

Between institutional scaling and artistic probing: how traditional performing arts organizations navigate digital transformation

Christian Holst and Sigrid Bekmeier-Feuerhahn

*School of Management and Technology, Institute of Management and Organisation,
Leuphana University, Lüneburg, Germany*

Abstract

Purpose – This study aims to examine how traditional performing arts organizations (PAOs) interpret and respond to digital transformation in a context of long-standing traditions and ambiguous demands. It explores how and why digital strategies diverge under similar institutional contexts.

Design/methodology/approach – Based on 25 expert interviews with digital professionals in PAOs, the study applies sensemaking theory and the Gioia methodology to reconstruct how organizations assign meaning to digital initiatives and shape distinct strategies.

Findings – We identify two ideal-typical strategic orientations: scaling and potentialization. Scaling focuses on expanding access and preserving continuity by digitally reproducing existing formats. In contrast, potentialization embraces digitality as a space for creative exploration and reimagining of artistic expression. These orientations are shaped by different sensemaking modes and unfold across four aggregate dimensions: initiating conditions, resource allocation, interaction culture and dissemination logic.

Originality/value – The study contributes to the body of research in organizational change management by (1) offering a framework of complementary strategic orientations rooted in different sensemaking modes, (2) demonstrating how sensemaking drives strategic divergence in highly institutionalized settings and (3) providing a concept of potentialization as a culturally grounded logic of digital innovation in the arts.

Keywords Performing arts organizations, Digital transformation, Sensemaking, Potentialization, Change management, Strategic ambiguity

Paper type Research article

1. Introduction

Digital transformation is reshaping how organizations perceive their purpose, engage with stakeholders, and create value. In the performing arts, the process of going digital is anything but straightforward, particularly in organizations with long-established artistic traditions and institutional routines. This study focuses on traditional performing arts organizations (PAOs): non-profit institutions such as opera houses, philharmonic orchestras, and repertory theaters. These organizations are characterized by professional autonomy, formal hierarchy, and a strong sense of artistic mission. They now face the challenge of aligning digital technologies with inherited notions of liveness, quality, professional artistic identities, and resource capacities (Salvaggio, 2025, chap. 2). While digital transformation offers new tools and formats, it also exposes tensions between innovation and continuity, artistic freedom and institutional constraints, experimentation and routines.

Despite sharing similar structural conditions, traditional PAOs implement notably different digital strategies. Some view digital tools primarily as extensions of analog formats to increase reach and visibility (Ouazzani *et al.*, 2022), whereas others engage with them as artistic



materials in their own right, exploring new aesthetic terrains and modes of audience interaction (Çankaya, 2023; Holst *et al.*, 2025). This divergence in strategies calls for a closer examination of the underlying mechanisms. DiMaggio and Stenberg's (1985) influential study established a structural lens on why some theaters innovate more than others. More recent approaches have expanded this lens by highlighting entrepreneurial and participatory practices in cultural management as additional enablers of innovation (Bilton, 2023). Yet, these approaches focus primarily structural, technological, or leadership-related enablers of innovation, rather than how divergent strategies take shape under comparable conditions. To address this gap, we shift the analytical focus from structural and technological enablers to organizational sensemaking (Weick, 1995; Weick *et al.*, 2005). Drawing on Weick's sensemaking lens and 25 expert interviews with professionals responsible for digital initiatives in PAOs, we examine how practitioners in traditional PAOs interpret and react to digital change and how their interpretations shape divergent strategic responses. By focusing on interpretative processes rather than technological adoption, this study contributes to a deeper understanding of how professionals in institutionalized organizations engage with digital transformation. They do so, not merely by adjusting structures and adopting technology, but also by exploring new possibilities for artistic expression and organizational development within and beyond established routines.

2. Theoretical framework

2.1 Theorizing digital transformation in the performing arts

In management studies, digital transformation has been widely discussed as a fundamental, technology-driven optimization of organizations across the entire value chain (Hanelt *et al.*, 2021; Jedynak *et al.*, 2021; Verhoef *et al.*, 2021). From this perspective, technological advancement is both an external catalyst for change and an internal tool for managing it (Hanelt *et al.*, 2021; Vial, 2019, p. 119), with a focus on scalability and efficiency to secure competitive advantages. In cultural studies, digital transformation is viewed less as a technology-centered optimization and more as a cultural condition that reshapes human-technology interaction (Cramer, 2015; Stalder, 2018). In this sense, digitality does not mean the mere use of technology with specific advantages. Rather, it refers to new relational configurations between human and non-human actors, redefining what is culturally, organizationally, and aesthetically possible (Stalder, 2018, p. 9). Thus, digitality opens a space for reconfiguring established norms and structures, embracing ambiguity and contingency not as problems to be resolved, but as productive conditions for imagining new organizational and artistic possibilities. For PAOs, this broader notion of digitality underscores that digital transformation is not merely technical, but deeply entangled with artistic and cultural questions.

Against these broad conceptualizations, existing research has examined the impact of digital transformation across the cultural value chain, including audience engagement, artistic innovation and documentation, value creation and organizational development and training (Bakhshi and Throsby, 2010; Vales *et al.*, 2025). Early empirical research has primarily focused on its impact at the end of the value chain, i.e. the dissemination and exhibition of cultural offerings (De Voldere *et al.*, 2017). Many studies focus on marketing and customer relations issues (Hausmann and Poellmann, 2013; Lazzeretti *et al.*, 2015; Suzić *et al.*, 2016; Walmsley, 2016), highlighting how digital tools can help to increase reach and audience engagement (Bakhshi *et al.*, 2010; Bakhshi and Throsby, 2014; Ford, 2019; Ford and Mandviwalla, 2020; Miniero and Holst, 2021). A key challenge has been redefining audience relationships, as audiences increasingly co-shape not only communication and evaluation (Agostino, 2018; Mora-Avila and Wiid, 2017; Walmsley, 2016), but also co-create artistic experiences (Bilton, 2023; Bonazzi *et al.*, 2024; Holst *et al.*, 2025). Recent research has increasingly focused on earlier stages of the value chain, examining how digital technologies also reshape artistic production and innovation ecosystems (Gagneré and Ternova, 2023; Jong

and Ganzaroli, 2024; Peukert, 2019; Sovhyra *et al.*, 2023). Although COVID-19 served as a catalyst for these developments by forcing PAOs to deliver their work digitally during lockdown periods (Brilli *et al.*, 2023; Dinardi *et al.*, 2023; Holst *et al.*, 2025; Vincent, 2023), the broader trajectory of digital experimentation predates the pandemic.

