Restrategizing for the post-pandemic era: Service design for digital transformation in the art and cultural sector

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Abstract: This paper explores the challenges of entrepreneurs and organisations within the art and cultural fields in meeting the challenges of digital transformation. Drawing on a multidisciplinary conceptual framework, and a qualitative empirical investigation comprising four case studies, which illuminate how cultural field organisations and entrepreneurs have adapted to the market disruption caused by the Covid19-pandemic through digital service innovation means, we propose a model for a four stage service design programme, which links design methods as concrete development tools for assisting companies develop innovative digital services and restrategize in post-pandemic markets.

Keywords: service design, digital transformation, service innovation, digital services

1. Introduction

Art and culture sectors were among the most severely hit by the Covid-19 pandemic and its restrictions to gatherings of people (EY 2021). Live events were prohibited or strongly limited, forcing creative entrepreneurs to restrategize. The pandemic radically accelerated digitisation and the production of cultural and creative work on digital platforms (EY 2021). This crisis disrupted existing operational strategies, and worked as a catalyst for companies to find and employ new digital solutions in service provision, distribution, and customer interaction (Kabadayi et al, 2020; Heinonen & Strandvik, 2020).

We can expect live engagement with audiences to remain an essential part of creative business when and if restrictions are removed (see EY 2021). However, the experiences gained from service digitalisation in a crisis offer fruitful learnings for digital innovation, transformation and service design research, as well as strategic development of the art and culture industry.

In this paper, we explore rapid service design processes for digital transformation backed with four case studies of digital transformation among art and culture entrepreneurs. Drawing on these empirical data and multidisciplinary literature, we propose a four-part model for digital transformation through service design. This model is used as a framework in service design education in creative fields.

The empirical context of art and cultural services, in combination with the temporal backdrop of the pandemic, offers a unique window into understanding the challenges and opportunities of service digitalisation and innovation. The paper offers a theoretical contribution by illustrating the responses to radical environmental change, illuminating the special circumstances and forms of service digitalisation and rapid, imposed service innovation, which challenge the previous discretionary models. In doing this, we address the call for research expressed by e.g. Heinonen & Strandvik (2020) to investigate pandemic-related adjustments of business operations in different circumstances. Moreover, analysing these particular experiences of digitalisation helps organisations accelerate digital transformation. In this paper, we also provide a contribution at the practitioner level by proposing a framework that connects service design methods with the identified digitalisation and service development challenges.

We begin with a conceptual background description of the topic digital transformation, particularly in disruptive and turbulent environmental conditions, and discuss the potential of service design as a tool in managing this transition. Thereafter, the research method and empirical data are presented and discussed. Drawing on these, the final section outlines a service design development programme that can be used to help companies and entrepreneurs innovate and develop digitalised service offerings.

2. Digital transformation through service design

2.1. Digital transformation in a disruptive marketplace

Adoption of digital technologies into business activities transforms companies holistically. Digital business transformation is a multifaceted and complex journey, which can create radical, ecosystem level changes in existing businesses and user preferences (Hämäläinen, 2019). On the company level, deploying digital technologies and digital innovations influences company culture, value creation, business models, and networks. Digital transformation is a long-term strategic maneuver that requires new competences, collaboration, and solution development.

Digital innovation can mediate digital solutions to customers, combine them into systems, or provide digital platforms for content. Digital ecosystems nourish digital innovations and provide relevant capabilities, which can lead to rapid growth of digital business. The digital innovation capabilities require both networking competences, and tools for communicating and making decisions about ideas. Innovation teams can approach development by exploring

new technologies, user needs or economic value to business models (Ciriello, Richter & Schwabe, 2018).

