Adaptive Digital Leadership Approaches for Self-engagement to Overcome Digital Transformation Gaps

Andrea Alec Simonek, Denis Imhof and Stella Gatziu Grivas

University of Applied Sciences and Arts Northwestern Switzerland FHNW, School of Business, Institute for Information Systems, 4600 Olten, Switzerland

andrea.alec.simonek@gmail.com
denis.imhof@fhnw.ch
stella.gatziugrivas@fhnw.ch

Abstract: Digital transformation, forced by a rapidly changing environment and the increasing speed of technological advancements, enables various valuable opportunities in the business context, like increased efficiency, lower costs, and thus enhanced competitiveness, and manifold, complex challenges, like fast-changing customer expectations, increasing job demands, new value creation structures, and disruptive competition from outside the traditional industry boundaries. This often leads to business process reengineering and urges the strategic realignment of management and leadership styles based on competitive positions and corporate goals. In digital transformation, value impedance defines resistances encountered when integrating new digital technologies and processes into existing systems and workflows. Similarly, digital transformation gaps such as the business model gap are discrepancies preventing organizations from fully exploiting benefits and overcoming the challenges of digital transformation. The connection of digital transformation gaps and value impedance is recommended to avoid conflicts when facing digital transformation. However, as many organizations face difficulties with that alignment, this paper introduces the topic of digital transformation gaps, specifically the business model gap, and discusses its bridging with digital leadership aspects regarding self-engagement. Self-engagement enhances employee motivation, innovative work behaviors, performance, and a positive attitude toward change. This research thus answers the following research question: "*what digital leadership factors contribute to the development of self-engagement of employees in organizations to bridge the business model gap in digital transformation?*" This qualitative research is based on the Design Science Research method and elaborates four matrices with four strategic options each to enhance the self-engagement of employees, based on validated questionnaire items from the existing literature, and iteratively evaluated and further developed through semi-structured interviews with domain experts. Consequently, these four matrices build the basis for bridges to overcome the business model gap in digital transformation. Further research is suggested, on the one hand, to validate the proposed strategic options quantitatively and, on the other hand, to extend the approach with more strategic options also for other focus areas.

Keywords: Digital Leadership, Digital Strategy, Digital Transformation Gaps, Business Model Gap, Self-engagement

1. Introduction

According to Stana et al. (2018), leadership in the business context can be categorized into two main categories. On the one hand, employee leadership focuses on enhancing connections between superiors and subordinates and is concerned with individual employee monitoring, evaluation, adaptation, intervention, collaboration, training, communication, integration, and empowerment. On the other hand, the organization's leadership concentrates on the general business goals and corporate culture. Digital transformation impacts both categories and poses challenging new opportunities and risks. Petry (2018) explains that challenges in leadership are caused by changes in the VUCA environment, which stands for volatility, uncertainty, complexity, and ambiguity, and denotes a digital economy in which planning is complicated yet essential for successful competition. Kane et al. (2019) find that a symbiotic mix of traditional and digital leadership principles would best suit organizations to face these challenges. Yet, Khaw et al. (2022) revealed that a common problem for many organizations is effectively integrating digital leadership approaches into their existing leadership and aligning them with individual employee needs and corporate strategy. Hence, transformation gaps would evolve due to insufficient leadership structures, leading to inappropriately addressing these issues (Pundziene et al. 2022). Also, Imhof and Gatziu Grivas (2022) discussed the necessity of a holistic approach to digital leadership, taking place on several organizational levels, such as the individual (self-)level, employee level, organizational level, and strategic level, thus also recognizing the importance of adequate digital leadership on the individual level, as a basis for the other levels. Thus, self-leadership can be considered an essential concept for digital leadership (Wagner, 2018). Building on this discussion, this article focuses on the self-leadership aspect of self-engagement since self-engagement is a prerequisite for constant learning, initiating and driving change and innovation, and being a role model for others (Hasenbein, 2020). Individual self-engagement in digital leadership is thus critical for the success of digital transformation, as it is essential for adaptation, innovation, growth, and competitiveness. By aiming to answer the research question, "*what digital leadership factors contribute to the*