The studies focusing on the production side of the value chain highlight the creative potential of digital tools, but also show the structural challenges of integrating them into traditional institutional contexts. Structural challenges include the lack of digital competencies (Bilton and Leary, 2012; Horváth, 2024; Webb and Layton, 2023), technical limitations (Hawthorne, 2023, p. 44), financial constraints due to the absence of business models (De Voldere *et al.*, 2017; Horváth, 2024; Ma and Liu, 2024), and legal issues surrounding intellectual property rights and rights of use (De Voldere *et al.*, 2017; Gateau, 2014; Horváth, 2024; Toledano, 2018). Another barrier to digital transformation lies in the specific production logic of PAOs, which centers on spatially situated, co-present experiences shaped by institutional traditions, structures, and public mandates (De Voldere *et al.*, 2017, p. 60). Together, these constraints contribute to the often cautious and fragmented nature of digital transformation in the performing arts sector. This observation reflects Mintzberg's (1993, 1980) model of professional bureaucracies, which favors stability, decentralization, and (artistic) autonomy (von Cossel, 2010, p. 238). While these features support quality, continuity, and routine, they limit adaptability and hinder the emergence of new roles, workflows, and mindsets that are essential for digital transformation.

And yet, digital innovation does take place, also in the realm of artistic offerings. Hawthorne (2023, pp. 20–21) identifies three types for the performing arts:

- (1) Digitally distributed performances, i.e. traditional stage productions recorded and disseminated via digital platforms (live streaming);
- (2) Digitally mediated performances, using digital tools in traditional performances, and
- (3) Digitally located performances, explicitly designed for digital environments.

Our study focuses on types 1 and 3, as they relate to the transformation of traditional artistic offerings into the digital sphere. Category 2 only enhances existing formats.

In sum, the literature outlines a range of structural, technological and policy-related challenges as well as approaches to tackling digital transformation in the performing arts. Hawthorne (2023) identifies three strategic pathways PAOs can pursue in the digital realm, ranging from extension to reinvention. Yet such variation remains insufficiently understood given the comparable institutional conditions under which these organizations operate. In this study, we address this gap by focusing on the interpretative processes through which practitioners in traditional PAOs engage with digital transformation.

2.2 Sensemaking as a lens

To analyze such processes, we draw on sensemaking theory, which explains how individuals and groups construct plausible interpretations of new, unexpected or ambiguous situations (Maitlis, 2005; Maitlis and Christianson, 2014; Weick *et al.*, 2005). The approach is widely used to analyze crises and organizational change (Deepa *et al.*, 2025; Gioia and Thomas, 2016; Li *et al.*, 2025; Maitlis and Sonenshein, 2010; Weick, 1993). Sensemaking is a dynamic interplay between cognitive activities such as noticing, bracketing, and cue extraction (Weick *et al.*, 2005) and the actions these interpretations inform. These actions, in turn, change the environment and generate new cues and stimuli for cognition. Cognition is not a self-contained mental act but shaped by social interactions and structural conditions. This recursive process remains open and adaptive. Weick identifies uncertainty and ambiguity as typical triggers of sensemaking. Uncertainty arises when no interpretation is available, while ambiguity involves multiple plausible interpretations, often due to complexity or paradoxes (Weick, 1995, p. 91). Ambiguity thus characterizes decision problems where competing solutions appear equally

valid. Intensive sensemaking is then required to make a decision in such a situation. As for digital transformation, we assume that ambiguity is the predominant condition, given the abundance of digital options and examples.

Furthermore, Weick emphasizes the role of action and beliefs in the sensemaking process (Weick, 1995, chaps. 6 and 7). Belief-driven sensemaking builds on past experiences, shaping interpretations that often reinforce existing assumptions and selectively draws on supporting evidence. Beliefs can form either through *argumentation*, where divergent views are synthesized into a unified understanding, or through *expectation*, where preconceptions shape perception, cue selection, and response (Weick, 1995, p. 134). In contrast, action-driven sensemaking interprets actions retrospectively. It operates either through *commitment* or *manipulation* (Weick, 1995, p. 135). Commitment refers to situations where irreversible decisions give meaning to actions and make actors more likely to persist in their chosen path, even at considerable cost. Manipulation, by contrast, involves actively shaping the environment to create meaning, pursuing those paths that appear to offer the most promising opportunities and viable solutions. The notions of commitment and manipulation parallel the dual principles of causation and effectuation (Ghorbel and Boujelbene, 2013; Matalamäki, 2017; Sarasvathy, 2001). While sensemaking offers a retrospective and interpretive lens, highlighting how meaning emerges from enacted practice within social and cultural contexts, effectuation and causation focus more concretely on the actors' scope for individual decision-making and action in the face of uncertainty.

3. Research design

Our study follows a qualitative, interpretative research design aimed at understanding how professionals in PAOs make sense of digital transformation. Given our conceptual grounding in the sensemaking perspective, we focus on reconstructing how organizational actors interpret digital transformation, assign meaning to ambiguity, and pursue particular courses of action. To grasp these interpretive processes, we adopt a research design that is sensitive to the situated perspectives of practitioners. This allows us to trace the logics, tensions, and justifications that guide sensemaking in organizations under conditions of ambiguity.

3.1 Data collection

We conducted 25 semi-structured, problem-centered expert interviews, combining guiding questions with openness to new insights, and enabling the systematic exploration of both explicit expertise and personal perspectives. Experts were defined as individuals responsible for “virtual stages” (or specific aspects thereof) within or for PAOs. They came from ten different organizations in Germany (4), Austria (2), UK (2), Switzerland (1), and USA (1), holding varied roles and hierarchical positions, providing diverse professional perspectives (see Table 1). Following the logic of theoretical sampling (Corbin and Strauss, 2014, pp. 134–152), we sought diversity in approaches and experiences. This iterative process allowed us to validate and complement perspectives and gradually develop the concepts and dimensions shown in Figure 1. Questions and categories emerging from the analysis of the early interviews informed adjustments to the interview guide for subsequent interviews. Initial participants were recruited through personal contacts of one author with a professional background in the performing arts sector. Interviews with them focused on the integration of reach and resources. To contrast these, later interviews explored experimentation and audience involvement in the development of digital formats. This process continued until theoretical saturation was reached and no further insights emerged. All participants were informed about the purpose of the study, their right to withdraw at any time, and the use of anonymized data in academic publications. Informed consent was obtained from all participants. Formal ethics approval was not required for this type of research. Interviews were recorded with the consent of interviewees and transcribed verbatim. In two cases, permission was not given for recording; detailed notes were taken instead.

