



## Research Article

# Digital Transformation in Business: Strategies and Implications for Organizational Change

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## ABSTRACT

Advanced algorithms, robotics, and analytics, among other digital technologies, are revolutionizing the dynamics of the workforce in organizations. Hence, the writers of this study have examined the consequences of emerging technology on Organizational Behavior. A significant proportion of the existing research on this topic has primarily examined the technology aspects, while neglecting the comprehensive perspective and its impact on organizational behavior. The uniqueness of this study resides in its ability to offer a comprehensive overview of the key digital technologies and assess their impact on employees and leadership. In order to achieve this objective, and considering the current relevance of the subject, the authors chose to examine the effects of digital technologies on organizational behavior. They accomplished this by conducting a thorough analysis of existing literature and organizing it according to the specific technologies and their implications. The article is divided into three sections. Firstly, the definitions of Organizational Behavior and digitalization were examined to establish a theoretical framework. This was followed by an analysis of the impacts and effects of digitalization on leadership and employees. Finally, the findings were summarized in a structured scheme.

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## 1. Introduction

In the context of digitalization, globalization, demographic shifts, and resource scarcity, it is crucial for enterprises to comprehend the consequences and repercussions linked to these major developments and to ready themselves for the future (Hanelt et al., 2021).

Advancements in technology, algorithms, interconnection, and large data storage have led to a growing digitalization of the globe. As a result, the world is becoming increasingly transparent for all individuals and groups involved (Foerster-Metz et al., 2018). Nowadays, it goes beyond mere marketing tactics to sway consumers, establishing a company's identity to retain staff, or finding ways to enhance procedures or automate manufacturing. In the present era, it is crucial to comprehend the interconnections and effects on the basic principles of organizational behavior, specifically the interaction between technology and individuals. This goes beyond just incorporating and utilizing innovative technologies and business models (Montero Guerra & Danvila-Del Valle, 2024).

Hence, due to the relevance of the subject matter, the authors opted to examine and condense the consequences and influences of digitalization on leadership and the workforce. This is done to proactively handle the required transformation, guarantee the long-term viability of companies, and uphold or expand their market position (Kraus et al., 2021; Madanchian & Taherdoost, 2022). The study commences with an examination of Organizational Behavior theory, followed by a concise overview of the technological advancements resulting from digitalization. It concludes by integrating these findings with the effects on leadership and the workforce (Verina & Titko, 2019). Within the realm of literature, one can come across elaborate explanations of the field of Organizational Behavior. However, for the specific objective of this paper, the authors will adopt DuBrin's definition, which characterizes Organizational Behavior as a methodical approach to comprehending the actions and conduct of individuals within organizations. Commencing with individuals, who serve as the most basic unit of analysis, and extending to large organizations and their interactions with the surrounding environment (Chaanoun et al., 2022). Furthermore, it is crucial to comprehend the interconnectedness of human behavior with other factors, like

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as technology, that encompass the entirety of the organization. Organizational Behavior in literature is influenced by three significant elements (Brown et al., 2014).

People, structure, and technology consistently engage with the environment both within and outside a business (Ismail et al., 2017). Fig. 1 illustrates the many components and their interplay inside an organization. The impact of technology on work environments and workflows is a significant factor in the field of Organizational Behavior science (Al-Edenat, 2023). Technological advancements can affect not only the workforce's characteristics but also businesses' organizational structure. How technology is integrated or utilized within a corporation can have an impact on the organization's internal culture and its interactions with stakeholders (Casalino et al., 2019). Moreover, the adoption of contemporary technology may lead to a progressive transformation in the workforce's makeup.

For instance, future generations who are younger, highly educated, more mobile, and technologically savvy will join companies in larger numbers than previous generations (Weber et al., 2022). This influx of new employees will lead to a transformation within organizations, potentially bringing with it a different set of values, attitudes, and concerns that

will impact the overall organizational behavior (Imran et al., 2021; Kraus et al., 2022). Fig. 2 shows the advancement of the worldwide capacity for storing information.

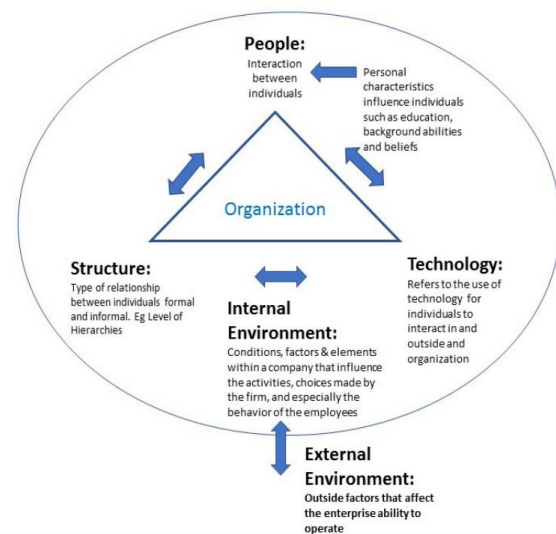


Fig. 1. Influential factors for organizational change (Vial, 2021).

