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Investigating the Impact of Digital Transformation on Organizational Identity in an SME: Insights from an In-Depth Case Study

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Abstract

The relationship between digital transformation and organizational identity is an immanent topic in IS, which is especially relevant for small- and medium-sized enterprises (SMEs) due to their reliance on implementing digital technologies to stay competitive. However, little is known about this relationship in this specific context. Based on theories and concepts about digital transformation, organizational identity, and SMEs, we conducted an in-depth case study with a German Mittelstand company in the engineering sector. Building on a conceptual archetype framework, we reveal that different manifestations of digital transformation have different impact on organizational identity. Thereby, we contribute to IS research by highlighting the mutual dependency of these concepts and by underlining the necessity for being aligned to the specifics of SMEs. Moreover, we derive practical implications for managers that help to anticipate the effects of digital transformation within their strategic decision processes.

Keywords

Digital transformation, organizational identity, SME.

Introduction

Digital transformation (DT) is an immanent topic in IS (Vial 2019). Currently, its gestalt and impact are investigated in diverse settings with insightful conceptual and empirical results (e.g., Bitzer et al. 2021; Chaniyas et al. 2019; Haskamp et al. 2021; Högberg 2021). In this context, the effects of DT on organizations play a dominant role in IS research, which can be divided in either focusing on their results or on their domain. Regarding the results of DT, researchers lately focused on investigating its influence on organizational identity (OI) to illustrate its holistic impact and how it affects the fundamentals of organizations (Wessel et al. 2021). Regarding the domain of DT, among others, studies are prevailing that highlight its importance for diverse forms and sizes of organizations, such as small- and medium-sized enterprises (SMEs) (e.g., Li et al. 2017; Pelletier and Cloutier 2019a; Pelletier and Cloutier 2019b; Williams et al. 2022; Zhao et al. 2022). Against this background, it is apparent that the concepts of DT and OI in an SME setting are highly relevant in IS. They are crucially important for organizations that aim at sustaining and developing competitive advantages through implementing digital technologies (Hess et al. 2016).

These three concepts are investigated extensively in their specific contexts. First, research on DT provides diverse concepts describing its different manifestations (Matt et al. 2015) and extent (Vial 2019; Wessel et al. 2021). Second, organizational studies offer different theoretical perspectives on OI, focusing e.g., on its composition and relevance for organizations (e.g., Albert and Whetten 1985; Pratt et al. 2016; Ran and Golden 2011). Third, contributions about SMEs stem from diverse fields and mostly comprise the definition and consequences of their specific idiosyncrasies (Levy and Powell 2002; Munro 2013; Zhao et al. 2022). Although the individual body of literature about these three concepts is rather broad, insights into their symbiosis are scarce. While research about the relationship between DT and OI is gaining attention recently (e.g., Graf et al. 2023; Wessel et al. 2021), the applicability of these results in the context of SMEs is vague. However, especially such results would be promising since SMEs serve as an appropriate object for investigating these topics, as they are particularly dependent on the implementation of digital technologies in order to stay competitive in globalizing markets (Alonso Mendo and Fitzgerald 2005; Levy and Powell 2002; Williams et al. 2022; Zhao et al. 2022). Therefore, we propose the following research question:

RQ: *How does digital transformation affect organizational identity in SMEs?*

To answer this research question, we conducted an in-depth case study in a German Mittelstand company in the engineering sector. We analyzed our data by utilizing established concepts about the relationship between DT and OI and applied them to the specific context of SMEs. Referring to the theoretical archetype framework by Graf et al. (2023), we find that different manifestations of DT lead to different effects on OI change in SMEs. Moreover, we highlight the mutual dependency of these concepts and the importance of a DT strategy that is aligned with the specific characteristics of SMEs. We contribute to current literature about DT`s impacts (Pucihar 2020; Vial 2019) as well as DT in SMEs (Trenkle 2019; Williams et al. 2022).

