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## How to respond to change? Evidence of cultural organizations in times of COVID-19

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# How to respond to change? Evidence of cultural organizations in times of COVID-19

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**Abstract:** The extensive impact of the COVID-19 pandemic on the cultural sector necessitated a paradigm shift, demanding organizational resilience and adaptability from organizations within this domain. In response, this study employs a mixed-methods approach to elucidate the innovative strategies implemented by Dutch cultural organizations amidst the constraints imposed by the pandemic. The study discerns three pivotal strategies: repurposing, the accelerated digitalization of cultural experiences, and the cultivation of a collaborative and experimental mindset. This research highlights the enduring implications of COVID-19-induced changes, illuminating the design strategies for sustaining organizational stability amid uncertain events posed by unprecedented external challenges.

**Keywords:** COVID-19; cultural sector; reaction; designing for dynamic stability

## 1. Introduction

The COVID-19 pandemic heavily impacted many sectors, demonstrating resilience and flexibility in response to the crisis (Tuchen et al., 2023; Goel et al., 2020; Tooze, 2020). Among the hardest hit was the vulnerable cultural sector (Dümcke, 2021), with its relatively small businesses, organizations, and self-employed workers (OECD, 2020). Cultural organizations such as museums, cinemas, and concert halls were brought to the verge of their existence as they suffered from restriction measures taken by the governments (Brown, 2020). This led to redundancies, canceled live events and performances, bankruptcy, and affected linked value chains of creative or non-creative sectors (OECD, 2020). Subsequently, many organizations were forced to close indefinitely and faced uncertainty about when the industry could resume.



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Contemporary societies are increasingly exposed to unexpected disruptive events (Pettit et al., 2013). Disruptive events, such as the COVID-19 pandemic, frequently yield unforeseeable and harmful consequences across various business domains, necessitating change in terms of planning and readiness (Gotham and Campanella, 2010). According to the study by Ramezani and Camarinha-Matos (2020), disruption can be described as a predictable or unpredictable event that interrupts a business's normal operation and stability, potentially leading to positive or negative impacts on the business ecosystem.

To address these grand challenges brought by disruptions, prior research shows that it is vital to develop resilience (Nieuwborg et al., 2023) and achieve dynamic stability in uncertain and rapidly changing environments (Kim et al., 2022). The concept of dynamic stability, derived from the literature on organizational design, refers to an organization's ability to satisfy customer needs (Kim, 2023; Kim et al., 2018) and build flexible capabilities during times of uncertainty (Boynton, 1993).

Many European countries see the cultural sector as a booster for "growth, innovation, entrepreneurship, tourism, social cohesion, and identity" (Dümcke, 2021, p.6). However, the pandemic and, specifically, the indefinite lockdown led to increased attention to the importance of culture in its stability, well-being, and resilience during uncertain times. Our research aims to comprehend how this hardly hit sector responds amid great uncertainty. In this context, we define the actions taken to build (dynamic) design capabilities advancing the 6R typologies for Innovation proposed by Kim et al. (2022) in preparation for the ever-changing environment (Bennett & Lemoine, 2014; Kim et al., 2018). We then derive firsthand action-oriented data, resulting in insights for practitioners of innovation strategy to surface informed recommendations whenever uncertain contexts arise.

This study uncovers the new capabilities and actions conceived by the cultural organizations in the Netherlands in reaction to a grand challenge (i.e., COVID-19 restrictions). First, we contribute to research on cultural sectors by unveiling concrete and tangible actions in reaction to the COVID-19 pandemic. These actions were intended to be short-term, thus labelled as "Repurpose" under the 6R typology. Second, digital tools were frequently used to sustain sufficient, or even more enhanced, engagement with the audience. Furthermore, we found that when confronted with the COVID-19 pandemic, cultural organizations adopted an experimental and collaborative way of working that contributed to the organization's resilience in times of uncertainty. Learning from and reflecting on the actions related to this mindset, cultural organizations are embracing adaptive design capabilities and gradually creating a new or alternative normal. Our paper provides actionable recommendations for design practitioners in cultural organizations and aims to foster discourse on such design capabilities in response to grand challenges.