development of self-engagement of employees in organizations to bridge the business model gap in digital transformation?" we recognize in this article specific leadership behaviors and strategies needed to navigate digital transformation challenges, thus providing a roadmap for organizational leaders to follow in their digital initiatives. The remainder of this article is structured as follows: Section 2 reviews the current state of the literature. Section 3 presents the methods used to conduct this research. Section 4 discusses the proposed framework for aligning transformation gaps and bridges. Section 5 concludes this article and sheds light on avenues for future research.

2. Literature Review

The literature review starts by discussing digital transformation's relevance and challenges before turning to strategies for digital transformation and the relevant aspects of digital leadership.

2.1 Challenges of Digital Transformation and the Need of Digital Transformation Strategies

According to Gatziu Grivas and Graf (2020), the relevancy of digital transformation is justified by the organizational need to adapt to shifting consumer preferences and technological advancements, which also entails altering business strategies. Consequently, a well-managed digital transformation streamlines processes, boosts productivity, and improves customer experience. This so-called digital upscaling of operations enhances an organization's competitiveness in the digital age, resulting in sustainable growth. Vural and Koyuncu (2021) elaborate that every transformation poses challenges, starting in the early stages with inadequate management mentality or when internal opposition impedes development due to a lack of dynamism, aversion to change, and poor communication. Another significant hurdle, according to Teichert (2019), is the so-called resource scarcity. Small and medium-sized organizations (SMEs) often face budget constraints, so-called monetary scarcity, that impede their capacity to obtain essential digital tools. Such restrictions often lead to insufficient IT infrastructure investments, competitive disadvantages, and security issues. In this context, Mijwil (2023) declared that many SMEs lack the resources and skills to appropriately safeguard their digital assets and customer data. Finally, as inter-organizational collaboration is a prerequisite for effective digital transformation, Camarinha-Matos et al. (2019) recommend forming strategic alliances with technology suppliers, industry groups, and other relevant stakeholders as sharing information, pooling resources, and collaboratively solving shared difficulties minimize these challenges.

Vial (2019) elaborates that disruptions threaten organizations that cannot transform their strategies fast enough to remain competitive besides the game-changing opportunities coming from digital technologies. Consequently, there is a need for a strategic response to such digital disruptions. As this response can happen by adopting different strategies, it is essential to align the respective strategies (Henderson and Venkatraman, 1993). For example, while the digital business strategy focuses more on using technology to improve operations and revenue creation, the digital transformation strategies comprise more complex and extensive organizational shifts that entail integrating digital technology to create fundamental changes in corporate culture and procedures (Matt et al. 2015). Digital business strategies and digital transformation strategies are distinct and have differing scopes and objectives. Digital business strategy primarily targets operational enhancements and revenue generation, while digital transformation strategies encompass broader organizational changes involving cultural shifts and procedural overhauls. The development and execution of digital transformation strategies require adopting adequate leadership capabilities and processes.

2.2 Digital Leadership and the Focus on Self-engagement

According to Stana et al. (2018), when adapting organizational leadership to digital transformation concepts, the primary objective would be to find new methods and innovative solutions to make the leadership processes more capable and efficient. In this regard, the literature discusses digital leadership as a capability for successful digital transformation (e.g., El Sawy et al. 2016; Brunner et al. 2023; Fitzgerald et al. 2014). According to El Sawy et al. (2016), digital leadership is defined as "doing the right things for the strategic success of digitalization for the enterprise and its business ecosystem." In this context, Bolte et al. (2018) distinguished between two main groups for digital leadership. First, so-called employee leadership fosters an atmosphere where people at all organizational levels are empowered to take the initiative, offer ideas, and work together productively to cultivate a collaborative culture of shared responsibility, motivation, and engagement. Second, the so-called