The Covid-19 pandemic, however, showed that much of the existing literature on digitalisation and innovation is rather limited to planned, discretionary type of innovations that depict gradual improvements of existing services, and hence lack consideration of the disruptive nature of environmental change and the subsequent rapid adaptation processes experienced in the pandemic-affected marketplace. Service scholars have recently started addressing these effects, introducing terms like service mega-disruptions, i.e. fast-moving market disturbances at a massive scale (Kabadayi et al, 2020) and imposed service innovation (Heinonen & Strandvik, 2020) to highlight the strategic necessity and urgency of service innovation in extremely sudden and disruptive environmental conditions. In their study of Covid-19 induced innovations, Heinonen & Strandvik (2020) identified thematic categories and strategic types depending on time horizon and strategic stretch, i.e. aimed for "riding out the storm" or exploiting new market opportunities or completely new future visions. They emphasise that in disruptive conditions such as the pandemic, service innovation receives an even more strategic significance, as a company's assumptions about its business models, offerings and customers may need to be completely reconsidered, and new directions opened up.

Even though the pandemic has caused business disruption at an unforeseen scale, the notion of environmental turbulence and its effects on company adaptation is not new within strategy literature. Environmental changes have traditionally been considered a change force that can alter the value of resource allocations, and thereby the successfulness of the product-market strategies that they rely on. (Luokkanen-Rabetino, 2015; Kouropalatis, 2012). In her systematic review of service innovation research, Wolf (2019) concludes that with regard to adapting to digital transformation, research has been polarised to either examining exploration or exploitation strategies, i.e. focusing either on exploring new competences and strategic directions, or on creating shorter term efficiencies from exploiting existing ones. Ambidexterity (see March, 1991) or the capacity to utilise these strategies simultaneously, has however been identified as a characteristic of successful adaptation to change. According to Wolf (2019) ambidextrous service innovation, the mutually constitutive relationship between exploration and exploitation activities, helps accelerate innovation cycles when the two activities are not temporally separated or siloed in an organisation. In our context of individual entrepreneurs or small firms, it is perhaps fair to assume that such separation is even less likely.

The notion of ambidexterity has also been applied in the context of design research. Nielsen et al (2021) suggest that design thinking principles can help managers achieve ambidexterity by assisting in sensing and finding solutions to key management problems, and by facilitating new meaning-making. These findings pave the way for our purpose to utilise service design tools in helping companies find novel ways of digital service development, and stay adaptive in changing market conditions.

2.2 Service design

Service Design (SD) is a growing field for human-centeredness, collaboration and innovation of services through a holistic approach (Joly et al, 2019). It brings together social, cultural, human and technological areas in the creation of new experiences. Typically, service design requires several iterations, prototyping and evaluation with users before a final solution. The customer-centred development impacts on customer experience by innovating the use processes and models of behaviour (Maffei et al, 2005). Co-creation with customers enables elaboration of individual needs, and customisation of services according to customer behaviour. In addition to creating well-functioning services, co-creation improves commitment and peer-to-peer learning (Miettinen et al, 2016).

In the context of digital transformation within art and culture, service design can act as a lens for reviewing one's own, current services, identifying gaps, and creating solutions. Building service design capacity helps organisations by changing mental models and thought structures about how operations shape behaviour. Vink, Edvardsson and Wetter-Edman (2019) have found three ways of reshaping mental models in adoption of service design practices for innovation: it can be a bodily experience through facilitated performance, perceiving alternative mental models through interactions, or becoming aware of them through testing (Vink et al; 2019).

Service design practice and methods can act as useful tools for stimulating ambidexterity and managerial ability to innovate services that not only help entrepreneurs ride through a crisis, but also frame innovative pathways to future services through reconfiguring resources and their relations within a system (Sangiorgi & Prendiville, 2017).

3. Methodology

The empirical data that provide the foundation for developing a framework for a service design programme, consists of four case studies, which provide rich and complementary illustrations of how different entrepreneurs and organisations were affected by the pandemic, and which kind of digital service development means they utilised as response. The insights about these efforts, their requirements and opportunities, provide a unique basis for understanding the needs for competence development for companies at the threshold of digital transformation.

