

RESEARCH IN PROGRESS

# ORGANIZATIONS IN DIGITAL TRANSFORMATION (ODT): A LITERATURE REVIEW ON THE IMPLICATIONS FOR MALLEABLE ORGANIZATION AND HRM

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The digital age has brought significant changes in the way organizations operate and compete. As a result of rapid technology development, many organizations are undergoing a digital transformation to stay relevant and competitive in the marketplace. This literature review aims to find future research topics by providing an overview of the current state of research on organizations in digital transformation (ODT), especially on malleable organization design and HRM aspects. The article begins by defining digital transformation (DT), and then examines how organizations change during DT, before delving into the perspectives of malleable organization design and HRM. Finally, it concludes by identifying gaps in the literature and suggesting a research agenda for future. Overall, organizational factors that need more investigation are highlighted to tackle complexities of ODT for further research.

**Keywords:**

digital transformation, organizations, malleable organization, HRM, Bled eConference



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## 1 Introduction

In recent years, rapid and continuous advancements in technologies lead to systemic changes across governmental, economic, social and organizational domains (Ivaldi et al., 2022). Organizations have been facing increasing pressure to digitally transform to stay competitive and meet the ever-evolving needs of their stakeholders. The way organizations operate and interact with their customers, partners, and employees has therefore drastically changed. Within digital transformation (DT), emphasis is placed on human-centricity and sustainability, as finding balance between technology and humans is crucial, and promoting sustainable development goals such as socio-environmental sustainability and resilience is the priority (Ghobakhloo et al., 2022; Reiman et al., 2021; Zizic et al., 2022).

The goal of this work-in-progress paper is to develop a future research agenda on the topics of human-centricity and sustainability of organizations in DT by reviewing the literature.

## 2 Theoretical background

Although DT is a central topic in many recent studies, there is much conceptual confusion about what exactly it entails. Therefore, it is essential to clearly define DT before addressing the challenges in relation to human-centricity and sustainability it poses to organizations. The theoretical background of this article is based on two systematic literature reviews: the definition of DT developed by Gong and Ribiere (2021) as a starting point, followed by an overview of changes in organizations in digital transformation (ODT) described by (Hanelt et al., 2021).

DT requires new ways of working and thinking, such as new strategies, structures, processes, operations and organizational culture. Successful DT leads to strategic benefits for organizations, unlike digitalization and digitization which mainly impact operational work within the organization (Gong & Ribiere, 2021). DT can be defined as:

“A fundamental change process, enabled by the innovative use of digital technologies accompanied by the strategic leverage of key resources and capabilities, aiming to radically improve an entity\* and redefine its value proposition for its stakeholders. (\*An entity could be: an organization, a business network, an industry, or society.)” (Gong & Ribiere, 2021, p.12)

DT leads to developments in two major areas for organizations (Hanelt et al., 2021): malleable organizational designs (internally) and digital business ecosystems (externally). A malleable organizational design is one that adapts easily and quickly to change through digital technologies and agile structures. A digital business ecosystem has rapidly changed value propositions which cause participants, positions, and roles of the organization to constantly evolve in a turbulent environment.

Because of the progression and complexity of DT established theoretical models do not fit anymore with the new empirical reality (Hanelt et al., 2021), a broader view on organizational changes and innovation associated with ODT is required. This study adds to developing that broader view by addressing the challenges that DT brings in relation to human-centricity in organizations and sustainability, by specifically focusing on human resource management (HRM) and a malleable organization for ODT.

### **3 Research method**

A literature review is conducted using the PRISMA 2020 approach (Page et al., 2021) to uncover the topics of ODT. The PRISMA 27-item checklist was applied for a transparent and thorough manner. The literature search follows screening stages with defined criteria, which is visualized in a flow diagram. See Figure 1 with explanations of screening stages and criteria in the Appendix. The search strategy is an advanced search action in Web of Science database with a final inclusion of 40 articles for this article after screening. As the article presents work in progress, it only includes the current literature search on malleable organization and HRM for ODT.