organization leadership concentrates on a broader area, including aligning leadership styles with the overall corporate goals and culture to gain strategic advantages and promote competitiveness. Imhof and Gatziu Grivas (2022) similarly delineate digital leadership but obtain a more holistic view by adding a third and a fourth dimension, conceptualizing digital leadership with the four dimensions of organizational, employee, self, and strategic leadership. The self-leadership aspects of self-engagement are considered focal topics in this paper as they are crucial for employees' commitment to the digital strategy and for aligning leadership practices with today's organizational requirements.

Generally, self-engagement can be described as an individual's energy and commitment when taking on a new challenge and the ability to inspire and engage others (Hasenbein, 2020). Transferred to the context of digital leadership, this means the active and continuous development and improvement of an individual's digital leadership skills and competencies. On the one hand, for an individual employee level, a well-known example is an employee's engagement in self-directed learning or attendance in training programs. On the other hand, Wenger and Snyder (2000) explained that in an organizational business context, the Community of Practice (COP) is gaining importance in the digital business world to improve knowledge management and maintain competitiveness. The most influential two are the so-called helping communities, which aim to solve daily work problems quickly, and the so-called best practice communities, which focus on sharing and debating good practices to convert them into best practices. Consequently, even if there is resistance to change and the need for comprehensive education and sensitization, the digital leadership factor of self-engagement is a prerequisite for a healthy digital business culture and a successful digital transformation, thus the above-stated research question.

2.3 Digital Transformation Gaps and Bridges

El-Telbany et al. (2020) explain that digital transformation gaps are discrepancies preventing organizations from fully exploiting benefits, jeopardizing a successful digital transformation. Our work, inspired by Pundziene et al. (2022), elaborates on how the previously explained digital leadership aspects can be matched to a digital transformation gap to build bridges to overcome these challenges. To elucidate the construction of possible bridges to overcome digital transformation gaps, one must initially comprehend the intricacies of these gaps themselves. Accordingly, this section summarizes the gaps and then transfers to the bridges. According to Stana et al. (2018), effective organizational digital transformation necessitates managing digital transformation gaps. Derived from the declaration of importance from Li et al. (2016) that a successful alignment between business strategy and digital technology fosters longevity and growth, the business model gap describes the inadequate alignment of core strategies with digital advancements. Additionally, Prebanić and Vukomanović (2021) also include the topic of insufficient stakeholder involvement in the business model gap due to a lack of understanding of the diverse business and digital needs and perspectives of key stakeholders, leading to a misalignment between business strategies, stakeholder expectations, and digital advancements. Consequently, as promoting self-engagement fosters a deeper understanding of the various organizational and stakeholder needs, it facilitates adapting corporate strategies to digital progress and developing innovative, valuable business models. Therefore, it underscores self-engagement's importance in minimizing, preventing, and bridging the business model gap during the digital transformation.

2.4 Research Gap and Contribution of the Paper

The dynamic area of digital transformation includes various benefits but also presents organizations with critical challenges like cultural resistance or data security concerns. The literature review discusses self-engagement and aligns it with the business model gap in digital transformation and respective adaptive bridges. These bridges should enable organizations to quickly adapt to a changing environment and effectively address digital transformation issues. The literature review did not offer concrete recommendations for actions, measures, or capabilities to achieve bridging outcomes. This observation is in line with Khaw et al. (2022), who elaborated that a significant research gap exists concerning the concrete digital leadership elements and capabilities required in the digital age, even though digital leadership has been recognized as a relevant capability for organizational performance and competitiveness for digital transformation (Brunner et al. 2023; Fitzgerald et al. 2014). De Araujo et al. (2021) conclude that such gaps in the literature and the knowledge of organizational decision-makers lead to difficulties in adapting their current leadership approaches to the fast-changing digital transformation. Consequently, this paper aims to contribute to the body of knowledge by elaborating concrete recommendations for actions for digital leadership capabilities in self-engagement by answering the above research question.