## 2. Background

### 2.1 The cultural sector in the Netherlands

The contribution of culture and media to the Dutch economy (GDP) in 2018 amounted to 3.4 percent. This is associated with employment of 330 thousand person-years, which is equivalent to 4.3 percent of the total employment in the Netherlands (Centraal Bureau voor de Statistiek, 2021). Cultural organizations came to an abrupt halt in March 2020, which evoked a series of unpredictable and constantly changing restrictions. During this halt, the government provided subsidies aimed at sustaining the infrastructure of the cultural institutions (Boekmanstichting et al., 2021). Nevertheless, many cultural organizations discovered new and creative approaches to developing off-site cultural exhibition experiences to reach their audience and generate revenue. Examples of such initiatives include virtual tours at Rijksmuseum and NPO Radio 2, which allowed over 30 Dutch artists to broadcast their music from their living rooms (Marques & Giolo, 2020). In this context, economic crises could be viewed as opportunities to reconstruct a new organization's innovation capabilities (Bonet & Donato, 2011; McDonnell & Tepper, 2014).

### 2.2 Dynamic stability in organizations

A dynamically stable organization, as defined by Boynton (1993), can simultaneously serve the broad market of consumers and product demands (dynamic) while building long-term capabilities and collective knowledge (stable). This concept of dynamic stability is closely related to the dynamic capabilities theory (Teece et al., 1997), which enables a firm to revolutionize and redesign other capabilities, such as operational capabilities (dynamic). The latter, on the other hand, allows the firm to function and perform daily activities (stable). As such, the development of dynamic capabilities can be reflected in day-to-day operations, involving strategy decision-making, generating new marketing and technology capabilities, and complementing processes that increase organizational adaptability (Grass et al., 2020). As described by Kim et al. (2022) and Protogerou et al. (2011), dynamic stability can be conceptualized through entrepreneurial actions, enabling organizations to react to increasing rapid and unpredictable market shifts and grand challenges (Boynton & Victor, 1991; Zahra et al., 2016), such as those posed by the recent COVID-19 pandemic and climate change.

In this paper, we build upon prior research and practices grounded in the 6R Framework for Innovation introduced by Kim et al. (2022), which encompasses six distinct typologies: *Repurpose*, *Redesign*, *Reframe*, *Reimagine*, *Research*, and *Resile*, which evolved from approaches employed in the aviation industry during the COVID-19 pandemic. Their study provides strategies for sustaining organizational stability amid uncertain events and guides achieving *resilience* in the face of various (both short and long-term) external changes. Specifically, *Repurpose* entails making slight modifications to make it suitable for a new or different application to fulfill temporal needs. *Redesign* involves implementing changes aimed at improving quality. *Reframe* brings alternative perspectives to identify new possibilities.

*Reimagine* creates new and creative ideas by thinking differently about a problem, often addressing larger-scale challenges. *Research* involves sensing trends and changing needs through literature reviews, inquiry, and interviews to understand user needs and behavior.

However, prior research has dominantly centered on understanding large organizations, overlooking smaller businesses with limited resources, which face greater vulnerability to unforeseen external events. Hence, building upon their research, the long-term aim of our research is to identify the dynamic design capabilities that can serve as key enablers to mitigate the unprecedented societal challenges and navigate new business opportunities, specifically for cultural organizations in the Netherlands.

### 3. Methods

In this section, we describe our study design, data sampling, and collection process, along with detailed method design descriptions. This project employed a mixed methods approach using a literature review, preliminary online survey to select the case study samples to participate in in-depth interviews, followed by qualitative case studies (Priya, 2021; Kwon et al., 2021; Baxter & Jack, 2008) to investigate the actions taken by cultural organizations during the COVID-19 pandemic. The mixed methods approach confirms methodological triangulation, helping collect more comprehensive data, enhancing validity, and a better understanding of the study phenomena (Venkatesh et al., 2013; Abowitz & Toole, 2010), which is illustrated in Figure 1.