Table 1. List of interviewees

Organization	Participant	Position	Organization type
A	M	Project staff	Orchestra
A	J	Video director	Orchestra
B	M	Video director	Opera house
B	Sr	Project staff	Opera house
B	Sv	Project staff	Opera house
B	K	Head of project	Opera house
C	A	Project manager (2 interviews)	Straight theater
C	Hs	Artist (2 interviews)	Straight theater
C	Hr	Project manager	Straight theater
D	B	Managing director	Training center
E	T	Member of managing board	Opera house
E	M	Legal counsel	Opera house
F	W	Head of project	Opera house
F	M	Producer	Opera house
F	N	Artist	Opera house
G	S	Communication specialist	Opera house
G	F	Head of project	Opera house
H	B	Managing director	Multi-genre theater
H	L	Project manager	Multi-genre theater
H	W	External consultant/observer	Multi-genre theater
I	W	Head of project	Opera house
I	K	Head of project (successor)	Opera house
J	L	Managing director	Straight theater

Source(s): Authors’ own work

3.2 Data analysis

Rather than analyzing the cases as discrete units in a comparative design, the study follows a pattern-oriented approach across interviews. The aim was not to compare institutions, but to reconstruct recurring interpretive logics through which organizational actors articulate, justify, and implement digital initiatives. The cases thus served as a heterogeneous sample of perspectives, from which broader sensemaking logics could be derived. Data analysis followed the Gioia methodology (Gioia, 2021; Gioia *et al.*, 2012; Magnani and Gioia, 2023), which builds on Grounded Theory (Corbin and Strauss, 2014; Glaser and Strauss, 2006) and is refined through a structured procedure and visualization, ensuring rigor and transparency (Gioia *et al.*, 2012, p. 17). For this purpose, the approach employs abductive refinement, condensing inductively derived codes across two levels of abstraction (Magnani and Gioia, 2023). Interviews were first openly coded to identify first-order concepts, derived directly and closely from the interview material. Representative quotes illustrating these first-order-concepts are presented in Table 2. Second-order concepts and aggregate dimensions represent conceptual syntheses, developed to capture more abstract issues of sensemaking. Figure 1 presents the resulting data structure and illustrates the relationship between first-order themes, second-order themes, and aggregate dimensions. Analysis was conducted using MAXQDA, with the “AI Assist” feature partly used to locate relevant sections in the material. However, all coding was manually performed by the authors; AI was used only as a navigational aid and transparently documented in MAXQDA.

4. Findings

Using the described analytical approach, we identified four dimensions of sensemaking from the data: initiating conditions, resource allocation, cultures of interaction, and dissemination mode. In the following section, we illustrate how professionals within PAOs shape the digital offerings of their organizations through these dimensions.

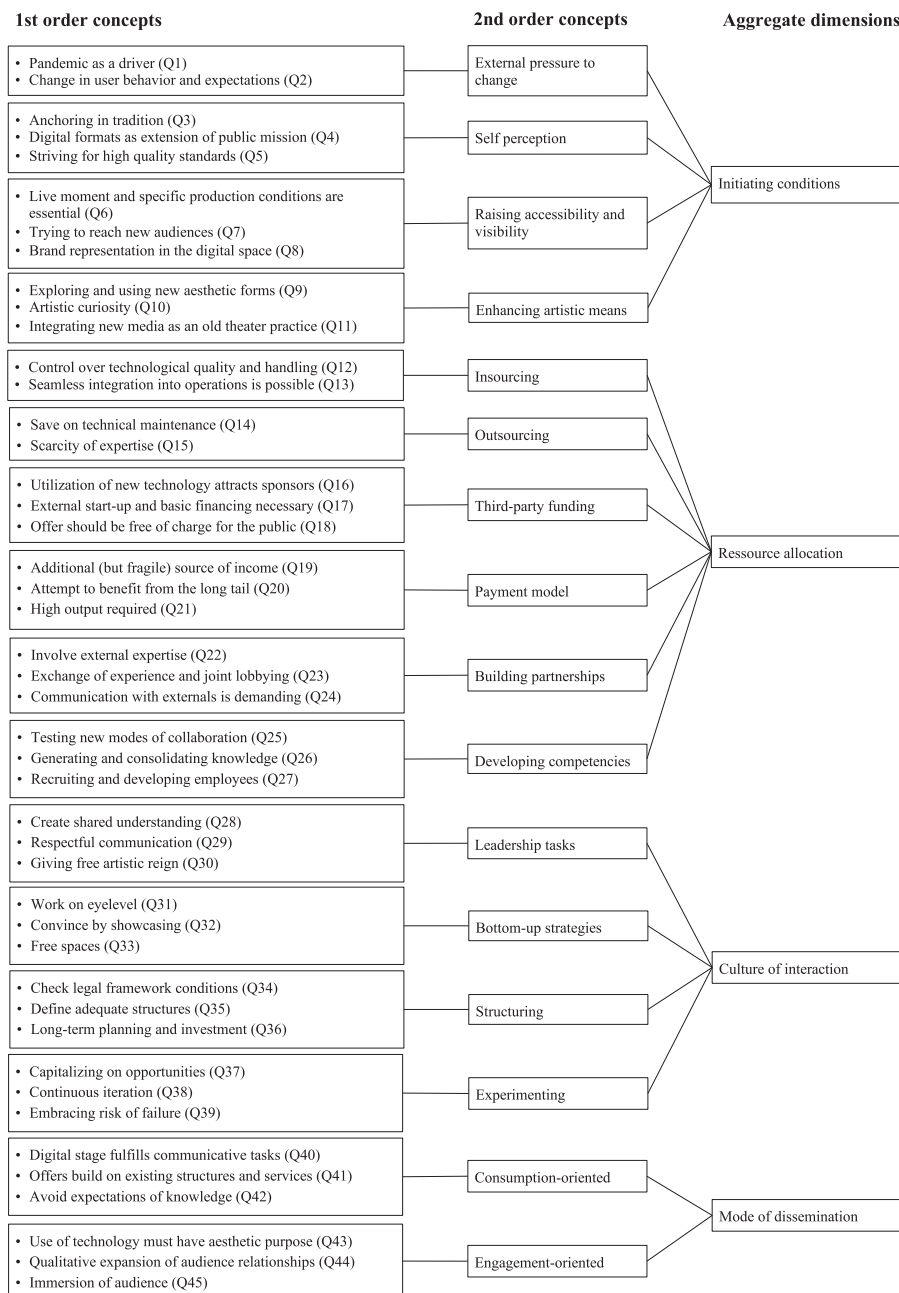


Figure 1. Data structure. Source(s): Authors' own work

4.1 Initiating conditions

The starting point of sensemaking revolves around questions of motivation and objectives, which must be clarified before action can be taken.