3.   Research Method

The authors followed the Design Science Research (DSR) method (Hevner et al. 2004). DSR is a suitable method for the iterative development of an artifact, such as a model or framework. It emphasizes the integration of the relevant environment and knowledge to ensure relevance and rigor (Hevner et al. 2004). The authors first reviewed the literature to derive gaps and bridges for digital transformation in connection with the digital leadership factor of self-engagement. Second, a measurement catalog has been developed based on existing literature for dealing with gaps and bridges. Third, the measurement catalog has been transformed into four matrices with four strategic options each. Fourth, the results have been evaluated by three domain experts. The following sections describe the methods in more detail.

3.1   Collection and Analysis of the Literature

To structure the literature review and to ensure reliability, verifiability, and reproducibility (Booth et al., 2012), the authors followed the suggestions by Webster and Watson (2002) and created a literature concept matrix. In the literature concept matrix, concepts of interest derived from the research question are matched with relevant literature obtained from academic databases, such as Scopus focusing on the keywords "self?engagement", "employee*", "business model", "organi?ation*" and "digital transformation". To ensure the quality of the sources, the authors focused on peer-reviewed academic journals and conferences and sections only from highly cited textbooks. To analyze the identified literature sources, the authors followed Wu and Yuan (2023) and highlighted text passages with colored codes for relevant topics and sub-topics during reading. Guided by Trochim and De Vaus' (2001) 5 C framework (cite, compare, contrast, critique, and connect), the authors summarized and organized the results as gaps and bridges for digital transformation as discussed in Section 2.

3.2   Creation and Evaluation of the Tool

To handle the identified gaps and bridges, a catalog consisting of Likert scale questions has been developed based on existing and validated measurements or scales from the literature. The measurement catalog was then transformed into four matrices with four strategic options each, leading to 16 strategic actions. Section 4 provides a more detailed overview of the measurement catalog, matrices, and strategic actions.

Three semi-structured expert interviews were conducted to evaluate the results. The expert group consisted of a managing partner of a medium-sized German leadership and management consulting company, a managing partner of a small-sized Swiss digital transformation consultancy, and a seasoned expert in human resources management. Semi-structured expert interviews are an appropriate method in qualitative research inquiries for obtaining viewpoints and opinions from professionals (Gill et al. 2018) by leaving them enough space to express themselves (Dick 2000) and to ask follow-up questions if needed (Steger 2003). For the interview preparation, conduct, and analysis, the authors followed Döring et al. (2016). The interviews were held via MS Teams and automatically transcribed by MS Teams with the interviewees' consent. The interviews were then analyzed and coded using MAXQDA software (MAXQDA 2023). Section 5 discusses the results of the expert interviews.

3.3   From Theory to Practice: A Tool for Assessing and Enhancing Self-Engagement

The findings from the literature review and the theoretical concepts developed during this work were finally transformed into practical products that can be used during a consulting process to measure digital leadership within organizations and to improve it tailored to the organization's internal and industry needs. More precisely, the result includes a measurement catalog to determine an organization's maturity level regarding self-engagement and matrices that provide four strategic options based on the measurement results.

3.4   Overview of the Self-engagement Construct

The 16 strategic options presented in this chapter serve as a visual representation facilitating an understanding of relationships and dependencies, especially among the measurement catalog and the matrices. Moreover, they serve as a keyword list for future digital transformation and leadership research. The digital leadership factor of self-engagement was examined and matched with the business model gap in digital transformation. Four clusters were formed, resulting in four categories reused in the measurement catalog with Likert scale questions from the literature, as visualized in Figure 2 below. Moreover, these clusters are also used for the matrices, containing 16 strategic actions to improve self-engagement within organizations.