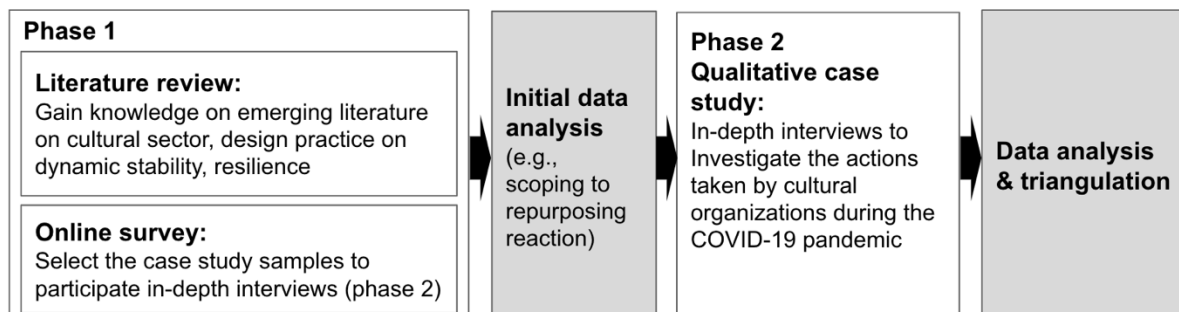


Figure 1 A sequence of the research process

#### 3.1 Data collection

*Online survey.* We conducted a web survey during the COVID-19 pandemic in the Netherlands, from March 2020 to February 2022. A questionnaire was sent to 195 cultural organizations across six sub-sectors: Performing Arts (66), museums/exhibition sites (44), festivals (31), development institutions (20), libraries (16), or film (18) via email. Among the 195 questionnaires sent, 62 responses were collected, with 35 of them being fully completed, revealing an approximate response rate of 18%. We required respondents to be in managerial positions to provide insights on organizational, business, and operational levels.

The survey comprised 27 questions in total, of which five were open, and 22 were multiple-choice. First, we asked participants to indicate at least one and a maximum of three actions

that were undertaken in response to the COVID-19 pandemic and instructed them to categorize these actions. We constructed three categories by rephrasing Kim et al.'s 6R Framework for Innovation (2022) into easily understandable terms: (1) Product/Service/Event category: Tangible actions carried out by the organization (e.g., offering new services, live streaming events, alternative use of space). (2) Organizational category: Abstract actions carried out by the organization (e.g., renewals in the organizational strategy or vision, adjustments in the business model, adjustments in employee agreements). (3) Research category: Actions carried out to better understand trends, the consumer, and the context (e.g., research on emerging trends, customer satisfaction survey, test events). Then, participants specified whether each action was intended to address a temporary need resulting from COVID-19 (short-term) or intended to address needs beyond COVID-19 (long-term). Next, they indicated whether they kept, stopped, or partially kept the action. Lastly, we aimed to seek further insights into the involvement and application of digitalization in these actions. This emphasis on digitalization is driven by the prevalent adoption in response to physical distancing measures within the cultural sector worldwide, as substantiated by data from Statista (2021). The last section focused on retrieving demographic data of the participant's organization.

*Qualitative case studies.* Based on the survey outcome, three organizations from distinct sub-sectors were selected as the qualitative case studies through focused expert interviews. These representative cultural organizations were contacted via email to schedule a meeting. Following confirmation, one-on-one online interviews lasting approximately 30 minutes to 1 hour were conducted via Zoom in May 2022. Selection criteria included the implementation of at least one action within the most adapted typology, the continuation of at least one of their actions either in a hybrid or full format, and agreement to participate in a follow-up interview. During the interviews, we asked participants to elaborate on the actions they named in the survey. Subsequently, they responded to questions regarding the underlying motivations for these actions taken, about the selection and creation process, and their results. With the semi-structured nature of the interview, we asked follow-up questions during the interview itself to discover further insights into the behavior of the cultural organization. Interviews were audio-recorded and transcribed.

### *3.2 Data analysis*

Completed surveys were extracted from Qualtrics (2005) and then entered into Google Sheets (2006). Respondent characteristics were summarized and figures were used to show the distribution in the typologies of the actions that were collected. Through thematic analysis, the actions that emerged from the quantitative study related to the most frequently occurring typology, were listed and clustered. Each cluster represented a unique code. This process facilitated the coding of the interview transcripts, allowing for iterative modifications to ensure codes remained comprehensive and relevant to the data (Boyatzis, 1998;

Hayes, 1997). Additionally, motivations for these clustered actions were analyzed and supporting quotes were collected. We obtained an ethics approval from our institution’s Human Research Ethics Committee (HREC) before the commencement of the proposed study.

## 4. Results

In this section, we derive first-hand action-oriented data based on the analysis of online surveys and following the case studies, resulting in insights for practitioners of innovation strategy to surface informed recommendations in the following discussion.