Case study methodology is one of the most frequently used qualitative methods in business research, providing holistic, in-depth understanding of a phenomenon, where the case itself and its specific context are highly intertwined (Yin, 2014; Stake, 1995; Eriksson & Kovalainen, 2008). This makes it an apt choice for studying the actions of entrepreneurs in a specific industry during rather unusual circumstances, as the cases are considered interesting because of their specific context, rather than isolated from it (Johnston, et al, 1999). The cases in this study were purposefully selected to follow an extensive case approach (Eriksson & Kovalainen 2008; Stake 1995) aimed at showcasing complementary perspectives from

different types of cultural organizations regarding size, type, and cultural field (see Table 1 for detail), but which all had experiences of rapid digital service development.

In line with the aim of triangulating data from multiple sources of evidence (Yin, 2014) the empirical material includes in-depth interviews and website and social media content of the organisations. Four expert interviews were held in Microsoft Teams, recorded, and fully transcribed. Our analysis focused on how the pandemic had altered service provision strategies in the organisations. The experiences and takeaways of digitalisation were first analysed within individual cases, and subsequently at an aggregated cross case level, which is presented next.

Table 1.   Summary of case study data

Acronym	Type of organisation	Informant's role	Date	Duration
Informant D	Dance studio (private SME)	Owner / instructor	13.10.21	67 min
Informant T	Freelancer theatre (association)	Administrative	18.10.21	63 min
Informant O	Opera singer (private entrepreneur)	Artist / entrepreneur	29.10.21	58 min
Informant A	Art museum	Audience development	3.11.21	67 min

4. Service provision during the pandemic - experiences from imposed digitalization

4.1 Forms of adaptation through digital services

The four cases were all drastically affected by the closures and limitations to gatherings brought on by the Covid-19 pandemic. Concerts, events and performances were cancelled, or allowed only for limited audiences, and premises temporarily closed. In order to serve their customers and maintain some level of operation, all the studied organisations responded to the disruption through various online solutions, from live streaming, sharing of tutorials, videos or other content through platforms like YouTube and Vimeo, digital sales platforms, and social media. Some of this content was provided for the audiences free of charge, whereas some content, such as performing art productions, online dance lessons, and concerts generated payments from users.

The types of innovative responses exhibited resonate with what Heinonen & Strandvik (2020) label as remote presence innovations, entertainment innovations, education innovations, and also social connection innovations. In fact, in art and cultural services, these typologies were often found to overlap; a digital service can provide multiple types of new value simultaneously. For instance streamed stage performances provide a way to remotely access what would normally be a cultural experience tied to a specific service consumption space and practice (e.g. going to the theatre or a concert), but which also provides entertainment

to counteract the boredom of socially limited pandemic times. In all the cases, part of the digital service was offered for free, which indicates that, from the service provider's point of view, not all digital service forms were viewed as business, but rather as offering something for pure entertainment, like the opera artist, who *"did some songs together with my son, and put them on YouTube just to make people happy".* Such responses adhered to an exploitation strategy; doing similar things as before, but in new channels and thus partly for new audiences.

All informants also highlighted the role of social interaction linked to digital service provision; how social media functions and the more direct interaction between provider and consumer helped establish and maintain a dialogue and forge a sense of community between the participating users. Also, it pinpointed at the challenge of providing a place for this social function of a service.

> *"People don't come to the dance studio to learn how to dance. Of course it's part of that, but mostly it's about the community. People want to feel like they are part of something."* (Informant D)

This type of social need, that the service needs to fulfil, was partly compensated by comments and chats enabled by some of the digital distribution formats, while they remained missing in others that instead performed technically better. This points at a challenge in managing the different aspects of service value for the customer.

Even if interacting through social media touchpoints during the service journey is nothing new, its role was highlighted when personal interactions of the service encounters were missing. Hence, the digital solutions also have characteristics of what Heinonen & Strandvik (2020) call social connection innovations. The opera singer as an individual entrepreneur was able to apply this at an even more personal level, providing concerts or "musical greetings" via media like Skype, Zoom or WhatsApp to individuals, families, elderly care units, or corporate events. In all, consumers could enjoy and interact with artists and fellow consumers in new contexts, or in the words of Informant T: *"Art was brought to people's homes in completely new ways".* This illustrates a more ambidextrous strategy, where exploitation in new channels also opens up new, explorative service pathways.