Table 2. Dimensions, concepts, and data

Second-order and first-order concepts	Representative exemplary data
<i>Aggregate dimension: Initiating conditions</i>	
External pressure to change	
• Pandemic as driver	Q1: The trigger was the pandemic. Like everyone, we had to shut down. (...) So we just started experimenting with what formats were feasible online. (C-A, 12, g)
• Change in user behavior and expectations	Q2: But, obviously the challenge being that these platforms are always changing and the user behavior is always changing as well. (G-S, 198)
<i>Self-perception</i>	
• Anchoring in tradition	Q3: We're already a bit of a grand old lady and very traditional, but we work with the most advanced tools and cutting-edge technology. (I-W, 45, g)
• Digital formats as an extension of public mission	Q4: This is an extension of our cultural mission. So, we perform for the people in the auditorium each night, but we also reach out to entirely different audiences, including opera fans from all over the world. (B-K, 4, g)
• Striving for high-quality standards	Q5: A value that we hold strong (...) is (...) the paramount nature of quality in the coverage and the performance. (G-F, 13)
<i>Raising accessibility and visibility</i>	
• Live moment and specific production conditions are essential	Q6: Because we truly believe that opera is live, that it unfolds all its magic and power in the live moment. (E-T, 2, g)
• Trying to reach new audiences	Q7: The fact is, like the more mediums that you open up, you grow your audience. (F-W, 78)
• Brand representation in the digital space	Q8: Of course, it has to do with branding and visibility (...) with presence, with success – that you do these things from time to time. (E-M, 44, g)
<i>Enhancing artistic means</i>	
• Exploring new aesthetic forms	Q9: It celebrates exploration and the unknown and welcoming artists outside of opera. (...). It pushes the form in the ways that I think are necessary. (F-W, 20)
• Artistic curiosity	Q10: Curiosity, creativity, interest (...). For me, that really comes from an artistic practice – I've always been interested in experimenting with new technologies. (H-B, 4, g)
• Integrating new media as an old theater practice	Q11: (...) these are art forms that are kind of always changing and always evolving and engaging in dialog with new technology. (G-S, 113)
<i>Aggregate dimension: Resource allocation</i>	
<i>Insourcing</i>	
• Control over technological quality and handling	Q12: (...) but rather, we wanted to put ourselves in a position to produce and distribute independently, and to really reach everyone. (I-W, 4, g)
• Seamless integration into operations is possible	Q13: And now this kind of technical apparatus, which merely accompanies and transmits it live, is somehow supposed to effortlessly fit into and match another medium just like that. (A-J, 28, g)
<i>Outsourcing</i>	
• Save on technical maintenance	Q14: We used to produce ourselves; now we're a co-producer or collaborator, but we've basically outsourced it to [name of firm]. (E-M, 28, g)
• Scarcity of expertise	Q15: (...) because you also see the difficulties within the institutions and the skills that are lacking. (C-A, 11, g)
<i>Third-party funding</i>	
• Utilization of new technology attracts sponsors	Q16: So, how can we use new technologies to tell stories? But, also when engaging funders it's of interest to get involved that way. (G-S, 110)
• External start-up and basic financing necessary	Q17: We always need to rely on partners and some level of funding. A chunk of money, but that's just the initial chunk (...). (B-M, 47, g)
• Offer should be free of charge for the public	Q18: Unlike [I] and [A], we're convinced that we want to offer it free of charge. (B-K, 4, g)
<i>Payment model</i>	
• Additional (but fragile) source of income	Q19: (...) but the idea that a viable business model would eventually emerge from it – that was, of course, a gamble. (A-M, 66, g)
• Attempt to benefit from the long tail	Q20: And the second point is simply that I'm not physically here – so the main access regions are, of course, Europe. But I think the U.S. is always second or third. Then the Asian region – Japan ranks quite high. (B-Sr, 62, g)
• High output required	Q21: One key reason we do so much and do it live is that it means we always have programming – there's just always something happening. (I-W, 37, g)
<i>Building partnerships</i>	
• Involve external expertise	Q22: To work in partnership is absolutely essential! (D-B, 42)
• Exchange of experience and joint lobbying	Q23: And now there's a working group for it – that's the first step toward a political positioning on the whole issue. (H-L, 48, g)

(continued)