Theoretical Foundation

DT and OI in SMEs

To understand how DT influences the OI of SMEs, it is important to first delineate the prevailing definitions of these concepts. Recently, various conceptual and empirical contributions have sparked fruitful discussions about the core, governance, and gestalt of DT in organizations (Haskamp et al. 2021). Although there is a scientific debate about the extent of changes induced by DT, it is argued that DT goes far beyond just implementing new digital technologies. Rather, its core is described as holistic organizational changes that are triggered by the implementation of digital technologies. DT affects various organizational domains, which can be tangible or intangible, and its impact is reflected in many ways, such as digital innovation (Hund et al. 2021; Nambisan et al. 2017), organizational strategizing (Chanas et al. 2019; Hess et al. 2016), and organizational processes (Vial 2019). Overall, DT is attested the potential to affect an organization right down to its very core and, thus, possibly questions its established OI. In this vein, DT`s impact on OI is an emerging topic in IS, whereas DT is discussed as a process that may lead to changes of an established OI (Karnebøgen et al. 2021; Stockhinger 2021; Vaast and Pinsonneault 2021; Wessel et al. 2021).

OI, in general, describes the collective self-understanding of an organization. Referring to the seminal work of Albert and Whetten (1985, p. 265), it is the organizational members` response to the questions: “Who are we? ‘What kind of business are we in?’ or ‘What do we want to be?’” They further argue that OI meets three criteria: central, distinctive, and enduring. While the first two criteria are undisputed, the last attribute (enduring) is discussed highly controversially as it implicitly indicates the impossibility (or unlikelihood) of change. Especially scholars from a social-constructivist perspective understand OI as “a social construction that results from the efforts of organizational members to understand their collective selves” (Brown 2009, p. 179), which calls its enduring character into question. Following Bourdieu`s theory of practice, we concur with this perspective by regarding OI as a (temporary) outcome of collective processes of understanding and negotiation. Applying this theoretical lens allows for overcoming the mentioned contradiction between the enduring versus dynamic character of OI. We regard an organization as a social field (Bourdieu 2005; Emirbayer and Johnson 2008) which pursues a specific purpose and follows its own logic as well as specific ‘rules of the game’. Each field/organization is grounded in a common interest and shared beliefs, building its collective fundament and binding its members together (Bourdieu 2000). Bourdieu (1977) calls these tacit and self-evident collective beliefs and principles *doxa*, which “at once divide and unify, legitimate unity in division” (Bourdieu 1977, p. 165). The parallels to the concept of OI are obvious. Thus, we suggest understanding OI as a field-specific *doxa* in a Bourdieusian sense. We do concur with Albert and Whetten (1985) regarding OI as the

organizational members' answer to the question 'Who are we?'. However, we further argue that this question mostly will not be asked at all. Through processes of understanding and negotiation among the organizational members and with their environment, a particular perception about the organization emerges. Once asserted as the legitimate view, it becomes taken-for-granted and unquestioned for the organizational members. Therefore, the doxa/OI tends to reproduce itself, which explains its relative stability by revealing the reproduction conditions, but which does not assume an ahistorical stability. DT poses an 'identity threat' (Petriglieri and Devine 2016; Ravasi and Schultz 2006) that sparks the OI discourse anew.

While DT is an important challenge for all organizations, it is particularly crucial for SMEs. The role of DT in SMEs is object of various papers in IS research that investigate its maturity and influence most dominantly (e.g., Pelletier and Cloutier 2019a; Trenkle 2019; Williams et al. 2022; Zhao et al. 2022). While many large companies have already made significant progress in unlocking potentials of digital technologies and expanding their digital business fields, SMEs seem to be even more challenged. On the one hand, the majority of SMEs are restricted in terms of financial and operational resources. On the other hand, a resistance from the management for investments in innovation and DT initiatives is stated (Soluk and Kammerlander 2021). Due to the interplay of DT and OI arising from their distinctive reliance on the implementation of digital technologies in order to stay competitive (Li et al. 2017; Pelletier et al. 2017; Wiesböck and Hess 2020), SMEs are valuable cases to investigate.