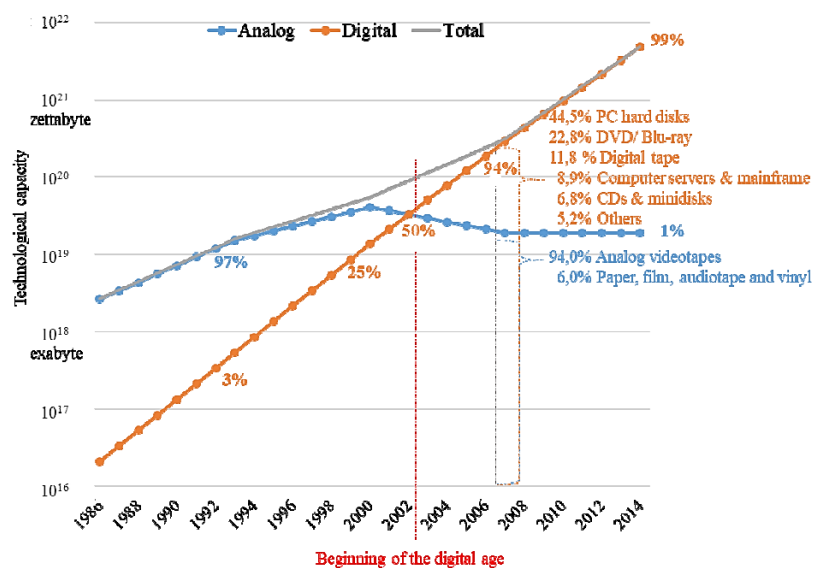


Fig. 2. Advancement of the worldwide capacity for storing information (Vial, 2021).

### 1.1. Digitalization in business and organizations

In recent decades, the process of digitalization and interconnection has caused a transition in the economy, moving it from being primarily based on physical goods to being controlled by software. Information technology has now become an essential component of both our business and society. Within this framework, commonly used terms such as digitalization, Internet of Things (IoT), big data, robots, automation, mobility, and others are omnipresent (Pousttchi et al., 2019). These topics are widely debated in social media, as well as in political and economic spheres. However, what

is the precise definition of these phrases and how are they interconnected? How do they impact our work and life environment?

The ubiquity of the phrases digitalization and digital transformation, and their clear linkage with other terms, prompted the authors to closely examine their definitions, characteristics, and impact on society and the economy. Digitization, refers to the process of converting analogue information into digital information that can be read by computers. Starting from the mid-20th century, advancements in technology such as the invention of the

transistor and microprocessor allowed for the digitization of various forms of traditional media, including pictures, paper, sound, video, and signals. This process involved converting these forms of media into binary code (ones and zeros) that could be stored in computer memory. Since the start of the 21st century, the rise of social media and social networks, along with advancements in sensor technology, has led to the collection, digitization, and sharing of additional information. This includes details about social activities and physical data such as location, temperature, force, weight, blood pressure, and stress. Currently, there is a growing trend of transforming non-digital objects into digital ones by incorporating tracking sensors to determine their location and network connections to provide real-time status updates. The data released by BMWi (2016) indicates a significant surge in digital information. In 1993, it accounted for a mere 3%, but by 2007, it had already reached 94% of the total global information (Plekhanov et al., 2022).

## 2. Impact of digitalization on modern leadership

It is crucial to comprehend the impact of digitalization on leadership practices in businesses. This is because digitization is rapidly and profoundly occurring in nearly all sectors of the economy. Various sectors such as manufacturing, financial services, customer service, health, agriculture, retail, and logistics are utilizing big data, new technologies, and solutions to propel their business growth and ensure their survival in the fiercely competitive market. These changes encompass not only the economy and work system, but also leadership management, thinking, and action. In order to facilitate this process of digital transformation, the company must transition from its conventional, hierarchical

framework to a more adaptable and decentralized organization. This new structure should prioritize team and project-based leadership to effectively adapt to the intricate and rapidly evolving digital-centric business landscape, as well as meet the growing demands of the customer-led market.

In addition, the transition from the baby boomer generation to the digital natives (Generation Y and Z) necessitates different working structures and leadership due to their distinct features and skills compared to previous generations.

The concept of new leadership, often known as digital leadership or leadership 4.0, encompasses more than just using digital media for collaboration and communication. It also entails adapting leadership tactics and procedures to the digital environment. The future leader must possess the ability to effectively employ emerging technology and solutions, swiftly adapt to and manage changes, demonstrate a pioneering mindset, and possess a rapid learning capacity.

