation and improvement phases. Informants noted a loss of physical context and emotional cues, which hindered understanding of customer needs:

We (C) are missing the physical side, for example, the spot, the setting, the environment, the situation. We couldn't even take pictures or anything like that because it was highly restricted to visit the customers (EC) (Digital product designer, mobility service).

I could not do an in-person evaluation of the activity. For example, I cannot observe them like on a normal day. That also complicates things and makes us create or design based on [our own] assumptions (Service designer, IT consulting service).

This lack of direct contact increased the risk of cognitive biases, such as over-reliance on internal assumptions.

To address these challenges, companies adjusted their SD tools and methods. In-person interviews were replaced with phone or virtual meetings, and new or modified digital tools were developed to interpret user feedback:

We use the online training tool pack that we've created since summer 2020. Over the years, we've been adding different self-made methods in there[. . .] because the tools are not automatically used but had to be tailor-made for specific projects (Service designer, healthcare service).

During the testing phase, physical contact with customers was limited. All testing was conducted online, which made qualitative evaluation more difficult. Designers had to rely solely on verbal feedback, testing features individually rather than in groups, which reduced consumer reflexivity:

Everything is moved online, and it's hard to get the real data from real people from talking. We tried to evaluate why that data exists and, again, make some assumptions that could be quantified, for example, how people use the mobile app. How do they experience it? What is their feedback? What is their pain point? What do they understand? What don't they understand? What do they like? What don't they like? And the key to this current scope has been to just reduce like features and complications and just trying to make it simpler so more people can understand it (CEO, Customer application).

Our findings indicate that SD was actively adapted in response to the crisis and the resulting changes in consumer behaviour. In the next section, we explore how these adaptations and behavioural changes evolved in parallel.

3.3 Service design adaptation to the crisis

SMEs that develop digital technologies found alternative solutions and turned challenges into opportunities by adjusting SD to the changed business environment – particularly in response to shifts in consumer behaviour. These changes are summarized in [Figure 1](#), where C2B refers to the relationship between SMEs and their business customers, and C2E refers to the relationship between SMEs and end consumers.

Firstly, due to travel and safety restrictions, service designers were forced to switch from in-person interviews and testing to virtual and online meetings. Although these remote settings lacked contextual cues, emotional depth and human connection, service designers adapted by using more flexible interview questions and alternative testing approaches.

Secondly, face-to-face SD workshops for ideation, modelling and testing could no longer be conducted. To address this challenge, SD tools and methods were transitioned to virtual platforms and further developed to support effective online workshops.

Third, SD in development activities was adjusted by shifting the focus to online service development. This included testing features individually, based on observed user behaviour, while also minimizing risk.

4. Preliminary framework for service design's promise in times of crisis

[Figure 2](#) introduces a conceptual framework illustrating the potential of SD in times of crisis. It adopts a forward-looking

perspective, proposing that SD can evolve beyond reactive measures to become a way to proactively strengthen firm capabilities and resilience. By learning from past crises and preparing for future disruptions, SD could help organizations mitigate different kinds of crises more effectively.

Building on insights from our small-scale study on the COVID-19 pandemic as a case of crisis, the framework begins by identifying how firms use SD to respond to crises. The key changes in consumer behaviour observed during the pandemic, such as increased attention to health and safety, a preference for localized mobility, the widespread adoption of remote work and greater reliance on digital services prompted service designers to adapt their practices in three main areas (market intelligence, management workflows and the tools and methods used in design processes). In response, companies moved their research and collaboration activities online, upgraded digital tools and restructured workflows to support remote engagement. These adaptations enabled the creation of new or modified services and interfaces tailored to the constraints of the pandemic.

Crucially, the framework underscores the value of past experiences as learning opportunities. By integrating insights gained during crises, organizations could strengthen their SD capabilities and adopt a more proactive stance towards future disruptions, ultimately enhancing their preparedness and resilience.

Through this framework, we aim to advance current knowledge of how SD can be used in times of crises by extending its role beyond crisis response to include proactive mitigation and resilience-building in business environments. This extended view aligns with the work of [Chowdhury et al. \(2025\)](#), who suggest designing resilient and sustainable service systems to overcome disruptions.

We propose a proactive approach to SD in crisis contexts consisting of two key elements: learning and preparing. A proactive approach is defined as “developing a service system's resilience to mitigate the impact of potential disruption” ([Chowdhury et al., 2025](#), p.26). Our framework suggests that organizations can build SD capabilities and resilience by integrating lessons from past crises and preparing for a range of future disruptions. In today's volatile world, this forward-looking use of SD is increasingly essential.