Figure 1 below shows the four clusters, whereby the cluster names were later used as titles for the strategic options matrices.
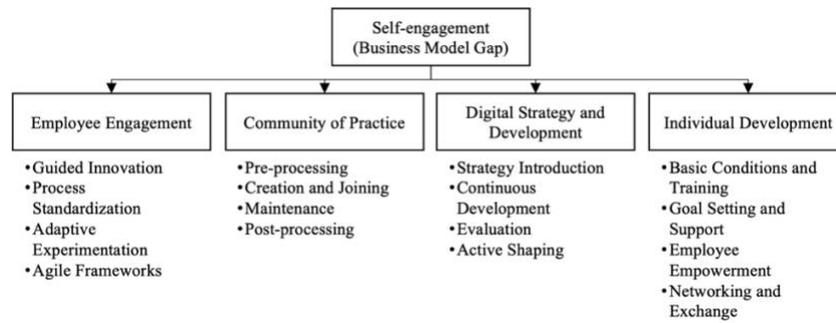

Figure 1: Overview of the factor self-engagement, the four clusters with strategic options

3.5 Discussion of the Strategic Options Matrices

The following section presents the four matrices with four strategic options each. As the maturity level of self-engagement cannot be determined using a single KPI (Key Performance Indicator), Likert scale items from extant literature were used, which means a series of statements or questions designed to measure respondents' attitudes or opinions by asking them to indicate their level of agreement or disagreement on a scale. More concretely, four clusters were built to measure the maturity level. Then, five to eight Likert scale questions were formulated for all four clusters to measure satisfaction. Finally, the strategic options provided on the matrices can be selected to suit the corresponding maturity level. The answer options to the Likert scale questions were later divided into two answer areas of importance and effectiveness. Examples of the questions from the literature are "How satisfied are you with the time provided to you during your daily work to learn new activities and tools to enhance your digital knowledge and skills?" or "How satisfied are you with the number of goals that you can self-impose?"

3.6 Strategic Options Matrices for Self-engagement

Figure 2 shows the matrix for the strategic options for enhancing employee engagement.
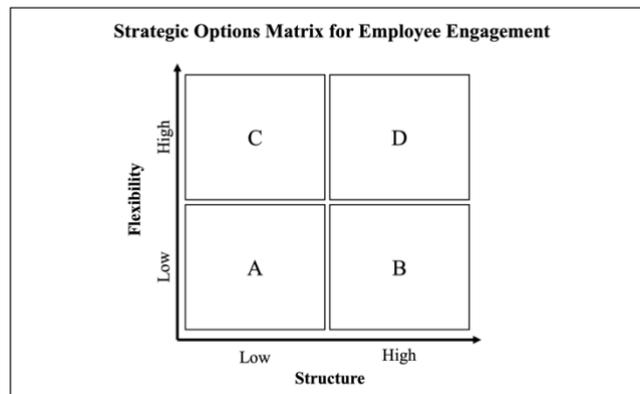

Figure 2: Four strategic options for employee engagement

The strategic options in Figure 2 allow organizations to explore different combinations of flexibility and structure, enabling them to align their strategies with their desired levels of adaptability and organizational structure. In more detail, the matrix depicts low or high flexibility and low or high structure. The single options are as follows: *A-Guided innovation:* Define structured processes and workflows to ensure consistency and effectiveness while offering training and development programs to support flexibility and innovation in a self-engaged way. *B-Process standardization:* Define clear guidelines, best practices, workflows, and templates, and monitor compliance with established procedures to maintain high structure and ensure consistency, efficiency, and scalability. *C-Adaptive experimentation:* Encourage individuals to explore innovative approaches and support their experimentation with new ideas by fostering a culture that values learning from failures, creativity, and adaptability. *D-Agile frameworks:* Implement agile methodologies and frameworks (e.g., Scrum, Kanban) to

enhance flexibility while maintaining structure and defining clear roles and responsibilities to support decision-making.