Although the body of literature about DT and SMEs is rather broad (e.g., Pelletier and Cloutier 2019b), definitions and conceptualizations on SMEs are varying. These can be subdivided into quantitative and qualitative approaches (Buculescu 2013). Although quantitative definitions of SMEs (e.g., number of employees, revenues) help to draw a clear line between organizations of different sizes, such approaches are often too strict as the metrics vary greatly between disciplines and continents (Munro 2013). Thus, this study follows a qualitative conceptualization which defines SMEs as non-subsidiary organizations (Heidt et al. 2019) producing locally but acting globally with a comparably small executive team. In addition, SMEs are characterized by their more family-like character as well as loose and flexible practices (Munro 2013). Consequently, a collectively shared OI is all the more important as it provides the company members with a frame of reference and orientation for acting in line with the organization (Kirchner 2010) and serves as a backbone for social cohesiveness (Bridwell-Mitchell and Mezas 2012; Smith 2011).

Archetypes for Understanding DT's Impact on OI

While DT is described as a holistic and far-reaching organizational change, its manifestation within companies can vary significantly in terms of different degrees of scope and complexity (Chaniyas et al. 2019). DT initiatives differ between companies regarding the dimensions of structure and content. The structural dimension relates to how DT is embedded within organizations. It can be differentiated into a separated and an integrated mode, depending on questions about "who will be responsible for the transformation" (Hess et al. 2016, p. 132) and where the new digital activities and necessary capabilities are bundled (Hess 2022). The content-related dimension describes the distance of DT to the core business. It is concerned with changes regarding an organization's value creation (Matt et al. 2015) and mainly refers to the question of the changes' extent brought along by implementing digital technologies: changes can either be relatively close or distant to the core business (Bosler et al. 2020). In line with Wessel et al. (2021) we argue that DT has an impact on a company's OI. However, we assume that different DT manifestations induce different (re)negotiation processes which imply different effects on a current OI. Hence, we build on the archetype framework by Graf et al. (2023) as a conceptual basis for our study. This framework provides a theoretical heuristic for characterizing different avenues for OI changes triggered by DT in organizations. As illustrated in Figure 1, the two DT dimensions described before form a framework that results in four distinct archetypes of how OI possibly changes in an organization. Both dimensions are understood as a continuum between the representations mentioned, which means that they are not seen as binary decisions but as a converging approach to describe the gestalt of a DT.

Archetype 1 refers to a DT that remains close to the previous core business and is implemented in a separated manner. In this case, an expanding OI is assumed. Due to the DT's closeness to the previous core business, the company's current OI is expected to be preserved by the organizational members to a large extent and not be questioned as a whole. It is supposed that such company members in charge of digital developments will bring new and additional aspects into discourse about the (future) OI. Since DT

is closely aligned with the previous core business in this case, it is assumed that the new digital attributes are to be added to the previous OI, rather than sparking a fundamental readjustment of the OI.

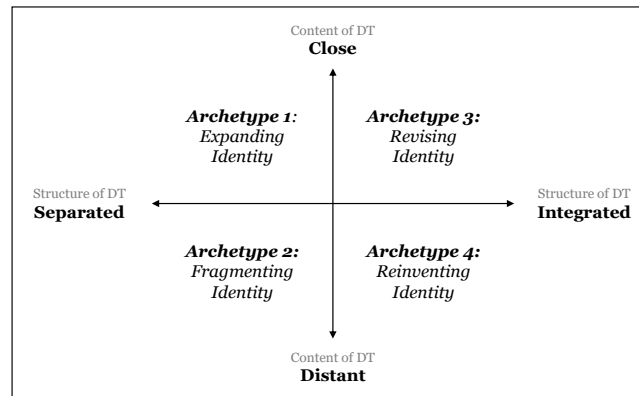


Figure 1. Archetype Framework on the Relationship between Digital Transformation and Organizational Identity based on Graf et al. (2023)