5. Implications and future research

Crises compel companies to quickly recognize and respond to changing customer behaviours. SD supports this process through its iterative nature, enabling continuous improvement based on user feedback ([Stickdorn et al., 2018](#)). This interdependence highlights how closely SD is tied to shifts in consumer behaviour at a societal level. While SD has been studied in relation to future thinking and service innovation ([Ojasalo et al., 2015](#)), its role in navigating crises remains underexamined. We argue that SD's unique value lies in its ability to help firms prepare for volatility rather than merely responding to it.

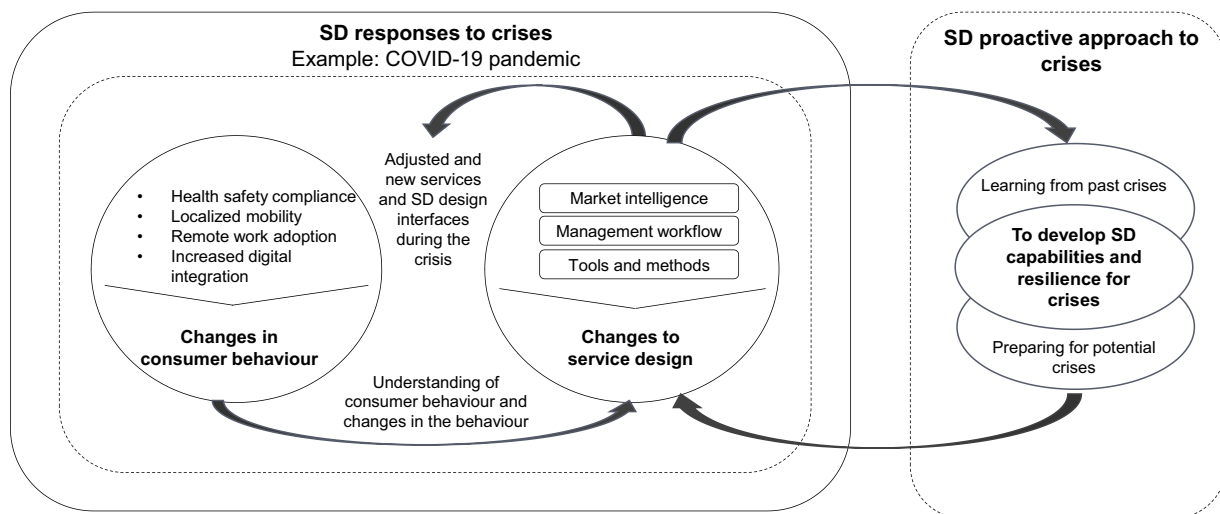
SD can anticipate future consumer needs by asking exploratory questions ([Harwood et al., 2020](#)) and

Figure 1 Examples of service design adaptation to consumer behaviour changes during the COVID-19 pandemic

Consumer behaviour change types	Company changes to SD examples		
	Market Intelligence	Management Workflow	Tools and methods
Health safety compliance (EC, BC)	Acquiring and implementing the COVID-19 pandemic instructions in communication channels (C2B)	Adapting and being flexible to the safety guidelines and instructions (C2B, C2E)	Accounting for safety issues when doing consumer interviews or testing (C2B, C2E)
Localized mobility (BC, EC)	Setting up remote conversations with the consumers to understand the pandemic's effects and consumer behaviour changes (C2B, C2E)	Moving to remote work and virtual meetings instead of face-to-face meetings (C2B, C2E)	Reaching consumers for interviews and testing remotely via phone, video call, or virtual interviews (C2B, C2E)
Remote work adoption (BC, EC)	Maintaining open and flexible communication with the consumers through different methods and platforms (C2B, C2E)	Setting up frequent online meetings inside the companies and with the consumers to keep close contact and working track (C2B, C2E)	Creating and using own and custom tool packs for online, remote workshops (C2B, C2E)
Increased digital integration (BC, EC)	Engaging more in omni-channels in service communications to reach the targeted audience (C2B, C2E)	Moving all service design work online and/or hybrid with different actors and stakeholders (C2B)	Hybrid testing of both online and in person (C2B, C2E)

Source(s): Authors' own work

Figure 2 Framework for service design's promise in times of crisis



Source(s): Authors' own work

generating new service ideas grounded in a deep understanding of customer contexts (Ojasalo et al., 2015). Such “what if” scenarios (Harwood et al., 2020; Mahanta, 2023) include asking questions such as: *What if there was a*

limit on energy consumption? What if the government capped waste generation?