## 4 Preliminary results

From selected literature, some preliminary results are found regarding malleable organization and HRM for ODT that help formulating a future research agenda.

### A malleable organization for ODT

A stable digital malleable organization is expected to be established where stakeholders connect online and interact digitally in dynamics that create value for all (Zizic et al., 2022). Investigating a digital malleable organization is a necessary step in understanding how digital technologies can be leveraged to benefit society as a whole. A malleable organization requires a corresponding strategy, business model and organizational culture, and a proper alignment of them (González-Díaz et al., 2021). Our literature review on the malleable organization starts by examining the adoption of organizational agility as the latest approach for operating and managing ODT. Subsequently, the review explores sustainable business models, as well as people and culture within ODT.

A malleable organization requires a new approach for operation and management with *organizational agility* as the core strategy. (Reuschl et al., 2022) named it as *organizational elasticity*, which means organizations can take quick decisive actions for changes and be flexible to either return to old or adapt to new routines after a crisis. (Hanelt et al., 2021) called this *malleable organizational designs*, as previously explained. *Innovation* is essential for agility and it enables organizations to stay sustainable, resilient and to create long-term value when dealing with the digital change and disruption (Di Vaio et al., 2021). Simultaneously with innovation, understanding and applying *change management* is required for successful ODT (Florek-Paszkowska et al., 2021). Change management - the process of planning, implementing, and monitoring changes in organizations and ensure that they are successful and sustainable - is needed because innovation often requires changes to an organization's processes, systems, and culture. This involves regularly reassessing various aspects of the organization, reflecting on their efficacy, evaluating their impact, and taking appropriate action. In the process of innovating and applying change management, knowledge is a key which can be not only created but also shared via digital advancement, for example the use of big data to predict the market so that the organization can respond accordingly (Di Vaio et al., 2021), or constantly

involving all relevant stakeholders at all stages for *knowledge co-creation* and *sharing* via a liquid network (Borchardt et al., 2022; Schiavone et al., 2022).

Besides organizational agility as a core strategy, both a sustainable business model and a supportive organizational culture are critical components that must be consistent and in sync with each other. In general, a dynamic, adaptive business model is suggested for a sustainable and resilient ODT (Florek-Paszowska et al., 2021), that not only sustains current core business, but also invest in new emerging external opportunities (Li, 2020). Specifically (Gruenbichler et al., 2021) and (Andersen et al., 2022) revealed some case studies of dynamic and adaptive business models with empirical data in SMEs. (Gruenbichler et al., 2021) investigated business performance management (BPM) which serves as a measurement tool to achieve business objectives successfully while enhancing the competitiveness and sustainability of ODT. (Andersen et al., 2022) explored business model innovation (BMI), confirming that a agile and data driven nature is important for the whole business process including identifying opportunities and making decisions. Finally, it should be noted that individuals and the prevailing organizational culture are essential factors for fostering a prosperous malleable organization in DT. Innovation requires continuous re-skilling and up-skilling of both leaders and employees, and with strong commitment and engagement during disruptive DT, e.g. an agile culture (Florek-Paszowska et al., 2021). The next sections delves further into the human-centric aspect of ODT.

### **Strategic HRM for ODT**

Although DT is driven by rapid and continuous advancements in digital technologies, it depends largely on the human factor: a combination of and synergy between top-down initiatives and bottom-up acceptance and commitment determine its success (Gong & Ribiere, 2021). Therefore, multiple studies address the human-related challenges that organizations face as a result of DT. On the one hand, these challenges refer to the knowledge, skills and attitudes of employees, including lack of employees' awareness of newly available digital technologies, lack of adequate skills, and confidence caused by the disruptive DT changes. On the other hand, these challenges refer to the adaptation of HRM practices, such as talent acquisition, retainment and employees training (James et al., 2022). These challenges underline that a successful DT strategy should include a refined HRM strategy that

anticipates and responds to human-related challenges during DT (Bamel et al., 2022; Vereycken et al., 2021). The included articles show that DT requires adaptation of HRM strategy and practices aimed at the following aspects.