Particularly the museum's and the dance studio's digital services, such as virtual exhibitions or behind-the-scenes work, online tutorials or classes, also exhibited what Heinonen & Strandvik (2020) categorise as education innovations.

An exploitation logic could be seen in services that changed the live encounter to remote (like live streaming), whereby the place of consumption and the digital delivery constituted the novel part. Even if e.g. making video recordings or teasers of performances had been done before, their role as content however changed from promotional or archive material to a more central one in service provision. For instance the dance studio entrepreneur found online recordings of classes as a convenient way to exploit resources to generate passive income over time. On the other hand, the examples also included more explorative strategies relating particularly to the opportunities provided by previously unused service distribution

tools, which in some cases radically changed the market structure and the offering. Traditional intermediaries (e.g. concert halls) could be surpassed or changed to new ones (digital platform providers), creating a new, more direct relationship between provider and user.

> "…private people began to order home live music. I hope that would stay from this time, that using live music at an occasion wouldn't be limited to companies, but that people would use it with a lower threshold. If a person asks me for a few songs, I obviously won't charge for it in the same way as for an entire evening gala" (Informant O)

In the interviews, the organisations also gave examples of other, more radically innovative and explorative digital services, where the actual components of the core service (art) were combined in a cross-disciplinary manner, for instance in events combining electronic music and projections of visual art, or performances fusing sound, light, performing art and scientific content, such as biology research.

4.2. Imposed digitalisation: problems and opportunities

As the examples above illustrate, some digital services were in place before the pandemic and had been developed in a more planned way, but the sudden change in operational circumstances also gave rise to imposed innovation in terms of digital services that were ideated and introduced rapidly, sometimes through processes of trial and error, and through testing of different platforms (like overcoming music copyright issues in digital distribution of dance lessons). A characteristic issue for the commercial services was also how to approach the earning logic of digital content, if, how much, and how to charge for services that many also offered for free.

> "Streaming has proven to be a sensible thing to do, so we will surely keep doing that for productions that it's suitable for. We just need to find another platform for it, so that also the artists would make some money from it." (Informant T)

While some of these challenges of adaptation imply a need to only find new routines and better solutions, as the quote above exemplifies, some digitalisation challenges related to issues with transforming the service into a digital form of consumption. All the informants raised the role of live presence and place-specific experience for the service encounter as something that is difficult or impossible to convey digitally.

> "Of course it's different… it's more like proper teaching and not just showing the choreo, but more communal." (Informant D)

> "It's a whole process, when you go to a concert hall, the anticipation. You don't get that when you are at home in your sweatpants" (Informant O)

Also a general screen fatigue was mentioned by several informants as an obstacle for service adoption.

Although the rapidly imposed digitalisation involved problems and challenges, the informants also recognised opportunities and future development potential from these experiences. This related both to the introduction of new ways to interact and engage with audiences and maintain services for existing customers, and, in general, building and reinforcing

relationships with and among audience members. Moreover, this had other marketing implications, like working as teasers that create pre- and post-consumption engagement, generating interest or paving way for actual service purchases and strengthening a more effective (exploitative) resource use.

> " those online classes were quite good because some people, they were first trying things out at home, and then they had the courage to come to the studio " (Informant D)

> "We organise discussions related to the performances. We record them, and they remain on our website. Without Corona, we wouldn't have come up with documenting them and putting them online. But it is actually a splendid way of creating content." (Informant T)

Other particular examples included using museum archive material for social media e.g. through creating memes of them and thereby increasing audience engagement, or by providing opportunities for participants and audiences to digitally share their consumption of a live event, e.g. a dance session or a selfie shoot with an artist. That is, the service provider more deliberately enables this social/digital practice for consumers.