Educators could incorporate such methods into the training of service designers to encourage their ability to

imagine and explore alternative futures, as well as to challenge current assumptions. For this purpose, Thakral (2025) proposes a set of approaches under the umbrella of Speculative Design, which focuses on the future consequences and implications of the relationship between science, technology and humanity. These methods include scenario building, design fiction and storytelling, prototyping experiential simulations, discursive and critical design, cultural probes, role-play and co-design workshops. These approaches not only enhance creativity but also cultivate a mindset of critical foresight – essential for navigating complex and uncertain futures. They are particularly powerful tools when applied in the context of various crises.

During a crisis, SD facilitates iterative collaboration and co-creation by engaging stakeholders in repeated cycles of development and refinement. Tools such as customer journeys, service maps and personas are used to refine services based on user feedback (Stickdom *et al.*, 2018). As our empirical study shows, this enables companies to reflect on past and present activities holistically to better prepare for the future.

After a crisis, SD supports reflection and learning through storytelling and visualization techniques (Harwood *et al.*, 2020), helping stakeholders, e.g. service designers and business leaders understand how various factors are interconnected and which changes had the greatest impact. Combining foresight tools – such as trend cards, future wheels and change paths – with SD methods can help organizations design more resilient, future-ready services (Ojasalo *et al.*, 2015).

In summary, our viewpoint proposes a before–during–after approach to crisis planning, where SD plays a role in prediction, mitigation and learning. As Mahanta (2023) notes, service designers are trained to anticipate future needs and create adaptable, holistic solutions that address complex societal challenges. Nevertheless, the full potential of SD in proactively mitigating the impact of crises remains largely untapped.

Given the limited research on SD in crisis contexts, we call for further investigation. Our framework offers a starting point, and future studies could expand its application across different types of crises, organizations and countries. Comparative and longitudinal research, particularly on services developed during the pandemic, could reveal which innovations endure and why. In addition, exploring the links between SD and factors such as employee well-being, emotional engagement and stakeholder transformation would deepen our understanding of SD's broader impact. More attention is also needed to SD's role in addressing individual-level crises and vulnerabilities, such as disability, and in navigating sudden regulatory or market shifts.

Moreover, the crisis we explored was health-related and required isolation, while other crises may involve different types of changes. Such changes might be societal, technological, economic and environmental in nature – or combinations thereof – each with its own requirements for SD adaptations and for preparations for future uncertainty. Finally, it would be pivotal to explore how crises, ecosystem change and SD align, as crises are likely to affect entire ecosystems. This calls for a deeper understanding of SD and

institutional arrangements to realize long-term change (see Vink *et al.*, 2021) and foster resilience in ecosystems. SD for ecosystem sustainability may be one such promising area for future research.

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Further reading

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Appendix. Interview guide

- 1 Company background:
 - What is your company’s business sector and what are its key activities?
 - What is your position in the company?
 - Who are your customers (e.g. business clients and end users)?
 - What services does your company offer?
- 2 Changes in consumer behaviour during the COVID-19 pandemic:
 - How was your company affected when your customers responded to the COVID-19 pandemic?
 - How was your company affected when your customers tried to cope with the COVID-19 pandemic?
 - How was your company affected when your customers adapted to the new normal?
- 3 Developing services and service design in the company:
 - How did your company respond to these changes in service development?
 - Did service design play a role in your response? If yes, in what ways was it useful? If not, why not?
- 4 Use of service design during the COVID-19 pandemic:
 - Did you use service design differently during the pandemic? If so, how?
 - How did you use service design to understand changes in customer behaviour? Which methods or tools were used?
 - How did you use service design to ideate service solutions in response to those changes? Which methods or tools were used?

- How did you use service design to model solutions and plans? Which methods or tools were used?
- How did you use service design to conceptualize and test solutions? Which methods or tools were used?

5 Additional questions

- What are the pros and cons of using service design to address changes in customer behaviour during the pandemic?

- Would you consider using service design in the future? If so, how?
- Is there anything else you would like to share about service innovation during or after the pandemic?

Source(s): Authors' own work

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