Firstly, strategic talent management - a systematic process of recruiting, developing and maintaining the best talents for the organization - should be (re-)designed to fit the DT context (Kuchciak & Warwas, 2021). Key elements in this (re-)design are recruitment, re- and upskilling, and redeployment. Recruitment should emphasize acquiring new talents who bring essential DT skills that are not yet sufficiently present in the organization, as a new target group to trigger change in the organization. An example of this are “digital talents”, who possess essential IT-related skills (Gilch & Sieweke, 2021). Regarding re- and upskilling, DT creates an urgent need for continuous development of employees, so that employees do not become obsolete, can co-exist, collaborate with, and benefit from new technologies, and can increase their confidence in working in digitalized workplace (Gjika & Pano, 2022; Kuchciak & Warwas, 2021; Vereycken et al., 2021). These skills include not only relevant technical skills but also non-technical, transformational skills, such as creativity, workplace learning, problem solving, conceptual thinking, entrepreneurship and resilience (Bamel et al., 2022; Kuchciak & Warwas, 2021). Re- and upskilling practices should be flexible and sustainable to respond to continuous technological developments (Piwowar-Sulej, 2021). Moreover, constant support is required during these practices, such as monitoring of employees’ skills and development needs, offering training and mentoring, and organizing work in such ways that it stimulates learning, e.g. by creating diverse and multidisciplinary teams (Kuchciak & Warwas, 2021). Redeployment - assigning employees to new, fitting, tasks - is becoming increasingly important as work can change tremendously and employees may no longer have fitting roles or tasks. Relevant practices include helping employees to plan career development paths, inform them about promotion opportunities, address job offers to diverse employees, develop work-life balance programs, and introduce well-being audits (Kuchciak & Warwas, 2021).

Secondly, HRM strategies and practices should be adapted to increase employee involvement and empowerment through job design. As new technologies take over physical, sensorial and cognitive-based tasks, many professional tasks will shift from predominantly operations-related tasks to more complex tasks such as coordination and decision-making. This is only possible when employees are granted with more

autonomy. It requires an organizational context that is characterized by a flat hierarchy, decentralized decision making, and employee empowerment (Vereycken et al., 2021). HR practices that promote employee involvement and empowerment are expected to increase employee acceptance of the changes that DT brings, stimulate employees' contribution to these changes (Vereycken et al., 2021), and facilitate employees' work-life balance and wellbeing because they experience a high degree of control over work, can adapt to changes, pick up technologies that make their work more effective and efficient, and experience fulfillment (Bamel et al., 2022).

Finally, the complexity of DT emphasizes that HR professionals need to rethink their own roles. HR professionals should increasingly act as consultative, strategic, business partners and change agents, who makes sense of trends in digital technologies and understand the consequences for the organization and its employees, understand new ways of working and how different parts of the organization will interact during and as a result of DT, and promote and support the needed organizational change (Dhanpat et al., 2020).

## **5 Conclusion and discussion**

The interdependencies and co-constitutive relationship between organizing and technology, the tensions between ways of knowing and the value laden nature of decision making in ODT call for research that effectively engages insights from multiple disciplines that coalesce in the questions that rise from the phenomenon of DT.

Malleable organizational designs and digital business ecosystems are under development for ODT, however progression and complexity of DT still requires a broader view on organizational change and innovation of DT (Hanelt et al., 2021). More research is needed to examine the design and testing of malleable organization for ODT. Specifically, further exploration is required to determine how a malleable organization can effectively facilitate open innovation by connecting stakeholders to share and co-create knowledge, and react quickly to disruptive changes with optimal solutions. Moreover, future research could further examine how malleable organizations impact traditional business models, including what are the successful factors for ODT business models and how people and culture of ODT should

respond accordingly. Furthermore, it is important to study the alignment between strategy, business model, and organizational culture, as current activities in digital transformation are being carried out at a rapid pace without taking this alignment into account (González-Díaz et al., 2021).