Archetype 2 refers to a DT manifesting as an extensive change of an organization's current mode of value creation, which is structurally implemented in a separated manner. Under these circumstances, a polarization tendency within the company is expected. Due to the importance of the organizational entities in charge of digitalization, it is assumed that these will develop a strong digitally-centered self-understanding, resulting in a discrete own OI which is largely independent from the established OI. Since the rest of the company is more likely to maintain and preserve the previous OI, it is assumed that the OI is fragmenting into two distinct OIs.

Archetype 3 refers to a DT likewise close to the previous core business but implemented in a structurally integrated mode. In this case, it is assumed that DT is irritating the OI throughout the whole company and triggering a (re)negotiation process about the (future) OI. Since the prevalent core business is not fundamentally changed by DT, it is expected that also the OI is only partially questioned. Here, a partial revising of the OI is anticipated, which largely builds on the organization's roots.

Archetype 4 refers to a DT distant from the previous core business which is implemented in an integrated mode from the start. As the organization, in this scenario, is shaken to its structural- and content-related foundations, DT is considered to spark a fundamental OI quest throughout the whole company. It is expected that DT elicits a serious identity crisis, since the previous OI loses its reliability as a frame of reference and orientation for the organizational members. Consequently, a fundamental process of understanding and negotiation about the company's future OI is emerging. This is either leading to a temporal loss of identity, accompanied by uncertainty and disorientation, or it is unshaking generative potential and fostering a process of reinventing the OI, which will be only loosely linked to the company's previous OI.

We will use the presented conceptual framework and its archetypes in the following to analyze the empirical data, investigating DT's impact on the OI of an SME.

Methodology

Research Design

To explore the relationship of DT and OI in SMEs empirically, we conducted a critical realist case study research (Wynn and Williams 2012). This methodology chosen allows to approach underlying mechanisms explaining specific ways of OI change, depending on structural manifestations of DT as well as collective interpretations of OI. Since this approach targets at "provid[ing] more detailed causal explanations of a given set of phenomena or events in terms of both the actors' interpretations and the structures and mechanisms that interact to produce the outcomes in question" (Wynn and Williams 2012, p. 788), a single case study is argued to be a useful design "to abduct and retroduct new forms of understanding" (Vincent and O'Mahoney, p. 155). To ensure a rigorous approach to our study, we followed established scientific guidelines and recommendations for qualitative research (Myers 2009; Yin 2013).

Case Selection and Description

Engineering companies, by definition, have a strong focus on technology, however, not primarily in digital domains. DT, therefore, has a particular influence on such companies since it not only implies changing competence requirements and aligning organizational settings, but it also impacts these companies right down to their very core. However, depending on the size, these companies might face different challenges. In order to investigate our research question, we therefore chose ENGINEERING-Co as a case company, belonging to the German Mittelstand with its headquarter located in a German town. With 150 years of corporate history, developing from a small family-owned business into a stock corporation, the company looks back on a long tradition and rich heritage. In the early 2000s, ENGINEERING-Co was split up, accompanied by a management buyout to more strongly turn back to its original roots. Top management aimed to renew and maintain the original family character and the company is still deep-rooted with its local community and heritage. By generating an average revenue of 600 million € per year, it is a classical ‘hidden champion’ and a leader in its niche market. Even though it is large regarding the number of employees and its average revenue, it can be characterized as a medium-sized company due to multiple qualitative factors that classify it as an SME. This is not only mirrored in the company’s living history but also in the fact that many employees receive their training within the company or join it directly after their vocational training and stay there for their entire professional career.