### 4.1 Spectrums: re-actions taken by the cultural sector organizations

Most organizations had 10-20 employees and were active in the performing arts sector and public organizations. The respondents reported a total of 87 actions, the majority of which were concrete and intended for short-term impact (40.2%), representing typology ‘*repurpose*’, followed by ‘*redesign*’, a concrete action intended to have a long-term impact (25,3%). *Reimagine*, an abstract action intended to have a long-term impact (17.2%), was ranked next. Examples of listed actions per category and percentages of the actions taken are shown in Table 1.

Table 1 Typologies, selected quotes, and the distribution of the classified by typology

Typology	Selected quote	Actions taken (%)
<b>Repurpose</b>	Set up book pickup and home delivery of books during closing (Library). We have scaled back hiring of outside employees during lockdowns. This is a defensive measure (Museum). We organized a theatrical walk through the neighborhood with large billboards with content via QR codes (Performing Arts).	40.2%
<b>Redesign</b>	Livestream events and online tours of our museum (Museum). Set up artistic labs so that artists could continue to develop (Festival).	25.3%
<b>Reimagine</b>	We have implemented project-based working in the organization (Performing Arts). Conducting regular strategy review (Performing Arts, Festival). Review activities, re-branding, and shaping new corporate identity, website, etc. (Performing Arts/Festival).	17.2%
<b>Reframe</b>	Develop multiple scenarios for some form of passage of our event (or some form of) (Festival). We invested in training employees and continuing to pay all freelancers in the event of a cancellation in order to keep people with us in case the industry reopens (Performing Arts).	10.3%



<b>Research</b>	Established corona working group with other cultural institutions (Development Institutions, Museums/ exhibition sites, Performing Arts). Participation in pilot cultural flow locations (Museum).	6.9%
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We assessed the retention and rejection rates of actions for each typology to determine whether they were sustained. Responses were categorized as: a) Yes: Continued with this new action, b) Hybrid: Kept a part, and c) No: Back to normal. Among of all action types, *Redesign* had the highest retention rate with 100% of 22 actions, followed by *Reimagine* with 80% of 15 actions, while *Reframe* and *Repurpose* got the highest rejection rates (66.6% of 9 actions, 40% of 35 actions) (Figure 2).

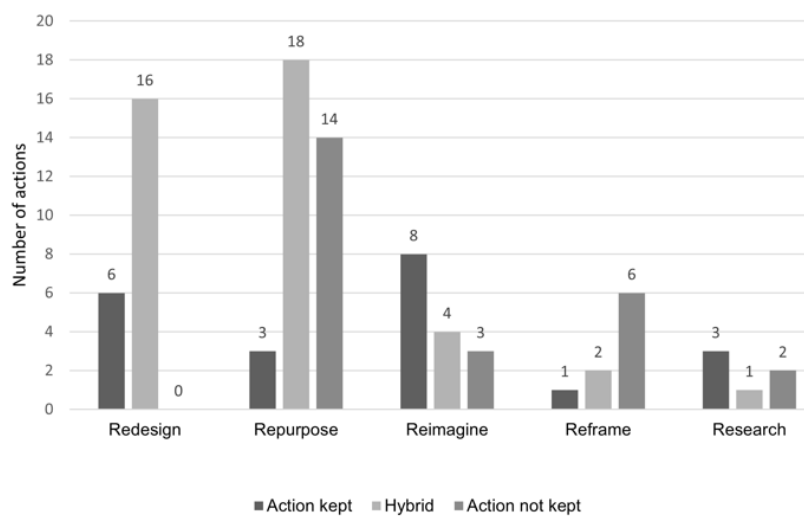


Figure 2 Retention rate split per typology

The survey participants were asked to select a multiple of the following digital actions or add another one themselves: The digitalization of an experience: analogue to virtual (e.g., live stream of a play, films, podcasts); Automation (reservation system/ticket sales); Digital/hybrid working (e.g., remote working with employees via Zoom or Teams). The results revealed that 34 of 35 organizations used digitalization of some sort during the COVID-19 pandemic—the most popular combination appeared to be the digitalization of an experience and the automation of a procedure and system.