Although key HRM areas for adaptation are identified in the results section, in-depth insights into the content of relevant HRM strategies and practices in response to DT remains limited and fragmented (Bamel et al., 2022). How HRM strategy and practices should be refined requires more fine-grained research into the specific changes that DT brings, and how HRM should anticipate and respond to them. For instance, the implementation of advanced robotics in the manufacturing industry will require a different HR strategy than the need for data analytics to optimize processes in healthcare (Vereycken et al., 2021). Moreover, research should take different organizational contexts into consideration, as similar technology implementations may lead to different requirements for HRM strategies and practices depending on this context (Gjika & Pano, 2022). It is therefore important to conduct this fine-grained research in the near future to gain more insight into required differences as well as similarities in successful HRM strategies and practices.

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Appendix

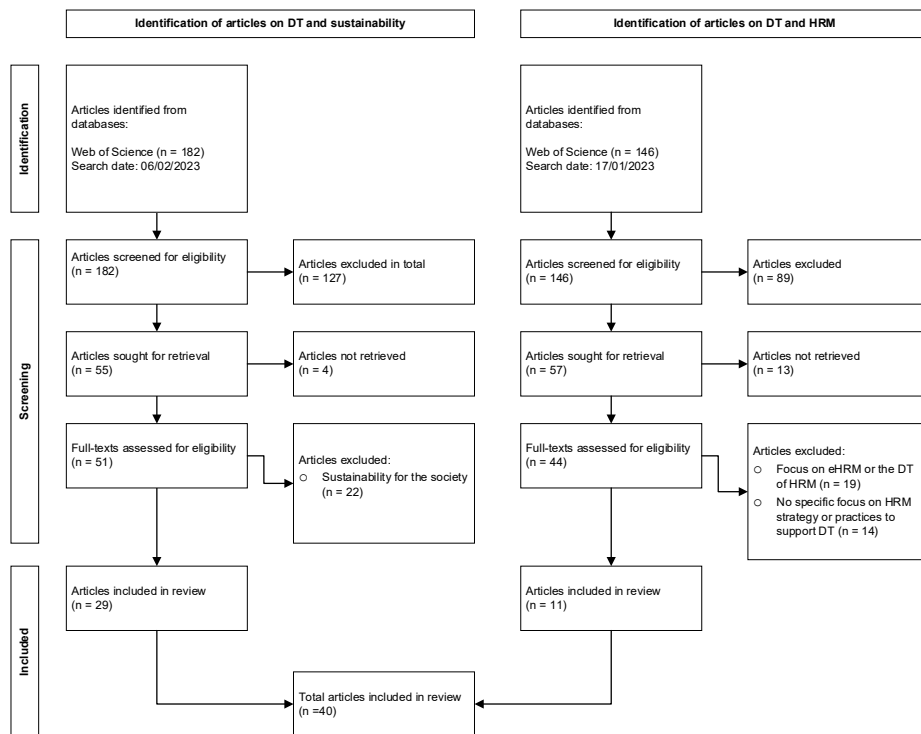


Figure 1: Adapted PRISMA 2020 flow diagram

For the search action in Web of Science multiple search terms were combined into two Boolean search operator, one for sustainability of ODT and one for HRM of ODT. This resulted in an identification of in total of 328 articles. After identification, articles were screened in two stages. In stage one, titles and abstracts of all articles were screened for the eligibility criteria mentioned below. This resulted in the exclusion of 233 articles, including articles that could not be retrieved. For each article, reasons for exclusion were provided. In stage two, the full-texts of the remaining 95 articles were checked. This resulted in a final inclusion of 40 articles from the Web of Science database.

Papers needed to meet the following eligibility criteria:

1. Be published in a peer-reviewed journal.
2. Be written in English.
3. DT and HRM: papers should focus on the (changing) role of HRM to support successful DT of organizations. Papers that focused on eHRM or on the DT of HRM itself (e.g. digital recruitment or HR analytics) are not yet included in this present article.
4. DT and sustainability: papers should not be specifically focused on one field, for example supply chain, and papers with empirical application only on specific countries are not included in this present article. In stage 2, only papers with a focus on sustainability regarding organization are included. Papers on sustainability as a societal development are excluded in this present article.