Data Collection and Analysis

Our data was collected in 2022 from semi-structured interviews with 77 organizational members. We used a stratified sampling (Trost 1986) in order to ensure that all hierarchy levels, functions, and departments are properly represented in the sample. Table 1 illustrates the sample composition. Interviews range from 40 to 116 minutes, with an average length of 65 minutes. In total, the database comprises about 85 hours of interview material. The interviews were conducted online via Zoom, video recorded, and transcribed verbatim. 35 interviews were conducted in English and 42 in German. The original German quotes are translated to English. To maintain the interviewees’ anonymity, the interviews were randomly numbered (IP = interviewed person). For data analysis, we employed thematic analysis. This method of analysis is deemed appropriate for both the critical realist approach and the proposed theoretical framework, as it allows for capturing both structure and context as well as conscious and implicit interpretations. According to Braun and Clarke (2006, p. 82), a theme in thematic analysis “captures something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set”. In our case, the themes refer to the commonly shared or (re)negotiated aspects of OI (e.g., beliefs, values, and assumptions). Building upon the theoretical framework, we analyzed our data following an abductive as well as a retroductive approach. On the one hand, we interpreted and re-described our data against the theoretical background and mechanisms proposed in the theoretical framework (abduction). On the other hand, we used retrodution in order to find additional explanations of the phenomena observed (Vincent, S., & O’Mahoney 2018).

Hierarchy Level			Geographics			Functions				
Top Mmgt.	Middle Mmgt.	Employees	Germany	Europe/ Middle East/ Africa	Asia-Pacific	Technology	Sales & Service	Operations	Corporate Functions	Other
10%	16%	76%	51%	31%	18%	28%	22%	14%	11%	25%

Table 1. Sample Composition

Case Analysis

First DT Phase

ENGINEERING-Co’s core business is in building industrial equipment with high-quality standards. In this area, the company gained extensive expertise and a reputation across the industry. In 2017, top management decided to establish a separate business unit within the company in order to explore the potential of digital technologies for the company’s business field. One top manager explains that they “had the idea to do something with digitalization and then founded a small digital unit in the generally supposed startup-hype, to drive digital services and solutions with a startup and agile approach” (IP36). Aiming at serving as an “internal

incubator” (IP41) for the company’s DT, a young team was assembled, deliberately working detached from day-to-day business, and tasked with developing digital innovations by using new forms of work organization (especially agile project management) in a startup-like culture. The innovations and practices should then be implemented throughout the whole company. Following the slogan “ENGINEERING-Co becomes smart and sexy”, then management aimed to drive DT forward vigorously and expeditiously. One interviewee explains: “Our CEO propagated that he no longer wanted ENGINEERING-Co as it was – that was a welding booth in his eyes [...] – but wants to transform it into a software company” (IP39). With respect to DT’s content-related dimension, this phase aimed at a fundamental turnaround of the previous mode of value creation. The future core business should focus on digital solutions and services.

While OI was previously not a topic of discourse in the company, this DT initiative has brought it to the forefront. Soon, the majority of the staff perceived the digital unit and its practices as a fundamental threat to the established OI. Interviewees described the digital unit as an “appendix to the organization” (IP41) or even as a “guerilla project” (IP17). The longstanding employees felt like “the old staff” in contrast to “the newcomers, the agile, modern ones” (IP36). Furthermore, the digital unit was said to develop its own distinct identity and was perceived as “following another mission than the rest of the organization, à la ‘We create innovation, but we have nothing to do with the traditional’” (IP41). This, in return, not only led to an awareness about the OI, but also to a re-assurance of the established OI that has been growing over the past decades, even centuries. When asked about what makes ENGINEERING-Co special and unique, the interviewees draw a picture whose essence can be condensed by the phrase ‘We are a proud engineering company’. In the data, three themes were revealed as the main aspects of the established OI: tradition/culture, products, and market position. With regard to tradition/culture, the interviewees emphasize a strong esprit de corps and sense of belonging among organizational members, which they link to the company’s tradition. They express that they are “proud” (IP40) of ‘their’ company’s longstanding heritage, which creates a “family-like character” (IP15). Additionally, the interviewees repeatedly refer to the company’s products and services. In their perception, it is their exceptional collective expertise that leads to a high-quality standard and makes the company outstanding and distinguishable from others. The third identified theme relates to the company’s leading market positioning. The interviewees highlight the company’s leadership position and its strong customer orientation, resulting in longstanding customer loyalty. For example, one employee aspires to always “offer the best solution to the customer, which leads us to want to tailor the solution as specific to the customer as possible” (IP17).