#### 4.2 Qualitative case study results

In the case studies, three organizations were selected and interviewed, including (1) a public performing arts institute with 15-20 employees, operating for over 24 years; (2) a public library with 20-25 employees and 140-150 volunteers, operating for over 18 years; and (3) a private museum/exhibition site with 25-30 employees and 35-40 volunteers, operating for over 60 years. As all 35 actions that emerged from the preliminary online survey results were labeled as repurposing actions, tangible actions intended for the short term; in the interviews, we focused on understanding the majority of the appointed repurpose actions. All

quotes originate from the interview transcripts and are translated from Dutch to English using DeepL translation software. The participatory organizations are referred to as follows: P1 for public performing arts, P2 for public library, and P3 for private museum/exhibition site. The clustered repurpose actions described in section 3.2 were listed in Table 2, together with a selection of underlying motivations collected from interviews and supporting quotes.

Table 2 *Actions within Repurpose typology and motivations with supporting quotes following from the focused (semi-structured) interviews.*

<b>Action implemented</b>	<b>Motivation</b>	<b>Selected quote</b>
<b>Provide service digitally</b>	Main task of cultural organizations to open up their collections.	As a museum, one of your main tasks is to open up the collection. And yes, we could already do that online but not in-person yet (P3). And especially looked at, what do we have of existing content that we can offer digitally? What can we make digitally as an alternative form to live performance? So the same title and with the same actors, but somehow online (P1).
	To serve a target group that we would otherwise not easily reach.	Because it allows us to serve a target group that we would otherwise not be able to reach easily, for example, people in nursing homes or people with disabilities who cannot leave the house. That kind of situation. Or people who live far away (P3).
	Staying visible	We also made quite a few podcasts to be able to continue to share our story. Sometimes indeed a combination of QR codes and a route through a city (P1).
<b>Advancing customer centered projects</b>	Time has been freed up for ideas that had not been pursued before.	Then we had a ticketing system created on our website with ticket time slots, like the larger museums already had. And we kept that because that was a plan we had anyway (P3).
		It's a co-production for preschoolers. This is a performance of which we thought. Yes, it would be really cool to make a tv series out of it. We had already thought of that. But then you do nothing with it because you have no time for it. But if there suddenly is a regulation, it is like, oh? Wait, we had already thought of that. Maybe we should now seize that opportunity (P1).
<b>Implementing safety measures</b>	Adhere to governmental COVID hygiene measures	People obviously want to get rid of their stuff and we had to do that in 3-5 days, those books had to be quarantined. So, there's going to be 1,000 books. And you throw those in a bin. Then you put a plastic bag over it or something. And 3 days later we started processing them (P2).
<b>Develop tickets with timeslot</b>	Gain customer insight	Selling tickets through the website just gives more data that you can use. We actually wanted to know how many visitors would come (P3).

	Adhere to governmental COVID measures	We were allowed a maximum number of visitors per square metre, and so we had to regulate that with time slots and we didn't have that before at all (P3).
	Improve the customer experience	Yes, you can also work more with time slots. That you have a live performance, but then you offer the stream to the same public. So people who have a ticket can go back and watch it again at home, right? They will probably like that, then you've already seen it (P1).
<b>Re-programming short-term program</b>	COVID poses a significant obstacle in developing the service.	That was just a combo of creators and players who had already 3 projects at other companies that were always postponed, canceled (P1).  Yeah, it just doesn't work anymore, we can't start again without being sure. You also need it as a director that you have that your test audience, that you can taste it. Does this work at all, what we are making now? (P1).
<b>Small-scale programming</b>	Adhere to governmental COVID hygiene measures, while complying to customer needs for physical contact.	But we have, we can, prepare bags for people and we put them at the outside door with a name on it, that's the advantage of these kinds of smaller villages (P2).  Then we went back to live, but then with very small encounters where we could keep distance (P1).
<b>Digitalizing internal communication</b>	Fast switching & adhering to governmental COVID measures concerning working from home	We were already pretty well digitized in the background, the financial administration. But because of working from home, that accelerated all of that. The digitization went even faster than we could have realized normally (P3).  We then just did Teams. We all learned using Teams (P1).

In line with the survey results, digitalization emerged as a recurring theme in the repurposing actions. Furthermore, the motivations and additional explanations of these actions shed light on an experimental and collaborative approach within cultural organizations. In this context, 'experimental' refers to using new methods or ideas that have not been tried before, to explore their effectiveness (Cambridge Dictionary, 2024). When the pandemic brought the work of many employees to a halt, many organizations used this moment to look for alternative ways to reach their audiences. Communicating with other organizations helped to transfer knowledge and generate ideas for new initiatives. Implementing these ideas using a trial-and-error approach enabled organizations to test and produce these ideas at a high pace.