Table 2. Continued

Second-order and first-order concepts	Representative exemplary data
• Communication with externals is demanding	Q24: You have to talk to each other and shape it together. We really try to enforce that, but we keep realizing internally just how incredibly difficult it is. (J-L, 28, g)
Developing competencies	
• Testing new modes of collaboration	Q25: It really breaks up some of the old crusts, so to speak – suddenly, art and tech start talking to each other differently. (H-B, 19, g)
• Generating and consolidating knowledge	Q26: What goes beyond that is the fact that we now have a very experienced team. Once young enthusiasts, now professionals who can deliver excellent work on short notice. (I-K, 6, g)
• Recruiting and developing employees	Q27: The team developed and recruited around the visual side, particularly when the new Vision Gallery was installed downstairs. (G-F, 51)
<i>Aggregate dimension: Culture of interaction</i>	
Leadership tasks	
• Create shared understanding	Q28: There's an understanding of what we're doing and where we're going. (F-W, 74)
• Respectful communication	Q29: They're very difficult conversations and they're touchy, but how they're handled and how you handle people with care matter. (...) I really try to be thoughtful about how and when I speak up. (F-W, 58)
• Giving free artistic reign	Q30: They just gave us free artistic reign. (F-M, 35/41)
Bottom-up strategies	
• Work on eyelevel	Q31: So there were no roles. (...) We all contributed. (D-B, 22)
• Convince by showcasing	Q32: But that kind of strong reporting culture and showcasing (...) is very effective at engaging people in the process. (G-S, 150)
• Free spaces	Q33: I like to have space for the artists to do their thing. (F-W, 48)
Structuring	
• Check legal framework conditions	Q34: The opera house can afford a legal expert – other theaters can't. (...) If you don't have anyone inhouse, no lawyer, then you have to bring in external expertise. (E-M, 30, g)
• Define adequate structures	Q35: The digital department is indeed a creative driving force, because it makes the boundaries between disciplines much more permeable and opens up access to the outside – but it also creates connections within the institution. (H-B, 55, g)
• Long-term planning and investment	Q36: I'm learning that opera is already planning four years ahead. I'm still at next Friday. (H-L, 54, g)
Experimenting	
• Capitalizing on opportunities	Q37: I think there were these grey areas that we tried to make productive. (C-AHsHr, 70, g)
• Continuous iteration	Q38: And then you have to adapt – quickly adjust the concept, even if you wrote it differently – so it works. (...) So you have to be willing to adapt to get it through. (B-M, 49, g)
• Embracing risk of failure	Q39: How do we know it's going to be a success? (...) When you think of Mozart (...) there were four or five hits and he wrote 22 operas. So, even for Mozart, the ratio of winners to failures is not that high. (D-B, 48)
<i>Aggregate dimension: Mode of dissemination</i>	
Consumption-oriented	
• Digital stage fulfills communicative tasks	Q40: It was clear that [A-a] served a purely communicative purpose. (A-M, 72, g)
• Offers build on existing structures and services	Q41: So, we're definitely building on that existing infrastructure and expertise. That's both fortunate and convenient. (I-K, 6, g)
• Avoid expectations of knowledge	Q42: We avoid expectations of knowledge. (G-S, 85)
Engagement-oriented	
• Use of technology must have aesthetic purpose	Q43: I saw two opera productions in [H] where everything just flickered with video inserts and effects – just technical add-ons. But if it's supposed to make narrative sense (...) that's the real challenge. (K-W, 25, g)
• Qualitative expansion of audience relationships	Q44: And then truly building a relationship with the audience. With all these VR formats, you have to start from scratch again and figure out who will actually watch it. (C-AHsHr, 176, g)
• Immersion of audience	Q45: Then you show up (...) with your headset in your living room, enter my virtual foyer, and I can perform with you – bring you into a scene, tell you a story, play theatre with you. (H-L, 32, g)
Note(s): First letter: Institution – Second letter: Interviewee(s) – Number: Position in transcript – g: Interview in German, translation by the authors	
Source(s): Authors' own work	

External pressure to change. PAOs face increasing external pressure, especially public expectations to maintain a digital presence. This became particularly pronounced during the COVID-19 pandemic, when digital formats were the main means of staying connected with audiences. While challenging for organizations, this shift also prompted reflection on the artistic potential of digital technologies beyond mere communication.

Self-Perception. Many PAOs uphold a strong tradition that reinforces their commitment to quality and institutional reputation. Simultaneously, this tradition embraces new technologies as a way to present the art form as dynamic and relevant in contemporary society.

Raising accessibility. A primary goal of digital offerings is to expand accessibility and visibility by reaching people who are unable or unlikely to attend in person. However, the co-present live experience is considered the essential theatrical encounter, which a digital simulacrum cannot fully replicate. Consequently, digital formats often serve branding and outreach purposes without fundamentally redefining the artistic form.

Enhancing artistic means. Another perspective views digital tools as a way to not only reach broader audiences but also to expand the artistic repertoire and create novel experiences for them. The performing arts are considered here as an evolving art form, historically open to exploring and adopting new technologies. This perspective emphasizes curiosity about translating theatrical experiences into digital formats without simply replicating analog forms.

4.2 Resource allocation

Once the decision to pursue a digital project is made, regardless of its specific objectives, the focus shifts to securing the technical, financial, and human resources. Sensemaking in this phase centers on determining how to allocate these resources effectively.

Insourcing. Many PAOs lack the technological infrastructure for digital production. Setting up in-house systems (own cameras, servers, audio equipment, etc.) provides autonomy and control over technology management and the production chain, allowing for seamless integration into existing operations. However, it demands significant investment, technical expertise, cross-departmental coordination, and adaptability to rapidly evolving technologies, which may restrict flexibility.

Outsourcing provides a practical solution for institutions that lack the expertise and resources to develop in-house digital capabilities. Relying on rented technology or external providers and specialists lowers maintenance costs and avoids high upfront investments. Yet it also creates dependencies that can hinder the seamless alignment of digital offerings with institutional workflows and brand identity. Therefore, it necessitates careful coordination and effective communication. Despite these challenges, outsourcing delivers flexibility and lessens the need for long-term managerial commitment, making it well-suited for bottom-up strategies that allow digital initiatives to emerge incrementally.

Third-party funding. As digital projects are often excluded from regular institutional budgets, external funding through sponsorships, grants, and foundations is essential for covering initial investments. At the same time, new technologies enhance an institution's appeal to sponsors since innovation attracts attention. Although funding may seem routine, interviewees linked it closely to institutional values: sponsorship-based models often prioritize free public access. This supports accessibility but creates sustainability challenges, requiring ongoing efforts to secure new funding.

Payment models. Some organizations favor paid access, arguing that digital art should retain its value and generate revenue. However, subscriptions and direct payments rarely cover costs unless paired with high-volume production at a low cost, which often conflicts with organizations' commitment to quality (see self-perception). Benefiting from the long tail effect requires substantial investment in technology and marketing, along with strong brand recognition from the outset.

Building partnerships. Integrating technology requires securing the necessary human resources to achieve digital goals. Institutions must choose between developing in-house

expertise and collaborating with universities, research centers, freelancers, technology and production companies, and other cultural institutions. Partnerships provide access to specialized knowledge, help expand outreach, attract new audiences, and reduce costs. They also facilitate knowledge exchange, promote shared learning, and support collective advocacy during negotiations with sponsors, policymakers, and industry associations. However, they also present challenges, such as conflicting interests, differences in work culture, uneven technical expertise, and incompatible funding structures.

Developing competencies. Building in-house expertise addresses many challenges of digital transformation, primarily through roles that bridge departments or manage projects. This requires new collaboration models that facilitate knowledge exchange and innovation. Institutions are testing joint workshops, brainstorming formats, and interdisciplinary teams to share knowledge and mitigate expertise loss due to turnover. As structures evolve, new roles emerge. However, finding professionals with both institutional knowledge and digital skills remains a challenge. Long-term hiring commitments are essential for building sustainable knowledge, retaining control, and ensuring independence in digital initiatives.

