


## Chapter 3


# Investigating the Role of Transformative Technologies and Smart Processes on Sustainable Business

**Masoud Vaseei**

 <https://orcid.org/0000-0002-9221-2128>


*Department of Industrial Engineering,  
Islamic Azad University, Lahijan, Iran*

**Milad Abolghasemian**

 <https://orcid.org/0000-0002-1341-7855>

*Department of Industrial Engineering,  
Islamic Azad University, Lahijan, Iran*

**Mohammadreza Nasiri Jan Agha**

 <https://orcid.org/0009-0009-0322-7212>

*Department of Industrial Engineering,  
Islamic Azad University, Lahijan, Iran*

**Adel Pourghader Chobar**

*Department of Industrial Engineering,  
Islamic Azad University, Qazvin, Iran*

## ABSTRACT

*The concept of sustainable development was at first inferred from the biological system. With the advance of related trends, sustainable advancement continuously become a comprehensive concept, counting economy, society, and environment. Sustainable development implies improvement that meets the desires of the present era without compromising the desires of the long-standing age. Rapid changes in digital technologies have transformed the landscape for pursuing the Sustainable Development Goals. At their best, these technologies have contributed to vast*

DOI: 10.4018/979-8-3693-0210-1.ch003

*improvements in access to public services and economic opportunity for millions of people. The growth of smart businesses based on transformative technologies and the development of smart processes in smart societies is significant as a strategic capacity and driver of development in technology and economy. Considering the importance of the topic in this chapter, the role of these technologies in the sustainable development of smart businesses is examined.*

## **1. INTRODUCTION**

Moving towards sustainable development can be considered a particular position for developing countries. Sustainable transportation, sustainable agriculture, sustainable cities, industries, organizations, businesses, etc., are some dimensions of sustainable development. Sustainable development requires actions in its three dimensions through policies that pursue economic growth, greater social equality, and reduced adverse environmental effects. Sustainable development could be a multidimensional concept emphasizing integrating and powerfully adjusting a region's financial, social, and biological angles to ensure intergenerational value. Although diverse analysts defined economic advancement slightly differently, it may be a typical drift that sustainable development incorporates the three measurements of economy, society, and environment. Sustainable development points to arranging financial, social, and natural advancement to adjust intergenerational well-being and maximize all generations' well-being (Qi et al., 2023).

Linking technologies and sustainability, we understand that smart businesses apply digital and communication technologies to process-level activities to improve efficiency, manage complexity, and increase the quality of activities. It leads to stable working operations. Today's ubiquitous communication technologies increasingly provide innovative solutions for complex logistics and make transportation smarter and more efficient. For simplicity of concept, this is called an intelligent supply chain based on increased visibility resulting from real-time data collection and sharing (nozari et al., (a),2023). These features make the process flexible, expandable, and intelligent. Therefore, technologies are increasingly opening their way to the space of smart businesses and changing conventional supply chain communication. It requires investigating how smart processes equipped with technology can increase the sustainability of smart businesses (Zhang et al., 2023).

In addition, smart businesses shaped based on an organization of information and communication technologies assist the city's social and urban development and open unused market openings for entrepreneurs. With the nonstop integration of computerized innovations in items, administrations, and forms, digital innovation and advanced upgrades have pulled analysts and experts into consideration. As automatic

12 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/investigating-the-role-of-transformative-technologies-and-smart-processes-on-sustainable-business/334683](http://www.igi-global.com/chapter/investigating-the-role-of-transformative-technologies-and-smart-processes-on-sustainable-business/334683)

## Related Content

---

### Human Resources as a Stakeholder in Cyber Risk Management

Alaa Abdulrhman Alamoudi (2022). *Future Role of Sustainable Innovative Technologies in Crisis Management* (pp. 47-58).

[www.irma-international.org/chapter/human-resources-as-a-stakeholder-in-cyber-risk-management/298929](http://www.irma-international.org/chapter/human-resources-as-a-stakeholder-in-cyber-risk-management/298929)

### Digitalization of Tax Administration and Tax Avoidance: Evidence on Tax Reform Dynamics in Morocco

Rida Belahouaoui and El Houssain Attak (2024). *Impact of Digitalization on Reporting, Tax Avoidance, Accounting, and Green Finance* (pp. 200-225).

[www.irma-international.org/chapter/digitalization-of-tax-administration-and-tax-avoidance/343402](http://www.irma-international.org/chapter/digitalization-of-tax-administration-and-tax-avoidance/343402)

### India-ASEAN Economic Engagement: Challenges and New Lessons for Trade Integration

Rakesh Kumar (2023). *Opportunities and Challenges of Business 5.0 in Emerging Markets* (pp. 212-226).

[www.irma-international.org/chapter/india-asean-economic-engagement/320732](http://www.irma-international.org/chapter/india-asean-economic-engagement/320732)

### Integration of Digital Games Into Pedagogical Practice: Contributions and Challenges to Teacher Training

Daniela Karine Ramos, Cláudia Regina Brito, Fernando Silvio Cavalcante Pimentel, Bruna Santana Anastácio and Gleice Assunção da Silva (2022). *Impact of Digital Transformation in Teacher Training Models* (pp. 73-92).

[www.irma-international.org/chapter/integration-of-digital-games-into-pedagogical-practice/298513](http://www.irma-international.org/chapter/integration-of-digital-games-into-pedagogical-practice/298513)

## Exploring the Noteworthy Experiences of African American Female Mid-Level Leaders in the United States

Paula Anderson (2023). *Applied Research Approaches to Technology, Healthcare, and Business* (pp. 55-72).

[www.irma-international.org/chapter/exploring-the-noteworthy-experiences-of-african-american-female-mid-level-leaders-in-the-united-states/331641](http://www.irma-international.org/chapter/exploring-the-noteworthy-experiences-of-african-american-female-mid-level-leaders-in-the-united-states/331641)