Figure 3 shows the matrix for the strategic options for the community of practice (CoP).
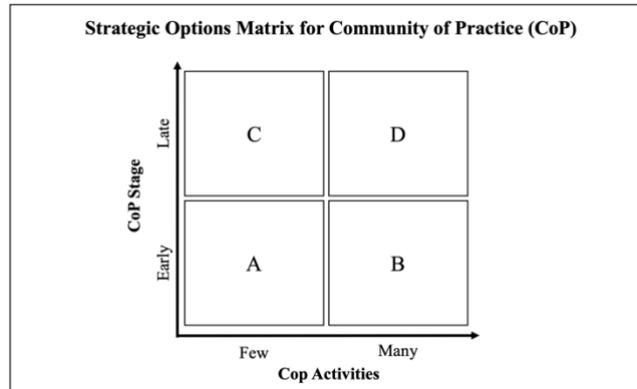

Figure 3: Four strategic options for community of practice

The strategic options in Figure 3 focus on the differentiation concerning the community of practice maturity level and the corresponding need for actions, giving companies an indication of where and what actions are needed to strengthen self-engagement in the community of practice. In more detail, the matrix depicts an early or late community of practice stage and whether basic or advanced community of practice activities occur. The single options are as follows: *A-Pre-processing:* Denotes the preliminary stage of development and introduction of the concept of community of practice. It involves creating awareness and understanding of the community of practice advantages within the organization from the top down and providing infrastructure, financial resources, and digital tools as fundamental enablers. *B-Creation and Joining:* It is still in the early stages, but employees actively participate in advanced activities in communities of practice. Support the community of practice creation process by encouraging employees to create and join based on their skills and interests. Enable cross-departmental, cross-functional, and location-independent interaction. *C-Maintenance:* Maintenance is needed at the late COP stage, but the activities are still fundamental. Encouragement of self-reflection and discussion of improvement potentials regarding the community of practice and maintaining the needed infrastructure and tools to ensure high quality. *D-Post-processing:* Collecting and disseminating COP knowledge is ongoing but usually starts late and uses advanced COP activities. They facilitate the storage and dissemination of community of practice insights (e.g., best practices) within the organization by introducing a knowledge management strategy and providing the necessary tools.

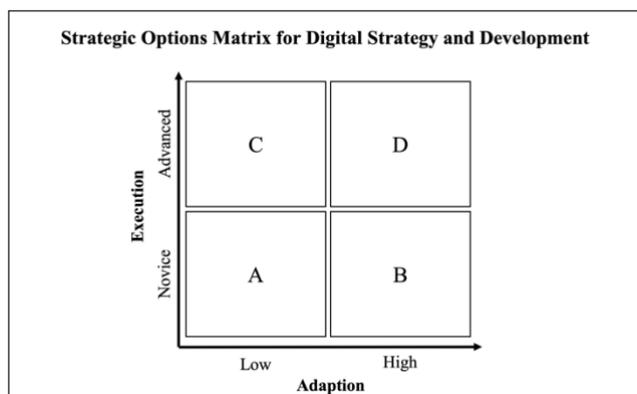Figure 4 shows the matrix for the strategic options for digital strategy and development.

Figure 4: Four strategic options for digital strategy and development

The strategic options in Figure 4 can be seen as an iteration, and depending on how far an organization is in the digital strategy development process, different strategic options are recommended to drive sustainable digital transformation. In more detail, the matrix depicts a novice or advanced execution stage and low or high adaption. The single options are as follows: *A-Strategy introduction:* To lay the foundation, develop a digital strategy that aligns with the overall corporate strategy and leverages digital technologies to achieve corporate

goals, involving a digital vision and mission. *B-Continuous development:* Continuously develop the digital strategy and adapt it to the changed business environment and needs as a proactive approach to ensure its relevance and effectiveness over time. *C-Evaluation:* Evaluate the effectiveness and impact of the digital strategy (e.g., by collecting stakeholder feedback) to make necessary adjustments to ensure a dynamic and responsive strategy over time. *D-Active shaping:* Monitor industry trends and analyze potential benefits of emerging technologies to proactively shape and influence the digital strategy to ensure its alignment with evolving needs and goals.