4.3 Culture of interaction

To effectively allocate resources, organizations must create suitable structures and processes that support their operations. As previously discussed, this is not always feasible within existing workflows, structures, and methods, which necessitates adaptations.

Leadership tasks. Projects with high visibility, risk, and substantial resource requirements necessitate top-down approval. In these situations, leadership is expected to instill a shared vision within the institution, advocate for and facilitate organizational adjustments, secure resources, and act as a “matchmaker” (F-N, 23) by integrating diverse expertise. Effective leadership encompasses open, appreciative communication that balances concerns with clarity and accountability. Trust is particularly emphasized, both in ensuring artistic freedom and in granting autonomy during the project development process.

Bottom-up strategies. Digital projects often arise not only from leadership but also from individual or small-group initiatives. Creating space for these initiatives is essential, but it can be challenging in day-to-day operations. This became especially evident during the COVID-19 lockdown when employees, freed from routine tasks, explored new ideas. When staff are allowed to take initiative, they can test ideas on a small scale and, if successful, expand them. A significant challenge here is access to resources since bottom-up projects often lack immediate institutional support. Building alliances and demonstrating the viability of ideas can improve the chances of broader adoption and formal integration.

Structuring. Sustainable transformation requires adapting routines and structures to the demands of digital production. Legal frameworks present significant challenges, as existing contracts often fail to address digital rights, necessitating the development of new agreements. Additional challenges include the misuse of digital content and compliance with data protection regulations. Beyond legal concerns, sensemaking involves redefining departmental responsibilities and workflows to ensure alignment with overall organizational goals. Many institutions lack dedicated digital units, leaving such tasks to departments primarily focused on other operations (e.g. marketing or stage production) instead of treating them as core functions. Long-term success depends on embedding digital production into both organizational structures and strategic planning.

Experimenting. Interviewees emphasize a strong culture of experimentation as a key factor in innovation. This includes identifying opportunities, testing ideas through simple, available means – a “bricolage” approach (Weick, 1993, p. 638) – and refining them through gradual iteration. Often, resource constraints drive more effective innovation by prioritizing strong ideas over expensive technology. Digital formats provide fertile ground for such artistic exploration. Embracing failure as part of the creative process is central to this mindset. By encouraging risk-taking and iterative learning, institutions can expand the boundaries of

4.4 Mode of dissemination

Ultimately, digital offerings must connect with the public. From the data, two complementary approaches emerged: distribution-oriented strategies, which focus on audience reach, and engagement-oriented strategies, which emphasize innovative, participatory artistic experiences.

Consumption-Oriented. For many institutions, digital technologies primarily serve as distribution tools, broadening the reach to new audiences and providing alternative ways for existing ones to engage. In this approach, digital platforms mainly fulfill communicative purposes, enhancing branding, increasing visibility, and maintaining engagement with core attendees. To ensure accessibility, institutions avoid expectations of knowledge. While this strategy necessitates mastering new technologies, it builds upon existing infrastructures and formats, rather than reinventing the traditional performance model. Innovation here enhances reach and inclusion without altering the core experience.

Engagement-Oriented. Other institutions adopt a more engagement-driven approach, utilizing digital media to create new artistic experiences that diverge from traditional formats. In this context, technology becomes integral to the creative process, often inviting active audience participation. The emphasis shifts from expanding reach to enhancing the quality of relationships and providing new artistic experiences. As new opportunities arise, this approach requires high levels of digital literacy from the audience and careful consideration of how digital elements impact the audience experience, all while preserving the core values of live performance.

5. Towards a framework of digital transformation in PAOs

The findings presented above outline the issue domains that arise as actors in PAOs make sense of digital transformation in artistic production. Across all four aggregate dimensions, a consistent pattern emerges: second-order concepts manifest as complementary pairs, defining a spectrum of ambiguity in which sensemaking unfolds. These pairs give rise to two internally coherent, ideal-typical strategic orientations which we describe as *scaling* and *potentialization*. To make these complementary orientations analytically accessible and link them to the existing literature, we present them as a structured, ideal-typical framework that helps to interpret how actors within organizations combine different modes of sensemaking in response to ambiguity. Table 3 juxtaposes the two orientations across the four aggregate dimensions, linking each to a dominant sensemaking mode and illustrating the underlying (second-order) concepts behind strategic divergence.

Scaling encompasses practices and rationales aimed at expanding audiences, optimizing communication, and maintaining institutional visibility in the digital sphere. It builds on existing formats and workflows, prioritizing reach, continuity, and operational stability. By seeking control over processes, resources (including technology and skills), and outcomes, it ensures high-quality standards. In doing so, it transfers the core institutional logic of traditional PAOs – defined by professional bureaucracy, stability, and quality assurance – into the digital realm. This leads to outcomes that mirror the analog stage, metaphorically extending the audience space into the digital realm. The following quote exemplifies this approach:

We wanted to open up the house, to give more people the chance to be part of it, to experience our understanding of music theater, and simply to spark interest in the house. (...) We see it as an extension of our cultural mission: not only to serve the people who attend in person every evening, but also to reach entirely different audiences, including opera fans all around the world. (B-K, 4, g)

Conceptually, scaling aligns with the digital transformation discourse in management studies (Hanelt *et al.*, 2021; Jedynak *et al.*, 2021; Verhoef *et al.*, 2021), focuses on the end of the

Table 3. Strategic orientations as complements of sensemaking

Aggregate dimension	Scaling	Potentialization
Initiating condition	Belief-driven sensemaking through argument - grounded in self-perception and - focused on visibility	Belief-driven sensemaking through argument (often) triggered by external pressure and - focused on artistic means
Resource allocation	Action-driven sensemaking through commitment by - insourcing - applying payment models - developing competencies	Action-driven sensemaking through manipulation by - outsourcing - securing third-party funding - building partnerships
Culture of interaction	Action-driven sensemaking through commitment by - leadership expectations (re-)structuring	Action-driven sensemaking through manipulation by - bottom-up initiatives - experimenting
Dissemination mode	Belief-driven sensemaking through expectation of consumption	Belief-driven sensemaking through expectation of engagement

Source(s): Authors' own work

cultural value chain (De Voldere *et al.*, 2017), and leaves the core production logics of theaters unchallenged, resulting in digitally distributed performances (Hawthorne, 2023). This logic also reflects the characteristics of *Cultural Management 1.0*, as described by Bilton (2023), which emphasizes hierarchical control and functional specialization.