In addition, the individual should possess contextual awareness, emotional intelligence, and trustworthiness. They should also demonstrate democratic leadership, share duties, make decisive decisions, and foster cooperation. Furthermore, they should be able to govern and build networks, instill trust and motivation in employees, and provide regular feedback. The VOPA leadership model is illustrated in Fig. 3, encompasses all the necessary attributes for effective digital leadership. It serves as a comprehensive framework for establishing a successful corporate and management culture in the digital era, while also addressing the expectations of the new generations.

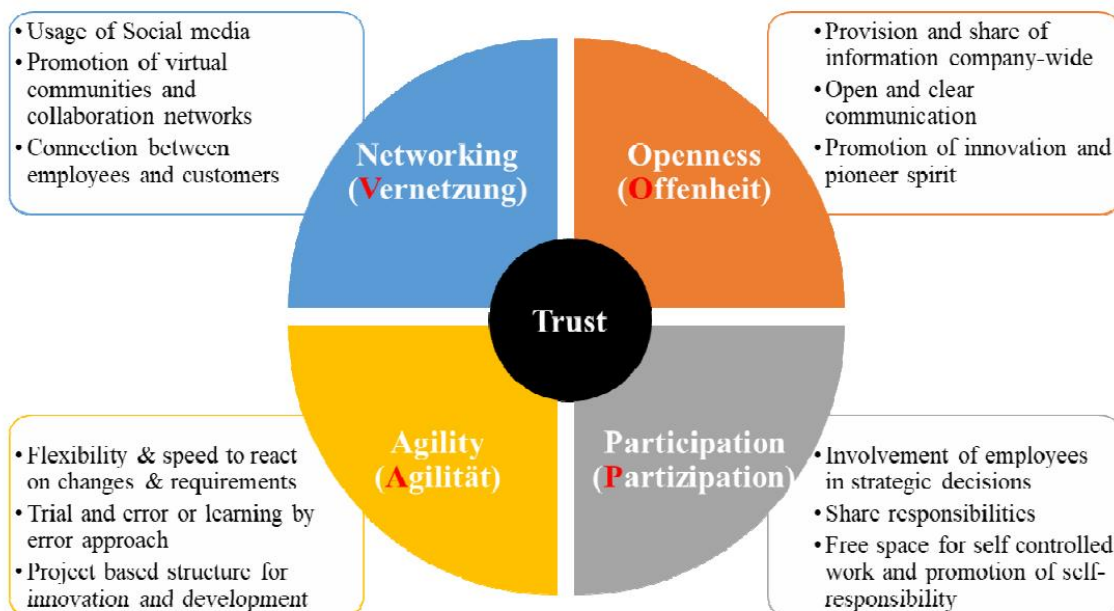


Fig. 3. VOPA plus model (Imran et al., 2021).

The foundation of digital leadership, which is based on trust, is not a novel concept, as trust has always been a crucial element in human relationships. In order for effective decision-making and timely action to occur amidst growing

complexity, uncertainty, and speed, it is essential for the leader to have faith in the management, and for the employees to have trust in the leader, and vice versa.

The remaining four points serve to bolster and sustain trust. Openness and transparency alleviate anxiety and uncertainty, providing a clear perspective and facilitating comprehension. Participation and involvement provide the opportunity to actively participate, modify, and take responsibility.

Agility facilitates rapid and contextually-driven responses, while networking enables and supports the sharing, collaboration, and improvement processes. Leaders must establish a direct and personal connection with all employees, particularly the emerging talents from the younger generations, as they are the catalysts for change in the digitalized world.

### 3. Impact of digitalization on employees

The ongoing process of digitalization is significantly affecting the workforce in terms of rationalization, knowledge, performance, efficiency, skill set, and other aspects.

In this instance, the writers have provided a concise summary of the impact by drawing upon an extensive assessment of existing research.

Digital learning platforms have the potential to enhance the company's internal education by providing customized training and development programs for employees and leaders. These platforms allow individuals to attend training sessions that are convenient for their work schedules and can be completed at their own pace. Additionally, users have the flexibility to choose the specific topics they want to focus on. These novel training methods facilitate the development of abilities that align with the strategies employed by corporations, which traditional educational systems are unable to provide. On the contrary, this requires personnel to engage in continual learning in order to stay updated with technological breakthroughs and prevent obsolescence in the long term.

The advent of digitalization has led to a significant impact on the workforce, particularly affecting individuals with lower credentials as a result of the automation of manufacturing processes. Nevertheless, the progress in intelligent automation and artificial intelligence begins to overshadow highly skilled personnel. Obtaining a formal certificate no longer ensures a stable profession for life, mostly because the rapid advancements in technology cannot be adequately addressed by the educational system.