Figure 5 shows the matrix for the strategic options for individual development.
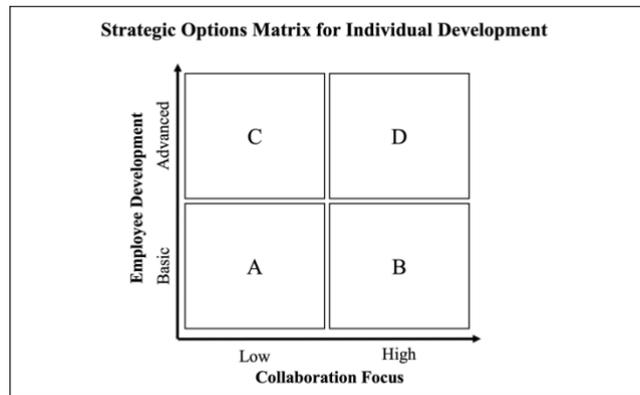

Figure 5: Four strategic options for individual development

According to the level of their digital leadership, these different strategic options in Figure 5 promote self-engagement and support digital leadership development to drive innovation and effectively navigate digital transformation. In more detail, the matrix depicts basic or advanced employee development and low or high collaboration focus. The single options are as follows: *A-Basic conditions and training:* Allocate time and provide training for continuous learning so that employees can develop and improve their digital knowledge, abilities, and leadership approaches in a self-engaged way. *B-Goal setting and support:* Allowing employees to set individual digital skill objectives and providing collaborative exchange and support to reach them is the first step of achieving cross-departmental and corporate goals. *C-Employee empowerment:* Create a work environment that encourages autonomy and empowers employees to take ownership of their digital journey, contributing to the overall digital transformation within organizations. *D-Networking and exchange:* By creating digital communities (e.g., CoP), employees can exchange ideas and innovative approaches in a self-engaged manner that fosters a digital and innovative culture.

3.7 Evaluation Through Expert Interviews

Three semi-structured interviews with domain experts were conducted to evaluate the results and gain valuable insights for future improvements or alternative methods. The interviews were conducted at different stages to enable an iterative development process. The first interview with a managing partner of a small-sized Swiss digital transformation consultancy focused on discussing the matrix arrangement of the strategic options. The interview analysis highlighted that the strategic options should enable an iterative approach and be stated in ascending order. This should support companies with relatively low maturity levels to orient and iterate towards higher maturity levels. The second interview with a human resources management expert aimed at a general assessment and focused on collecting relevant leadership and human resources information to improve the matrices with the provided strategic options. The discussion highlighted that even though digital leadership is becoming increasingly important for organizations, it should be combined with traditional leadership approaches, which remain relevant, to create a hybrid leadership approach. For self-engagement to be effective, developing a digital strategy and a digital culture is required which also motivates employees to work in the digital environment and enables them to better deal with challenges. The interview revealed that the strategic options are likely to support organizations in the digital transformation process upon more in-depth empirical validation and are rather suitable for small and medium-sized enterprises than for large enterprises. The third interview with a managing partner from a medium-sized German management and leadership consulting company focused on the interviewee's opinion as an experienced consultant regarding the usability and validity of the measurement catalog and the matrices. The interview analysis revealed support for self-engagement as a crucial aspect of effective digital leadership since a more self-engaged workforce inherits the potential for increased performance and, thus, for creating a competitive advantage for the firm. Also, the third interviewee