The term potentialization, borrowed from system theories, describes practices that deliberately create options for action by loosening routines and structures to give space for experimentation and the productive handling of ambiguity and uncertainty (Andersen, 2020; Andersen and Pors, 2023). In the context of our study, it refers to practices that use digital tools as a means of expanding artistic possibilities, enabling new forms of creation and genuine digital experiences, such as co-creation, virtual reality theater or games. It foregrounds interaction and aesthetic experimentation, extending the stage space itself into the digital. Potentialization involves experimentation and risk-taking, and can reshape artistic processes and institutional routines in response to emerging technological affordances. It often draws on external resources beyond direct institutional control, enabling bottom-up processes and outcomes as illustrated in the following quote:

I actually did it together with two nerds (. . .). They came from 3D animation rather than gaming, interestingly. But we really built a game and asked ourselves: what is theater for us? (. . .) In our view it works . . . now we'll see. (H-L, 36, g)

Conceptually, potentialization aligns with the notion of digitality (Stalder, 2018), which frames digital transformation as also expanding cultural possibilities. Potentialization engages the beginning of the value chain, reimagining artistic production for digital contexts and leading to digitally located performances (Hawthorne, 2023), explicitly created for digital environments and their creative potential. This orientation resonates with the entrepreneurial and participatory models of cultural management described by Bilton (2023), which emphasize distributed agency and the co-creation of cultural value.

Using the sensemaking perspective reveals how different modes of sensemaking unfold at distinct stages of each orientation. The aggregate dimensions of initiating conditions and dissemination mode align with belief-driven sensemaking: initiating conditions serve as cues to construct a rationale for digital offerings and foster a shared understanding of what and how

to develop, while the dissemination mode reflects expectations about audience engagement. In contrast, resource allocation and culture of interaction correspond to action-driven sensemaking, unfolding through the modes of “behavioral commitment and manipulation” (Weick, 1995, p. 156). Scaling, in this view, is characterized by commitment-based sensemaking: substantial investments in technology, specialized staff, training, and the implementation of payment models increase the cost of failure and require deep workflow integration. This attitude is exemplified in the following quote, which highlights the claim not to introduce any programmatic agenda, but instead to commit to substantial and continuous investments in technology:

At the core of our activities is still the concert (...). We have to keep reminding ourselves of that – we are not (...) a record company. (...) We don’t make programming decisions; we can only mirror what happens on stage. And to bring that out fully, we always have to be at the technological forefront. (...) We now have a 4K studio (...), which is already our third video studio (...). (A-M, 30, g)

Potentialization arises through manipulation-based sensemaking, engaging external stakeholders (e.g. funders, tech partners) flexibly and avoiding long-term commitments. This enables experimentation at lower hierarchical levels, allowing staff to initiate projects with minimal approval. With low failure costs, successful initiatives can become integrated into organizational routines. The following quote shows how manipulation, in Weick’s sense, based on individual initiative and showcasing, makes potentialization effective:

So I just went ahead and did it – it was a project I carried out simply because I felt it was the right thing to do. Once it became established, I could also demonstrate that it was well received. (C-A2, 83, g)

The distinction between scaling and potentialization shares similarities with the dichotomy of causation and effectuation from entrepreneurship studies (Ghorbel and Boujelbene, 2013; Matalamäki, 2017; Sarasvathy, 2001). Both frameworks contrast goal-driven, planning-oriented approaches with explorative, adaptive ones. While causation and effectuation focus on individual decision-making under uncertainty, our study emphasizes collective sensemaking, shaped by tensions among institutional routines, aesthetic ambitions, and strategic ambiguity. Furthermore, potentialization captures not only a mode of action but also a cultural logic of aesthetic experimentation, which extends beyond the utilitarian scope of entrepreneurial innovation. At the same time, entrepreneurial logics can inform this sensemaking process on a pragmatic level.

The two strategic orientations and associated sensemaking modes (Table 3) do not prescribe a fixed path but mark the poles of a spectrum. In practice, elements of both orientations often coexist, with varying degrees of emphasis depending on context, available resources, and artistic vision. For instance, resource allocation may emphasize either developing internal competencies or building external partnerships, but rarely one alone. This is exemplified by the following quote:

We hired three people in total across both the video and audio departments, which is incredibly few, and they manage this program in addition to other tasks. Over the years, we’ve built a pool of about twenty freelance staff members who organize themselves into teams to handle the broadcasts. (I-W, 4, g)

Hiring permanent staff demonstrates a clear commitment to institutionalize digital production. Yet this commitment alone proved insufficient on its own and was therefore gradually supplemented by partnerships with external freelancers. The same pattern applies to the other complementary pairs. For analytical clarity, we present the orientations in their internally coherent form. Both, however, offer viable pathways to digital transformation. Traditional PAOs, as professional bureaucracies with a predominant causation logic (von Cossel, 2010), tend to favor commitment-based approaches. These rely on digital tools to scale well-established practices effectively. Potentialization becomes feasible when organizations foreground manipulation in their approach to resource allocation and interaction culture. Our data shows two main pathways for this shift: first, external disruption, especially the COVID-19

pandemic, which interrupted routine operations and opened space for bottom-up experimentation with new formats (Barber-Kersovan and Kirchberg, 2020; Hylland, 2022; Liodaki and Velegarakis, 2022):

I had the feeling that the lockdowns kind of acted as a push (...) to start taking all of this more seriously. Not just focusing on the usual potential (...) but instead getting excited about the creative possibilities that come with it. (C-Hs, 14, g)

The second pathway is strategic alignment. While bottom-up experimentation typically remains within rehearsal contexts, some institutions extended this freedom to digital initiatives. By connecting artistic ambitions to digital exploration, leadership created space for experimentation within existing structures. Their commitment to structural adjustment within a professional bureaucracy enabled sensemaking through manipulation, allowing flexible, bottom-up processes and collaboration to unfold beyond routine constraints:

The digital division has become a creative engine, because it makes the boundaries between artistic departments much more permeable. It opens up the kinds of access I mentioned earlier to the outside, but also creates new connections internally. (...) It's something theaters will truly need in the future. These rigid structures just don't work anymore. (H-B, 55, g)

6. Conclusion

Our findings have significant theoretical and practical implications for the discussion on digital transformation in traditional PAOs.

