

Chapter 2

Digitalization in Management: The Case of the Metaverse

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ABSTRACT

When the historical development of management is examined, it is seen that every age has created a management and organizational structure suitable for its own conditions. Therefore, today, management and organizational structures are experiencing a digital transformation as a necessity of the age. From this point of view, this study was carried out as a conceptual analysis in order to conceptually examine new terms such as digital management, digital transformation, and digital leader that emerged with digitalization in management structures to explain the change in management structures by comparing them with previous management structures and to eliminate the ambiguities about the concept of digitalization. In addition, another aim of this study is to compile explanations in the literature about the metaverse, which is described as a three-dimensional virtual world, and to evaluate the innovations, opportunities, concerns, and criticisms brought by the metaverse application.

DIGITALIZATION

Digitalization has become a popular concept with the rapid development of technology in recent years. The term digitalization was first used in the North American Review in 1971 as “digitalization of societies”. In terms of content, the potentials of computer-based humanities are examined. Digitalization enables the development of a wide range of technologies accessible to all. For this reason, digitalization has led to significant changes in cultural, behavioral, demographic and lifestyles (Kupiainen, 2006, p. 287). Stolterman and Fors, who are among the first scientists working on the theoretical features of the concept of digitalization, define digitalization as a world where everything is associated through information technologies (Stolterman & Fors, 2004, p. 688). According to another definition, digitalization

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is defined as the development of a new business model or the use of digital technologies to create a new resource and value by changing an existing business model. For example, converting a handwritten text into a digital format is described as digitization. (Bloomberg, 2018).

Digital Transformation

The concept of digital transformation is expressed as the structuring of technology, production and management process in the organization, especially with digital technologies at different degrees, including the business model (Kraus, Schiavone, Pluzhnikova, & Invernizzi, 2021). According to Abbu et al., digital transformation first includes the restructuring of production, communication and human resources management of organizations. Secondly, digitalization includes top management (Abbu, Mugge, Gudergan, & Kwiatkowski, 2020). Although there is no universally accepted definition of digital transformation in the literature, another definition surrounding the previous two definitions states that digital transformation is a company that improves customer experience information of the organization and facilitates business transactions by using new internet-related digital technologies such as artificial intelligence, cloud storage system and blockchain. and a process of transformation and change aimed at creating new business models (Warner & Wäger, 2019, p. 326). From this point of view, digital transformation refers to the innovative use of various advanced digital technologies to create value on a larger scale for internal and external stakeholders (Gong & Ribiere, 2021, p. 102).

Digitizing Management

With digitalization, the structure of organizations is faced with an organic transformation expressed as “on-site management, empowerment, flexibility in rules and procedures, horizontal communication and teamwork”. With this structure explained, organizations can adapt more appropriately to learning, virtual organizational climate and digital environment in an innovative way (Tom & Stalker, 1998). With the digital transformation in organizations, personalization, improvement and visualization based on cyber-physical systems find a place in the management level (Brettel, Friederichsen, Keller, & Rosenberg, 2014). In other words, it is thought that organizational effectiveness and efficiency will increase with the opportunities that the use of the internet in organizational business and transactions can create together with digital transformation (Porter & Heppelmann, 2014). In addition, it creates a fast communication network within the organization by adapting the internet and information technologies to the organization. With digitalized management, complex systems can be standardized and thus effectively managed. Organizing and designing ways of doing business, ensuring continuity in the training and career development of employees, and using organizational resources efficiently are expressed as opportunities that digitalized management provides to the organization (Landscheidt & Kans, 2016, p. 3). One of the most important goals of digitalized management is to create organizations that improve the ability of organizations to adapt to their environment, are flexible, can use organizational resources effectively, and are in good harmony with buyers and business partners (Akgül, Akgül, & Ayer, 2018, p. 201).

Digital Leader

Digital leaders play an important role in adapting digital changes to the organization in the digital transformation process (Stana, Fischer, & Nicolajsen, 2018). Digital leaders enable businesses to gain

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