Currently, professions that are particularly at risk are those in which precision and routine tasks make up a significant part of daily job activities. These professions can be more readily automated and replaced by computer algorithms. Examples include sales agents in call centers, clerical workers, packers, pilots, and even judges. Regarding the latter, it is suggested that they face an unfair competition against autopilots and algorithms that can navigate flawlessly and make cunning

decisions. Conversely, occupations that necessitate a greater level of inventiveness, interpersonal skills, and business acumen appear to have a greater likelihood of long-term viability.

The future of work, based on a digitalized economy, necessitates a new skill set in order to ensure a viable working future. For instance, the outsourcing sector now requires individuals to possess particular technical and interpersonal abilities that are directly linked to technological improvements. This is necessary in order to provide enhanced services that can outperform artificial intelligence and algorithms, thereby gaining a competitive edge.

In the digitized age, higher qualified occupations have given rise to a new working space that facilitates the adoption of new collaborative working models, thanks to cloud computing platforms. The software sector is in the forefront of adopting the agile development methodology, specifically Scrum, which incorporates principles from Lean Production. This innovative kind of collaborative work on cloud platforms enables rapid development cycles that continuously and immediately enable managers and leaders to assess the success of each completed work package. Moreover, it empowers individuals to make decisions and manage tasks more efficiently, resulting in increased productivity and enhanced visibility into the performance of each team member. As a result, each team experiences an increase in empowerment. It also demonstrates the inclination towards efficient execution, similar to that of a "assembly line".

### 4. Findings

Companies must address the reality that the growing digitalization of information leads to knowledgeable employees, consumers, and partners who have immediate access to competitive pricing and product information, resulting in heightened pricing transparency. Digital platforms enable consumers to provide peer recommendations, which may be both intimidating due to the increased scrutiny on brand messaging and advantageous as it allows workers to interact with consumers as brand ambassadors. The latter individuals are referred to as "prosumers". Thus, a novel kind of bilateral communication has been established between the consumer and the brand, presenting both potential and threats. It is necessary to adopt new collaborative methods to maintain stakeholder participation.

Companies have been utilizing this novel digital communication method to conduct innovation testing within communities and to gather and offer feedback on product flaws and concerns, among other things. Nevertheless, engaging in active engagement with stakeholders necessitates a shift in organizational mindset and culture towards a heightened focus on providing exceptional service. Findings summary is presented in Table 1.



**Table 1.** Findings summary (Vial, 2021).

TECHNOLOGY	IMPACT ON WORKFORCE	IMPACT ON LEADERSHIP
<b>INTERCONNECTEDNESS &amp; AVAILABILITY</b>		
<b>MOBILE IOT CLOUD</b>	<ul style="list-style-type: none"> <li>• Changes in contracting form of Workforce: Crowd sourcing</li> <li>• Flexible work models in time and space</li> <li>• Free space of self-controlled work</li> <li>• Entrepreneurship and empowerment at the risk of simple execution</li> <li>• Exposure to higher global workforce competition</li> <li>• Reduction of sense of affiliation of the workforce</li> <li>• Lose of social security protection</li> </ul>	<ul style="list-style-type: none"> <li>• Flat Hierarchies</li> <li>• Implies agility and speed in decision taking</li> <li>• Enforces collaborative approach</li> <li>• Requires higher motivation of employees due to the externalization of work packages and personal distance to the contractor</li> <li>• Middle Management loses importance as managers can cover larger departments and locations</li> </ul>
<b>INFORMATION &amp; INTELLIGENCE</b>		
<b>BIG DATA &amp; ANALYTICS</b>	<ul style="list-style-type: none"> <li>• Higher performance surveillance</li> <li>• Loss of creativity due to higher and detailed process structure</li> <li>• Higher amount of performance based remuneration</li> </ul>	<ul style="list-style-type: none"> <li>• Optimization of processes</li> <li>• Increased evaluation of employees, frees up management from their surveillance role as analytics start to take over the decision</li> <li>• Dependency of providers due to lack of programming knowledge</li> </ul>

## 5. Conclusions

Cloud computing, complex algorithms, and artificial intelligence are interconnected and significantly impact humans' behavior within and outside enterprises. The process of digitalization has significantly transformed the composition of the workforce, the required skill set, and the methods of interaction, collaboration, and communication inside a company. These changes affect not just employees but also leaders. Table 2 presents a concise overview of the influence that each emerging technology has on the individuals inside a company.

Based on the authors' analysis, it is evident that the future workforce must possess a mindset and behavior that emphasizes interconnectedness and places a strong emphasis on invention and creativity. This is necessary in order to effectively adapt to the structural changes that have been brought about by technological advancements. There are still unanswered questions regarding the speed at which additional rationalization will occur, and what actions are being taken by the environment to align with the skill requirements of the reduced workforce.

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