Perhaps the most significant game changer in digitalisation was however the opportunity to reconsider market segments regardless of spatial limitations; audiences and customers could participate from anywhere in the country or world, which opens the field for broader potential markets, but also a more dispersed type of co-consumption (see Belk, 2014) when e.g. a family with members around the world can gather around a shared, private concert. Also the sustainability dimensions of digital services were mentioned as providing future potential:

> "If we want to shift away from excess consumption and provide immaterial gifts, this [digital concerts] could be something to consider" (Informant O)

4.3 Development challenges

From the perspective of service design, the experiences of the case organisations raise some general themes for development work to address, to help companies better meet the challenges of digitalisation.

On the one hand, these challenges relate to **exploitation** level aims of **reusing** and **restructuring** existing resources and competences, so they can be effectively drawn upon also in a digitalised operational context. Examples include distribution and availability choices; finding the most suitable new platforms intermediaries, and partners for service delivery and audience interaction. Under the surface of these practical concerns, is however the fundamental question of who the users and customers are in a spatially redefined market setting, and what the value of the service is for the customers.

The digital setting also raises design challenges in managing customer journeys and touchpoints when the personal and live experiences are absent. Digital settings can on the one hand offer new ways to engage, interact, and bring the provider and user closer to another, but replacing service components that make live events experiential, memorable, energising

etc, such as the ambience of the servicescape (Bitner, 1982), which many of the informants had already focused on building through various atmospheric design means. *"We don't want the experience to end when the performance ends"*, as Informant T describes.

At **exploration** level, there are challenges related to for instance finding business models that enable economically feasible new services. It challenges entrepreneurs to create and orchestrate new digital offerings and places in ecosystems. Such considerations challenge entrepreneurs to **reinvent** and **rethink** their strategic directions altogether. This may how-ever not be an easy task, but it requires outside-the-box thinking, and mental reframing, as well as new ways to strategise and network. One informant expressed this challenge in the following way:

> "Even though artists are interested in digital content and platforms, getting a good hold of it on their own is rather difficult. Writing something that you don't properly un-derstand yourself, into a grant application, is pretty difficult". … It also limits the artis-tic ideation when you don't know what is possible and how it is possible".
> (Informant T)

In the theory section, it was noted that exploration and exploitation strategies are not nec-essarily alternative ways to deal with change, but that ambidextrous organisations can man-age both, even simultaneously (Wolf, 2019). This implies that the efforts to reuse, restruc-ture, reinvent and rethink are not necessarily sequential steps in a linear process, but mana-gerial challenges that arise for different organisations in different environmental conditions.

5. Design strategy implications

Next, we elaborate on the challenges of reusing, restructuring, reinventing and rethinking digital service solutions through service design in the creative sector. Each challenge includes core service design methods following the double diamond model (Design Council 2013) for digital interaction and value creation. The service design processes tackle increasingly chal-lenging digitalisation strategies as well as more holistic design methodologies requiring changes in both practices and ways of thinking. Together the service design approaches pro-vide design methods and strategic approaches (Kuure et al 2014) that create a competence development and digital innovation programme.

The first service design strategy, 'Reuse' focuses on digital interaction in communication and marketing, and the second stage 'Restructure' on digital services based on existing offerings. The third stage 'Reinvent' concentrates on new digital solutions for new customer groups, and the fourth stage 'Rethink' on the capacity building for a digital service business strategy. In other words, the steps delineate with Heinonen & Strandvik's (2020) strategic typology that ranges from more minor, short term service innovations to building potential for vi-sions further ahead in the future. The logic also incorporates the analytical distinction be-tween exploitation (stages 1-2) and exploration (stages 3-4) strategies (March, 1991).

5.1 Reuse

The first digital innovation strategy concerns using existing creative work in digital communication and marketing in order to involve customers on digital platforms. New digital touchpoints aim to foster customer relationships and increase engagement. Reusing creative solutions on digital platforms relieves time strains and helps to monetise on existing investments, and allows customers to engage with existing creative solutions.