The emerging different OI within the newly founded digital unit has not only resulted in a re-assurance of the previous OI, but also has caused significant tensions and defensive reactions within the company. A conflict has arisen between the digital unit and the rest of the company. Exemplarily, one interviewee describes this identity conflict as “the shiny digital guys versus us” (IP15). After less than two years, the digital unit was dissolved since it was considered incompatible with the established OI, as one top manager explains: “And yes, it failed miserably because ENGINEERING-Co is not a software company but an engineering company and should focus on the things it’s good at” (IP39). Thereafter, DT has been put on hold and digital innovation attempts were continued at low-level scattered over the company and in a relatively unstructured manner.

Second DT Phase

After various changes in the company’s board and management, the issue of DT was to be tackled again, however, in a new wrapping. In 2020, the company leadership decided to establish the position of a Chief Digital Officer (CDO). The CDO was tasked with finding new ways for DT that are to be supported and embraced by the employees. A member of the top management explains: “We have put an end to all this startup talk and said that digitalization is not simply a startup or foreign matter. Rather, we have to think about digitalization with the business – and out of the business” (IP36). The reference to the existing ‘business’ makes it obvious that the established OI serves as the reference point for shaping change processes. The CDO now follows an informal network approach for DT. In addition to ‘digital managers’, who are directly responsible for managing digital product development projects, the CDO identified employees throughout the company with an affinity for digital topics and brought them together in an informal network. They were assigned the role of ‘digital ambassadors’. On the one hand, they should bring digital topics into their own areas to actively drive them forward. On the other hand, the coordination of the digital initiative should be enhanced through the networking of these people. This is intended to bring “the right people together on specific topics” (IP41). The declared aim is now to realize DT as a ‘bottom-up transformation’ in order to get all employees on board. Building on established formal and informal structures is meant to ensure that the initiated processes will find acceptance among employees and will be considered compatible with their

previous collective self-understanding. Moreover, strategically, DT is intended not to substitute the previous core business but to expand it.

Against this backdrop, we observe a vibrant debate on the question: ‘Who do we want to be in the future?’ In contrast to the first DT phase, it is less polarizing. Rather, the current changes seem to be accompanied by a collective sensemaking and (re)negotiation process about the future OI. Most of the interviewees agree on the necessity of a higher degree of digitization. On the one hand, machines and plants should become more intelligent and connected and digital business models, such as ‘equipment as a service’, and customized solutions should be fostered. On the other hand, anticipating the future of their industry, the interviewees refer to the traditional and conservative behavior of their customers and the slowly changing industry in their domain (“I think we do okay at keeping customers satisfied and having good relationships with them. I could see us losing that if we grew too far away from them” (IP4)). They argue that the requirements and the physical conditions in their business will remain, and thus also their traditional expertise will stay important.