“Let’s see if this works now and if it works, then we’ll see if then in the future we can do something with it.” (P1)

“What’s nice within librarianship is what we call ‘Bieb to Bieb’. That’s an online community, with all these working groups and members from around the country, who

share ideas with each other and ask each other questions like: Hey, have you figured out what you're going to do now that we're not allowed to open?" (P2)

"We also noticed that at a certain point, so much experimentation was done with all kinds of alternative forms than playing live in the theater, that the hunger for online content really decreased." (P1)

"But this group of people had nothing to do during the coronavirus crisis because the museum was closed, so for them, that online contact with visitors was a nice step in the work, and now they had the time to acquire that knowledge. They were motivated to keep trying those kinds of things, and I think it has a lasting effect on the organization." (P3)

It shows cultural organizations' resiliency in exploring many new paths during the pandemic, leaving them with new learnings and knowledge they can take to the future. By gaining experience with digital services, as concrete evidence, organizations build their own technological knowledge and design capabilities. As a result, organizations felt more confident taking future digital actions and dealing with uncertainty. Some successful experiments have led organizations to adopt specific actions in either a hybrid or full format.

"What we have done in those two years in terms of special activities. They stay on the shelf just in case something happens again. Well, we're hopefully not going to have a lockdown, but then we can come up with things that don't require people to get close to each other." (P2)

"I think we were much more of the 'no' camp when it comes to digital forms. But we make live theater and of course we still do. That is also the core of what we do. But if challenges come along that make it interesting to go digital or that could also have TV or film as a medium, we will not shy away from them." (P1)

"The threshold has been reduced to further develop and continue with digitization." (P3)

## 5. Discussion

In this section, we examine the presented findings and highlight key themes that emerged from the mixed methods we employed. We draw connections between our findings and the previous study by Kim et al. (2022), recalibrating the definitions of the typologies within our research scope and context. Section 5.1 explores the growing digitalization of cultural experiences, further accelerated by the pandemic. In Section 5.2, we elucidate additional consolidated research results, reassuring the shift towards a more experimental and collaborative mindset in cultural sectors. Finally, we provide practical implications for practitioners of innovation strategy in the cultural sector. Our study aims to articulate how the cultural sector responded to times of uncertainty. We defined the actions taken as a means to build innovative capabilities, building on the 6R typologies for Innovation conceived by Kim et al. (2022) in preparation for the changing external environment.

### *5.1 Accelerated digitalization of cultural experiences*

Our findings support that almost all digital actions taken by cultural organizations were either fully or partially kept after the COVID-19 pandemic. Therefore, responding to a disruptive event by implementing digital transformation creates permanent competencies that may enable such organizations to also address future challenges. Our study contributes to research on how actions precipitated by grand challenges may help organizations sustain their competitive advantage.

Prior research suggests increased engagement with cultural content since the COVID-19 pandemic (Noehrer et al., 2021). In this sense, a crisis like COVID-19 catalyzed familiarization with digital media. Accordingly, such a crisis may support the innovative capabilities of organizations in general (Kateb et al., 2022). With the increase of digitalization in the cultural sector during the pandemic (Tissen, 2021; Raimo et al., 2021), these innovative capabilities have become of great importance. Especially since digital advancements are breaking down the silos between the cultural sectors, blending various disciplines, cultural organizations need to embrace new capabilities (Department for Digital, Culture, Media & Sport, 2019).

Our study also indicates that cultural organizations that embedded digitalization in response to the (forced) sudden switch to remote operations will be more likely to benefit from digital technology in the near future. However, the interviews suggest that the digitalization of activities was challenging for the audience due to an 'overkill' of digital experiences. To prevent this, we encourage cultural organizations to stay updated with relevant and recent methods of engaging participants and make their content more interactive.

Lastly, our study suggests expanding the 6R typologies and adding another important element of innovation (i.e., digitalization). However, it is notable to be sensible of digitalization's limitations and the possible effect that it may have on the original first-hand experience. For example, at the end of COVID-19, it is important to weigh whether it is still valuable to retain digitalization in its entirety or just some of its elements (hybrid) or to let it become obsolete.