In order to better understand the value a service provides in new settings, methodological practices such as observations are used to gain holistic, real life understanding of the users in their natural settings (Miettinen et al 2016). Understanding customers also helps in establishing empathy and assists in the creation of user personas to concretise service user types, which support user-centered development (Bitner et al, 2007; Pruitt & Adlin, 2010). Service journeys based on service blueprinting as a flexible and versatile method can in turn graphically represent involved stakeholders, actions, customers and service providers, which helps to understand the service process and contact points of customers. (Bitner et al, 2007). Prototypes provide concrete representation of future digital solutions for elaboration and evaluation with customers. (Blomqvist, 2014)

5.2. Restructure

The second digital innovation strategy restructures existing creative work on digital platforms. The service design process aims at creating unique user experiences to a broader customer group. The services can utilise existing digital platforms, or they can be modified as new digital solutions for user engagement. Restructuring new digital services frees the entrepreneur from spatial limitations and reaches out to the new customers.

Digital services compete on global markets which require unique offerings. Therefore, service design concentrates on branding of creative work and refinement of a unique value proposition that the brand represents. Competitor analysis and customer insight inform the process of strategic positioning of the service brand. Analogies and cultural meanings create connections between symbols, myths or items which can be utilised in creating desired brand image associations (Holt, 2004) of a new digital service. The digital solution can be processed into a form that is presentable to the world, and compatible with related knowledge or artifacts, such as a paper prototype concretising digital service solutions.

5.3. Reinvent

The third digital innovation strategy concentrates on reinventing digital services through new digital solutions to new audiences. Reinvention can combine existing creative resources with complementary competences from other, even more remote fields, such as sports, manufacturing industry or health care. As an outcome, a networked service solution broadens the capabilities and development possibilities of creative entrepreneurs.

Service design for reinvention means supporting entrepreneurs' capabilities to innovate and think creatively. Innovations require creative visions of potential market opportunities, understanding of possible users, their values, practices and behaviours as well as possible business contexts and service ecosystems. The design methods include framing problem areas (Dorst, 2011), creating empathy and design drivers and co-creation with network actors. Defining scenarios helps articulate visions in a way that can be shared with stakeholders and help also others frame them. Co-creation research (Cantù & Simeone, 2012; Hoyer et al, 2010) shows that shared viewpoints have a range of benefits, improving efficiency and increasing effectiveness. Co-designing can help share an employee's inputs with customers, which ensures continuous service development, and also reduces the risk of service failure as the services are partly created by customers themselves. Effectivity is increased as services better match customer needs (Steen et al, 2011).

Combining different types of collected information and experimenting with service offerings are done with the help of prototypes as they are done through different digital touchpoints, interactions and processes. (Koskinen et al, 2011).

5.4. Rethink

In the fourth strategy, service design expands the competence base in business thinking, service innovation and digital transformation. Rethinking concerns adoption of multidisciplinary concepts and models in order to establish ground for continuous learning and development. It entails development efforts that are focused on the most conceptual and strategic level questions, whereby symbolic tools come into play. Artistic expressions such as stories can function as links connecting different entities together, helping to create a specific image that defines and differentiates the service. On a strategic level, stories help the company to express its very purpose, and for external audiences it help to carve out its uniqueness from others (Kankainen et al, 2012). Storytelling is a powerful tool that helps in presenting events and experiences in a seamless manner. The intersection between storytelling and user experience is that both aim at connecting people, places, activities that emerge over time. Therefore, storytelling will help to rightly capture the situations which can be made digital. Desktop walkthrough, physical cardboard prototypes or even bodily thinking are good ways to validate the created new service. (Miettinen et al, 2015; Cramer; 2021).

The different design tools usable for the different strategic aims in the service design programme are summarised in Table 2 below.