Even though this DT phase is more focused on the organizational members’ commitment and identification with the changes, that does not mean that all organizational members are in agreement and share a clear vision. Rather, a complex and diffuse mixture of internal negotiation processes and micropolitics can be observed. This has not yet manifested in clearly defined camps. Instead, we currently find a ‘polyphony of voices’ and an open process of collective sensemaking. Given the significant uncertainties regarding future developments in relation to digitization, both with regard to the organization itself and with regard to market developments, a clear positioning seems to be difficult for organizational members. With respect to the question ‘Who do we want to be in the future?’, we find a broad range of opinions in the data. Some advocate a gradual development, following the motto of ‘evolution rather than revolution’. In this vein, they want to remain a ‘proud engineering company’, however, building “smart machines” (IP6) in the future. Others are more uncertain and indecisive. Many do not have a clear vision in mind and do not know where the journey will or should go. While some are still skeptical and emphasize the company’s strength being deeply rooted in its tradition (“We have to keep an eye on where we come from and what we stand for” (IP19)), others are very open to DT, however, also tie it up with the established OI. One interviewee, for instance, expresses, “the old DNA and the new technology can be married extremely well because the new technologies offer an incredible number of opportunities to solidify our identity” (IP31). Overall, the statements can be described rather as diffuse search processes than as a clear positioning with regard to the company’s future OI – it is negotiation in process.

Discussion

As outlined in the results, ENGINEERING-Co underwent two DT phases, each leading to different effects on the OI. Therefore, we will subsume and interpret these phases against the backdrop of the previously outlined archetype framework on the interrelationship between DT and OI.

First DT Phase: Fragmenting Identity – “The shiny digital guys vs. us”. The first DT phase can be categorized as distant from the previous core business with respect to the content-related dimension and as separated regarding the structural-related dimension. The data reveals that the new digital unit developed its own OI, detached from the company’s previous OI. This, at the same time, led to the rest of the company trying to distance itself from the new OI by reaffirming the previous one (‘We’re an engineering company, not a software company’). In fact, the internal tensions between the digital unit and the rest of the company caused a serious OI crisis. The longstanding employees were unable and/or unwilling to commit to the newly emerging identity from the digital unit, while the digital unit’s members distanced themselves from the previous OI. Referring to the theoretical framework, this effect can be interpreted as a fragmenting identity first. However, since the two OIs (or OI fragments) were perceived as incompatible, this did not lead to an abiding co-existence, but ENGINEERING-Co’s management decided to turn back to the established OI and even to accept the failure of the first DT phase.

Second DT Phase: Revising Identity – “We will stay a proud engineering company – however, building smart machines”. In contrast, the second DT phase builds on the company’s previous core business and thus remains close to it, and it is implemented in an integrated manner. Since it is still in its beginning, we observe a lively discourse about ‘who’ the company wants to be in the future. In contrast to the first phase, the company as a whole is equally involved in questioning, challenging, and re-negotiating the future OI. To date, the situation is highly complex: It is a polyphony of voices discussing very different,

often fuzzy opinions. Most organizational members have not yet positioned themselves clearly. There is not one clear counter-narrative to the established OI; instead, different attitudes, perspectives, and ideas are in open competition with each other. The emerging ambiguity or discrepancy between the existing expertise and the future digital challenges is addressed by re-interpreting and partially revising the current OI. Even though there are still skeptical voices towards DT, the established identity features are often regarded as a scaffold on which future developments and changes should be based, and therefore the established OI is considered compatible with digitalization in general. One interviewee even argues: “Our DNA: ‘We are experts, we are quality leaders, we are problem solvers number one, we are efficient at it, we are sustainable at it’ – we can utilize all of these to our advantage” (IP33). Currently, there is an ongoing process of re-negotiation, re-interpretation, and re-definition, that can be captured with the ‘revising identity’ archetype in the theoretical framework. However, the outcome of this process is not yet foreseeable.

Overall, our results reveal that the two different DT manifestations each have specific effects on the company’s OI which can be assigned to different archetypes from the theoretical framework. Firstly, our analyses expose that at ENGINEERING-Co two different states of DT can be differentiated with regard to the structural- and content-related dimension. Secondly, these two different DT manifestations show specific effects on the company’s OI as they open up different constellations for (re)negotiating OI in the course of DT, leading to different OI changes. In the first DT phase, ENGINEERING-Co decided on a DT separated from the established structure of the organization and rather distant from the core business. This resulted in a **fragmenting OI**, which complies with the second archetype. In contrast, in the second DT phase, an integrated DT approach is followed. Its content is rather close to the organization’s core business, which is currently leading to an ongoing process of partially re-thinking the established identity. This can be assigned to the third archetype of **revising OI**.