### *5.2 Experimental and collaborative mindset*

The adaptation of an experimental and collaborative mindset by cultural organizations is another important insight that emerged in our study. Although it could not be directly categorized under the 'repurpose' typology, our research considers it relevant to the field of design and strategy. When looking into topics such as design thinking, creative thinking, and experimentation, these capabilities are known to push innovation and prompt learning (Carlgren et al., 2016; Magistretti et al., 2023). We theorize that the creative nature of the cultural sector made it easier to embrace this experimental attitude, which could explain the dominant actions taken by the cultural organizations. The downtime due to restrictions allowed innovative organizations to try out many actions without weighing too much. The resulting exposure to new ideas, such as digital experiences, fueled ongoing experimentation, likely leaving a lasting impact on organizations.

The fact that there is less rivalry within the industry may account for the high level of cross-cooperation between cultural organizations. Because many organizations are largely dependent on government funding and pursue similar societal goals, there is a lesser strategic risk to collaborating with others. The interviews revealed that the collaborative experimental mindset was especially prevalent in the first year of COVID-19. In the second year, the pandemic became part of the daily rhythm, a habit. Also, customer needs seemed to return to the pre-COVID needs, and government measures became more predictable (Ministerie van Algemene Zaken, 2022). Stabilizing these external factors allowed organizations to pause, reflect, and learn through the exchange of knowledge and experiences with external partners in a similar cultural domain. This finding is in line with the literature on organizational resilience, where these activities are grouped under the term 'adaptation' (Gibson & Tarrant, 2010; Burnard & Bhamra, 2011; Duchek, 2019). In this, literature and practice concur, and we sense that when facing greater vulnerability to unforeseen external events, the cultural sector organizations with limited resources implement adaptive capabilities to create a new normal post-pandemic, which remains an input for further study.

### 5.3 Implications to cultural sector practice

The findings specified in this study are intended to facilitate a better understanding of the responses taken by the Dutch cultural sectors during the COVID-19 pandemic restrictions to shed light on new knowledge and implementations conceived by them during that challenging time. We summarize the practical implications that could be beneficial for practitioners of innovation strategy:

- (1) Spontaneous actions with a short-term intent may morph into long-term actions when reacting to uncertain changes. If this is the case, it is advised to consider modifying the concept to a hybrid and alternative format to accommodate the new or alternative normal that may emerge over time.
- (2) Be aware of the effect of digitalizing content on audience engagement. Furthermore, embedding digitalization across a whole organization will be more likely to benefit from digital technology addressing the near-coming future challenges.

Experimentation, collaboration, iteration, and reflection may contribute to the resilience of the organization in times of uncertainty. Methods such as *repurpose*, *reframe*, *redesign* would have the potential to facilitate this and help the practices secure moments to pause and reflect on the actions. By doing so, organizations can leverage the lessons learned from their own experience to prepare for a future unprecedented, thus enhancing the resilience and maturity of the organization along its journeys.

## 6. Conclusive remark

In this research we set out to explore the new knowledge and implementations conceived by the cultural organizations in the Netherlands in reaction to the grand challenge (i.e., COVID-19 restrictions). The research revealed that the cultural sector mostly applied concrete and

tangible actions in reaction to the COVID-19 pandemic that were intended for the short-term, labeled with the typology of Repurpose. Also, there was frequent use of digital media to sustain sufficient, or even more enhanced, engagement with the audience. When confronted with the COVID-19 pandemic, cultural organizations adopted an experimental and collaborative way of working that contributed to the organization's resilience in times of uncertainty. Learning from and reflecting on the actions related to this mindset, the cultural sector is currently applying adaptive design capabilities, and gradually creating a new or alternative normal.

The results of this study must be interpreted in the context of the following limitations. Although our study concerns the actions taken during the recent COVID-19 pandemic, the data collection took place many months after most pandemic-related restrictions were suspended. This may lead to some inaccuracy in the data as the cultural sector has moved on since then. An additional limitation is posed by the responses of the study, which were not equally divided over the sub-sectors or company sizes, which may have influenced the validity of our findings. Respondents could also belong to more than one sub-sector, which decreases the significance of the distinct behavior per sub-sector. As our findings are based on 35 organizations, we suggest aiming for a higher number of respondents to increase the generalizability of the findings in future research. Additionally, future studies can provide more explicit definitions for the actions that are being measured and may consider implementing a qualitative approach (e.g., embedded action research or expert interviews with various employee types) to obtain a more in-depth understanding of the actions taken individually and collectively.

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