Table 2. Service design tools for digital transformation

Stages of digital transformation	Digitizing	Digital business	Digital innovation	Digital transformation
Phases of service design	**Reuse**	**Restructure**	**Reinvent**	**Rethink**
Discover	Observations of customers and digital platforms	competitor analysis and customer insight	Framing and co-creation	Concepts and models for digital innovation
Define	User persona	branding	Design drivers	Digital business strategy
Develop	Service journey for digital engagement	Analogies, cultural meanings experience maps	co-creation and generalisation	Storytelling and modelling
Deliver	Prototyping in social media	paper prototypes	Experiments as prototypes	Bodily thinking in prototyping
Strategic actions	**Digitize for marketing**	**New business on digital platforms**	**Digital innovation to new target groups**	**Restrategize for digital transformation**

6. Conclusions

In this paper, we have proposed a service design programme that can be used to help creative industry companies, entrepreneurs and organisations in their processes of digital transformation. The programme consists of four service design processes with main methods categorised according to the double diamond model. The Reuse, Restructure, Reinvent and Re-

think processes tackle different digital transformation levels starting from digitisation of creative work to the development of the digital business, innovation and strategy. The model will be tested with art and culture entrepreneurs during the spring 2022. The service design programme can be used in discovering the most usable service design approaches in a digital transformation context, and it addresses development challenges in an ambidextrous way, where digital technologies provide opportunities to both improve existing and design new services (see Wolf, 2019) However, iterative development of service design processes is needed to test the applicability of the programme components, and to find the most suited approaches specifically for digital transformation needs.

The service design programme was built on multidisciplinary literature, combining inputs from digital transformation, strategic adaptation and service innovation, and on empirical findings from four case studies of art and cultural sector entrepreneurs and organisations, and their experiences and strategies in adapting to the radical market disruption brought on by the Covid-19 pandemic. As Heinonen & Strandvik (2020) propose, the pandemic worked as a catalyst for imposed service innovation. But the innovative effects do not necessarily only mean developing short term coping mechanisms, but can rather provide seeds for continued interest and efforts in seeking new digital opportunities, also at more innovative and strategic levels.

Our paper has in addition to the suggesting avenues for development through service design, also shed light on the forms and mechanisms through which service providers have digitalised their operations in unusually disruptive times, and thereby contributed to an increased understanding of digital service innovating forms, challenges and opportunities.

7. References

Belk, R. (2014) . You are what you can access: Sharing and collaborative consumption online. Journal of Business Research, 67 (8), 1595-1600.

Bitner, M.J. (1992). Servicescapes: The Impact of Physical Surroundings on Customers and Employees. *Journal of Marketing*, 55 (2),: 57-71.

Bitner, M. J., Ostrom, A. L., & Morgan, F. N. (2007). *Service blueprinting: A practical tool for service innovation* (Working paper). *Tempe, AZ: Center for Services Leadership, Arizona State University*.

Cantù, D., & Simeone, G. (2012, September). Creating Scenarios for Regional Projects: Service design for multifunctional and collaborative food networks. In *Conference Proceedings; ServDes. 2010; Exchanging Knowledge; Linköping; Sweden; 1-3 December 2010* (No. 060, pp. 13-23). Linköping University Electronic Press.

Ciriello, R., Richter, A. & Schwabe, G. Digital Innovation. *Bus Inf Syst Eng* **60,** 563–569 (2018). https://doi.org/10.1007/s12599-018-0559-8

Cramer, M. (2021). What are service design tools? (Guide part 3). Retrieved from: https://www.smaply.com/blog/service-design-tools-methods. Last accessed on 30.11.21

Eriksson, P., & Kovalainen, A. (2008). *Qualitative methods in business research*. Sage publications. London.

EY (2021). *Rebuilding Europe. The cultural and creative economy before and after the COVID-19 crisis*. Available: https://1761b814-bfb6-43fc-9f9a-

775d1abca7ab.filesusr.com/ugd/4b2ba2_8bc0958c15d9495e9d19f25ec6c0a6f8.pdf

Hämäläinen, M. (2019). *Organizations ' Digital Transformation. Toward a Systematic Approach to Organizations ' Digital Transformation* [University of Jyväskylä]. https://doi.org/http://urn.fi/URN:ISBN:978-951-39-7951-5

Heinonen, K., & Strandvik, T. (2020). Reframing service innovation: COVID-19 as a catalyst for imposed service innovation. *Journal of Service Management*.