Contribution, Limitations, and Conclusion

Our study contributes to IS research in a twofold manner: First, based on our empirical data, we show that the theoretical framework of Graf et al. (2023) is suitable as an analytical heuristic for empirical investigation. Our case study reveals that different DT manifestations on an organizational level do have different impacts on an established OI. Thereby, we sharpen the current understanding of the relationship between DT and OI in SMEs by giving empirical evidence for their mutual dependence (Pelletier and Cloutier 2019b; Wessel et al. 2021). Different ways of (re)negotiating a current OI are sparked within the organization, depending on the structural- and content-related configuration of DT, which leads to different ways of OI change. Second, our empirical study shows that the way an OI is (re)negotiated and developed in the course of DT is critical for its success. Therefore, it is important to consider the OI when developing a DT and to align it to the respective organizational setting, which stands in line with IS research about DT strategies (Baygi et al. 2021; Haskamp et al. 2021; Hess et al. 2016). Furthermore, the data indicates that an envisioned ‘target’ OI, which is too distant from the current OI, can cause resistance within a company and jeopardize the DT as a whole. Therefore, it is upon the company to find an optimal “identity gap” (Reger et al. 1994) and align it with its DT strategy. Third, our study provides useful insights into DT projects of SMEs, especially with a focus on family-owned Mittelstand firms (Soluk and Kammerlander 2021). Thereby, we contribute to research with our genuine data that can be used to assess and classify DT strategies in organizations.

From a practitioner’s point of view, our study provides helpful insights highlighting the confirmed relationship between DT and OI. Especially managers responsible for the DT in SMEs should assess the current OI in their organization and the goal of the DT before they decide on a strategy. In this course, our empirical assessment of the archetype framework helps practitioners anticipate the implications of DT to prevent a failure of such a process. Hence, our study can directly influence management decisions by providing measures that enable decision makers to anticipate the effects of their DT strategy. However, it has to be mentioned that from our study it is not possible to derive a general desired ‘ideal’ archetype in the course of DT, as the way and direction as well as a successful transition of DT and OI both depend on the specific characteristics of an SME.

Our study also bears some limitations, which, however, provide anchor points for further research: First, due to the missing empirical body of knowledge about the relationship between DT and OI, we decided for a single in-depth case study to explore and confirm the applicability of the conceptual framework and to surface the underlying mechanisms leading to different archetypes. Hence, comparative case studies with other SMEs would be a suitable way to explore how such mechanisms operate in different contexts and to further refine our understanding of the (inter)dependency of DT and OI change. Second, as outlined in the

theoretical foundation, we followed a qualitative definition of SMEs to ensure the relevance of our findings for different international and organizational settings. However, the investigated case of ENGINEERING-Co is admittedly at an intermediary stage towards a large company. Therefore, it would again be recommendable to conduct further studies with other SMEs of different organizational sizes to understand which mechanisms dominate in different settings, leading to respective outcomes. Third, due to this focus on SMEs, the applicability of our findings has to be proven for organizations of other sizes in general. However, we argue from a sociological perspective that all types of enterprises do have an OI, which fundamentally shapes organizational practice and will be threatened by DT.

Overall, our study provides first empirical insights that enrich the current prominent discussion about the relationship between DT and OI, especially in the setting of SMEs. By utilizing the case of a German engineering company, we confirm that different DT manifestations lead to different types of OI change. Thereby, we answer our research question that addresses the relationship of DT and OI by showing that within the same SME, two different phases of DT led to different ways of OI change. Following a critical realist approach, our focus was on identifying underlying mechanisms in terms of (re)negotiation processes that lead to different OI changes that should be transferable to all organizations facing DT. We hope that our study incentivizes further research in this area.

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