


# Chapter 13


## The Role of Digitalization in Corporate Sustainability

**Bilge Kural**

 <https://orcid.org/0000-0002-2452-8809>

*Trakya University, Turkey*

**İlknur Taştan**

 <https://orcid.org/0000-0002-3214-9403>

*Trakya University, Turkey*

### **ABSTRACT**

*This book chapter examines the multifaceted impacts of digitalization on corporate sustainability. Corporate sustainability is a management paradigm that aims to manage environmental, social, and economic responsibilities with a holistic approach and to enhance the long-term value creation capacities of businesses. Especially, the integration of digital technologies such as artificial intelligence, big data, the Internet of Things, and cloud computing into business processes has been shown to contribute to sustainable performance in areas such as efficiency, transparency, agility, and innovation. However, it has been emphasized that digitalization also carries various risks such as high costs, digital skills gaps, cybersecurity threats, e-waste generation, and digital inequality. The section argues that digitalization requires not only a technical transformation but also a strategic, cultural, and governance transformation in terms of corporate sustainability.*

DOI: 10.4018/979-8-3373-3336-6.ch013

## INTRODUCTION

Digitalization and sustainability emerge as two main megatrends of critical importance in today's business and management world. Guandalini (2022) emphasizes the necessity of addressing digital transformation and sustainability together within the framework of the concept of “digital sustainability,” yet a complete integration is not yet observed in the literature. Digitalization refers to the transformation of businesses' operations, processes, and services through digital technologies, while sustainability aims to create long-term value by considering environmental, social, and economic responsibilities. These two concepts are changing the dynamics of the business world and affecting the business process management (BPM) and capabilities of business processes.

BPM is a structured approach to analyze and continuously improve the core activities of an organization, such as production, marketing, communication, and other essential operational elements. With this structuring, business processes are consistently designed to ensure continuity. Sustainability, in today's business world, is not merely an environmental concern but has become a strategic management paradigm encompassing economic and social dimensions. Especially the global climate crisis, the depletion of natural resources, the deepening of social inequalities, and the rapid proliferation of digital technologies necessitate that institutions reconsider their traditional ways of doing business (Bansal, 2005; Dyllick & Hockerts, 2002). Both sustainability and digitalization inevitably have significant impacts on business process management due to their influence on ways of doing business.

Many pieces of evidence demonstrating the impact of digitalization on sustainable business performance have begun to emerge. Many studies on the impact of digitalization on sustainability performance have shown that digital technologies significantly contribute to reducing energy consumption and enhancing sustainability in production processes and innovation (Liang, 2024; Ye et al., 2024; Ahmadi-Gh & Bello-Pintado, 2024; Ching et al., 2022; Amjad et al., 2021; Ghobakhloo, 2020).

In some studies examining the relationship between digitalization and sustainability, it has been found that digitalization affects innovation, thereby influencing the sustainability, growth, and performance of businesses (Avelar et al., 2024; Chen et al., 2024). Similarly, a study conducted on manufacturing businesses in China found that digitalization and network capabilities together provide innovation in the business model, enhancing the dimensions of innovation and efficiency. Both of these dimensions positively affect economic and environmental performance, indicating that they can improve sustainability outcomes (Li et al., 2023). Even though many studies look at how digitalization and sustainability affect each other, there isn't enough research that thoroughly examines how digitalization impacts sustainability in all its forms. In this book chapter, the increasing importance of

28 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/the-role-of-digitalization-in-corporate-sustainability/386671](http://www.igi-global.com/chapter/the-role-of-digitalization-in-corporate-sustainability/386671)

## Related Content

---

### Quality and Process Management Systems in the UAE Maritime Industry

Michail Glykas and Johnichan George (2017). *International Journal of Productivity Management and Assessment Technologies* (pp. 20-39).

[www.irma-international.org/article/quality-and-process-management-systems-in-the-uae-maritime-industry/170397](http://www.irma-international.org/article/quality-and-process-management-systems-in-the-uae-maritime-industry/170397)

### Measuring the Sustainability Performance of the Public Transport System: A Case of the Amman BRT System in Operation

Reema Al-Dalain and Moawiah Alnsour (2022). *International Journal of Project Management and Productivity Assessment* (pp. 1-13).

[www.irma-international.org/article/measuring-the-sustainability-performance-of-the-public-transport-system/312566](http://www.irma-international.org/article/measuring-the-sustainability-performance-of-the-public-transport-system/312566)

### Immersive Commerce: Leveraging AR and VR for Transforming Retail

Apurva Mehta (2025). *Retail Innovations in Business Models* (pp. 51-66).

[www.irma-international.org/chapter/immersive-commerce/377207](http://www.irma-international.org/chapter/immersive-commerce/377207)

### Strategic Human Capital and Executive Decision-Making in Regulated Pharma and MedTech Innovation

Muhammad Saad Naeem, Adnan Afzal, Shumaila Qurban, Abu Sulman, Adeeba Riaz, Humaira Bibi, Hina Nawab, Hira Waheed, Maria Shafaqat and Maham Shehzadi (2026). *Human Capital, Innovation, and Executive Decision-Making in Pharma and Medical Device Industries* (pp. 285-312).

[www.irma-international.org/chapter/strategic-human-capital-and-executive-decision-making-in-regulated-pharma-and-medtech-innovation/413243](http://www.irma-international.org/chapter/strategic-human-capital-and-executive-decision-making-in-regulated-pharma-and-medtech-innovation/413243)

### An Evaluation of Leasing Companies' Efficiency Through Data Envelopment Analysis: A Study on Selected Firms of Bangladesh

Syed Khaled Rahman (2020). *International Journal of Project Management and Productivity Assessment* (pp. 1-22).

[www.irma-international.org/article/an-evaluation-of-leasing-companies-efficiency-through-data-envelopment-analysis/256508](http://www.irma-international.org/article/an-evaluation-of-leasing-companies-efficiency-through-data-envelopment-analysis/256508)