Holt, D. (2004). *How Brands Become Icons: The Principles of Cultural Branding*. Harvard Business School Publishing Corporation. USA.

Hoyer, W. D., Chandy, R., Dorotic, M., Krafft, M., & Singh, S. S. (2010). Consumer cocreation in new product development. *Journal of Service Research*, *13*(3), 283-296.

Johnston, W. J., Leach, M. P., & Liu, A. H. (1999). Theory testing using case studies in business-to-business research. *Industrial Marketing Management*, *28*(3), 201-213.

Joly, M. P., Teixeira, J. G., Patrício, L., & Sangiorgi, D. (2019). Leveraging service design as a multidisciplinary approach to service innovation. *Journal of Service Management*.

Kabadayi, S., O'Connor, G., & Tuzovic, S. (2020) Viewpoint: The impact of coronavirus on service ecosystems as service mega-disruptions. *Journal of Services Marketing*, 34(6), pp. 809-817.

Kankainen, A., Vaajakallio, K., Kantola, V., & Mattelmäki, T. (2012). Storytelling Group–a co-design method for service design. *Behaviour & Information Technology*, 31(3), 221-230.

Koskinen, I., Zimmerman, J., Binder, T., Redstrom, J., & Wensveen, S. (2011). *Design research through practice: From the lab, field, and showroom*. Elsevier.

Kouropalatis, Y., Hughes, P., & Morgan, R. E. (2012). Pursuing "flexible commitment" as strategic ambidexterity: An empirical justification in high technology firms. *European Journal of Marketing.*

Kuure, E., Miettinen, S., & Alhonsuo, M. (2014). *Change through Service Design–Service Prototyping as a Tool for Learning and Transformation*.

Luokkanen-Rabetino, K. (2015). *Eksploraatio ja eksploitaatio tuote-markkinastrategian sopeuttamisen välineenä. [Ex*ploitation and exploration as tools to adapt product-market strategy.] Acta Wasaensia 338 (doctoral dissertation). University of Vaasa, Finland.

March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization science,* 2(1), 71-87.

Miettinen, S., Jylkäs, T., Jeminen, J., & Tikkanen, H. (2016, July). Service design for business: Value creation opportunities through service design research. In *Proceedings of the 20th DMI Academic Design Management Conference* (pp. 455-470).

Nielsen, S. L., Christensen, P. R., & Storvang, P. (2021). Does Design Thinking Benefit Ambidextrous Dynamics between SME Managers' Entrepreneurial and Administrative Mindsets? *The Design Journal,* 24(5), 683-703.

Pruitt, J., & Adlin, T. (2010). *Interactive Technologies : The Persona Lifecycle : Keeping People in Mind Throughout Product Design* (ProQuest e). Oxford: Morgan Kaufmann.

Sangiorgi, D., & Prendiville, A. (Eds.). (2017). *Designing for Service: key issues and new directions.* Bloomsbury Publishing.

Stake, R. (1995). *The art of case study research*. Thousand Oaks, CA: Sage Publications

Steen, M., Manschot, M., & De Koning, N. (2011). Benefits of co-design in service design projects. *International Journal of Design*, *5*(2).

Vink, J., Edvardsson, B., Wetter-Edman, K., & Tronvoll, B. (2019). Reshaping mental models – enabling innovation through service design. *Journal of Service Management*, *30*(1), 75–104. https://doi.org/10.1108/JOSM-08-2017-0186

Wolf, V. (2019) Ambidexterity in Service Innovation Research: A Systematic Literature Review. *International Conference on Wirtschaftsinformatik*: Siegen, Germany

Yin, R. K. (2014). *Case study research: design and methods*. 5th ed. Sage Publications.

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