found the measurement catalog and the strategic options relevant for companies to help them determine their maturity level. Yet, the level of detail of the measurement catalog could increase to obtain more detailed answers and thus enable a more tailored maturity analysis. The interview led to valuable feedback for improving measurement methodologies and strategic presentation. Suggestions included refining Likert scale questions for clarity and organizing strategic options in ascending order for more straightforward navigation. Meanwhile, the narrative underscores the significance of digital leadership in modern economies, emphasizing the need for leaders to embrace new technologies and adapt swiftly. It also highlights the importance of a hybrid leadership approach, integrating traditional principles with digital strategies. Moreover, the interview excerpts stress essential skills for digital leaders, such as self-engagement and the ability to manage technological change effectively, particularly pertinent for small and medium-sized enterprises facing resource constraints and the pressure to compete with larger counterparts in the digital realm. In conclusion, the expert interviews provided valuable insights for the further improvement of the matrices. All experts agreed and emphasized how crucial digital leadership is to successfully manage the challenges of today's fast-changing business environment. Recognizing issues like change management and technical speed also highlights the variety of responsibilities expected of digital leaders and poses further research possibilities. The constructive criticism and improvement recommendations have further enriched the analysis by indicating scope adjustments for a broader range of organizational sizes. Moreover, all interview partners have called for practical validation to assess the product's practical application, which will be done in the next phase. Finally, all interview partners confirmed that the products are valid and usable for consulting.

4. Conclusion

In conclusion, based on the existing literature, this article discussed relevant digital leadership aspects, namely the self-leadership aspect of self-engagement, to overcome the business model gap in digital transformation. The article identified a lack of concrete measures and capabilities in the existing literature to achieve this goal. It thus contributes to calls from other authors (e.g., Khaw et al., 2022) who find that concrete and established digital leadership measures and capabilities required in the digital age are still subject to research. Based on existing and validated scales, a measures catalog has been compiled and transformed into four matrices for self-engagement to contribute to the body of knowledge. These newly developed matrices and strategic options offer a concrete approach beyond previous theoretical models and provide practical application examples. Three semi-structured interviews were conducted with two managing partners from two Germany- and Switzerland-based consulting firms and a human resources management expert to iteratively develop matrices with four strategic options, each evaluating the results and obtaining insights for future improvements. It can be concluded that organizations must focus on collaboration and communication tactics that successfully align employees with business goals, as this is critical to fostering a resilient and adaptable digital leadership approach in the evolving business landscape. Digital leadership and digital workflows combined with improved communication often relieve leaders from time-consuming, repetitive tasks, enabling them to focus more on complex, value-adding tasks. However, caution is advised against organizational myopia, where an excessive focus on technology may limit foresight, reducing awareness of potential impacts and opportunities. Striking a balance between technological advancement and holistic organizational understanding remains pivotal for effective and sustainable digital leadership.

4.1 Limitations and Future Research

The nature of this exploratory research poses some limitations regarding the generalizability of the results. Furthermore, other relevant literature sources might have been overlooked due to the literature search's applied quality and inclusion criteria. Further research should aim to refine and extend the current knowledge and literature to advance the academic discourse on digital leadership and digital transformation qualitatively and quantitatively assess the described relationships. It is worthwhile to expand on the theoretical concepts of the discussed results. Still, practical applicability validation is imperative and can be done by conducting case studies, surveys, or interviews in a corporate setting. To achieve comparable and meaningful results, such studies should include different industries and company sizes to identify as many further gaps in digital transformation as possible. The findings should be compared and matched with additional digital leadership aspects to build bridges that complement the one presented in this article. Another field of research that would complement the area of digital leadership would be the analysis of the integration of emerging technologies. This would involve analyzing the integration challenges and opportunities associated with new technologies such as artificial intelligence, blockchain, big data, and the Internet of Things. It should be validated in practice to

determine how organizations can adopt and adapt these technologies according to their core competencies to formulate challenges, benefits, and recommendations. Finally, these complementary insights could create a framework that facilitates digital leadership for organizational digital transformation.

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