6.1 Theoretical contributions

First, the typology of scaling and potentialization provides a framework for understanding how PAOs navigate strategic ambiguities surrounding goals, resources, the culture of interaction, and dissemination. Without implying deterministic or causal trajectories, it outlines a spectrum of strategic responses across key issue domains. This approach enriches existing explanatory concepts of organizational (digital) transformation and connects them in new ways. It resonates with structural perspectives on PAOs (Mintzberg, 1993, 1980; von Cossel, 2010), bridging managerial understandings of digital transformation (Hanelt *et al.*, 2021; Jedynak *et al.*, 2021; Verhoef *et al.*, 2021; Vial, 2019) with culturally grounded views of digitality (Cramer, 2015; Stalder, 2018). Moreover, it builds on typologies of digital artistic formats as proposed by Hawthorne (2023), who distinguishes between digitally distributed, digitally mediated, and digitally located offerings. Scaling aligns most closely with the first type, while potentialization corresponds to the third, which demands more artistic rethinking and creative design, as opposed to distribute analog performance via digital channels. The two strategic orientations also resonate with effectuation and causation logics (Ghorbel and Boujelbene, 2013; Sarasvathy, 2001), which frame shifts between exploration and structured implementation.

Second, utilizing the sensemaking lens emphasizes organizational agency. While structural configurations shape the scope for innovation (Bakhshi *et al.*, 2010; Bakhshi and Throsby, 2010; DiMaggio and Stenberg, 1985; Tai, 2023), they do not fully account for the diversity of digital strategies among otherwise similar PAOs. Therefore, a management perspective must also examine how organizational actors interpret competing imperatives and adapt strategies under conditions of ambiguity. Our findings highlight how action-driven sensemaking, through “behavioral commitment and manipulation” (Weick, 1995, p. 156), is linked to complementary strategic orientations for digital transformation. Commitment-based sensemaking reflects the dominant mode in traditional PAOs, rooted in tradition-anchored understanding of the art form and institutional continuity. Yet our data also show cases of

manipulation-based sensemaking, where organizations deliberately allowed for experimentation by using external resources (e.g. funders, partners) and avoiding long-term structural commitments. This allowed bottom-up initiatives to emerge and be tested with minimal risk. By employing this approach, we offer a novel conceptual lens for the growing cultural management literature on organizational agency (Bilton, 2023; Gohoungodji and Amara, 2023; Patriotta and Hirsch, 2016; Stahl, 2024).

Third, our results suggest that dominant management understandings of digital transformation (Hanelt *et al.*, 2021; Jedynak *et al.*, 2021; Verhoef *et al.*, 2021; Vial, 2019) should be broadened for the cultural sector. Here, digital transformation involves not only scaling, but also institutional and aesthetic potentialization. This perspective recognizes digital formats not merely as simulacra of analog offerings, but as frameworks for genuinely digital experiences, thereby advancing the discourse on digital innovation in the performing arts (Salvaggio, 2025).

6.2 Practical contributions

For practitioners, our study offers several contributions: First, the proposed framework helps practitioners position their organizations along core strategic dimensions and make sense of the ambiguities they encounter. It supports reflection and internal alignment in developing digital strategies. For cultural leaders, the framework clarifies how sensemaking shapes digital strategies and indicates how it can be influenced by either emphasizing commitment-based or manipulation-based approaches to achieve specific outcomes.

Second, the framework demonstrates that potentialization can be encouraged by creating space for experimentation, bottom-up initiatives, and increased employee agency. This is especially relevant for institutions seeking to open up established structures without abandoning their core mission. Effectuation research provides detailed tools for practical implementation (Read and Sarasvathy, 2005).

Third, while the two orientations illustrate distinct ways of engaging digitally, they also entail challenges and unintended consequences. Scaling risks locking PAOs into a volume logic, where success depends on maximizing reach rather than advancing artistic quality. This may work for a few highly visible institutions, but for most the costs of producing digital content exceed potential returns. Potentialization, in turn, may raise expectations that cannot be met: experiments often lack measurable impact, risk overwhelming audiences, and may remain one-off projects without lasting effect. Both orientations therefore require careful strategic consideration, as neither a singular focus nor complete avoidance of digital engagement appears sustainable in the long run.

Finally, the framework also holds implications for cultural policy and education. For policymakers, recognizing the coexistence of different strategic orientations can inform more nuanced funding criteria that support both orientations. In cultural management education, the model can be used to teach strategic decision-making under ambiguity and to explore how organizational structure, digital technology, and artistic logic interact in practice.

6.3 Limitations

While our study offers novel insights into how professionals in PAOs perceive digital transformation, it also highlights limitations that suggest directions for future research. First, its qualitative design enables rich, contextual insights, but precludes statistical generalization (Polit and Beck, 2010; Ritchie *et al.*, 2013, p. 359). Instead, it follows analytical generalization (Polit and Beck, 2010), offering plausible, empirically grounded, and theoretically relatable patterns for how actors in PAOs make sense of and navigate ambiguity in decision-making and strategic practice. Comparative or survey-based studies could help consolidate our findings. Second, this study focuses on the initiation of digital transformation (partly shaped by the COVID-19 context) but does not address how digital projects are sustained, institutionalized, or discontinued within the complex dynamics of PAOs, including leadership changes, shifting

resources, or evolving artistic agendas. These dynamics also involve sensemaking and require further research. Third, interview data carries the risk of bias, as participants might overstate successes or underreport problems. Moreover, since digital expertise is often concentrated among a few individuals within an organization, this study reflects primarily individual perspectives rather than comprehensive organizational viewpoints. While this represents how responsibilities are currently structured, future research should incorporate broader organizational voices and triangulate expert perspectives with those of other stakeholders such as audiences and policymakers. It would also be valuable to broaden the scope of future research beyond the narrow field of traditional PAOs considered in this study. Finally, the findings are shaped in parts by the specific COVID and post-COVID context, in which the pandemic strongly accelerated digital transformation in PAOs. Future research should examine to what extent these effects have had a lasting impact and genuinely transformed practices, routines, and audience habits.

In summary, our paper demonstrates that developing artistic offerings for the digital realm is a complex and ambiguous process that can be described across several complementary dimensions. By highlighting organizational sensemaking, it contributes to a deeper understanding of how digital innovation emerges, specifically between the poles of scaling and potentialization as two fundamental strategic orientations.

AI Statement

The authors, who are non-native English speakers, utilized ChatGPT-4o and Grammarly for language support. MAXQDA's "AI Assist" feature aided the analysis. All AI-generated suggestions were thoroughly reviewed to ensure they aligned with the authors' intentions.

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Corresponding author

Christian Holst can be contacted at: christian.holst@leuphana.de