



Taylor & Francis Proceedings in Environmental Science and Engineering

SUSTAINABLE INNOVATIONS IN MANAGEMENT IN THE DIGITAL TRANSFORMATION ERA

Edited by
 Shabana Faizal, Jayendra P. Sankar, Dorota Jelonek,
 and Magdalena Rzemieniak



CRC CRC Press
 Taylor & Francis Group

SUSTAINABLE INNOVATIONS IN MANAGEMENT IN THE DIGITAL TRANSFORMATION ERA

This proceedings compilation presents groundbreaking contemporary research on digital transformation and its profound impact on industries, institutions, and societies. Through 67 peer-reviewed papers, this volume takes a multidisciplinary approach and delves into technological change, sustainability, and innovation in the digital era.

The contributions span artificial intelligence applications, sustainable business practices, fintech and digital finance, technology adoption, innovation and entrepreneurship, human resource transformation, governance, and digital education systems. Several studies examine AI-enabled decision-making, automation, data-driven strategy, and emerging digital infrastructures, while others explore sustainability transitions, inclusive development, financial inclusion, and policy frameworks in technology-mediated environments. The collection also features empirical analyses, conceptual models, technical innovations, and sector-specific case studies from diverse regional contexts. Together, these papers document current research directions, practical implementations, and strategic responses shaping organizations and economies.

This book is intended for researchers, scholars, and professionals engaged in digital transformation, innovation, and technology management. It serves as a reference for academics, industry leaders, policymakers, and research institutions seeking current evidence, interdisciplinary perspectives, and emerging insights into technological change and its organisational, economic, and societal implications.

Sustainable Innovations in Management in the Digital Transformation Era

Edited by

Shabana Faizal and Jayendira P. Sankar

University of Technology Bahrain, Kingdom of Bahrain

Dorota Jelonek

Czestochowa University of Technology, Poland

Magdalena Rzemieniak

Lublin University of Technology (LUT), Poland

PROCEEDINGS OF THE 2ND INTERNATIONAL CONFERENCE ON CONFERENCE ON
SUSTAINABLE INNOVATIONS IN MANAGEMENT IN THE DIGITAL TRANSFORMATION
ERA (SIMDTE 2025), OCTOBER 14TH–15TH, 2025, KINGDOM OF BAHRAIN



CRC Press

Taylor & Francis Group

Boca Raton London New York Leiden

CRC Press is an imprint of the
Taylor & Francis Group, an informa business

First edition published 2026
by CRC Press
4 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN

and by CRC Press
2385 NW Executive Center Drive, Suite 320, Boca Raton FL 33431

© 2026 selection and editorial matter, Shabana Faizal, Jayendra P. Sankar, Dorota Jelonek, and Magdalena Rzemieniak; individual chapters, the contributors

CRC Press is an imprint of Informa UK Limited

The right of Shabana Faizal, Jayendra P. Sankar, Dorota Jelonek, and Magdalena Rzemieniak to be identified as the authors of the editorial material, and of the authors for their individual chapters has been asserted in accordance with sections 77 and 78 of the Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this book may be reprinted or reproduced or utilised in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

For permission to photocopy or use material electronically from this work, access www.copyright.com or contact the Copyright Clearance Center, Inc. (CCC), 222 Rosewood Drive, Danvers, MA 01923, 978-750-8400. For works that are not available on CCC please contact mpkbookspermissions@tandf.co.uk

For Product Safety Concerns and Information please contact our EU representative GPSR@taylorandfrancis.com. Taylor & Francis Verlag GmbH, Kaufingerstraße 24, 80331 München, Germany.

Trademark notice: Product or corporate names may be trademarks or registered trademarks and are used only for identification and explanation without intent to infringe.

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library

ISBN: 978-1-041-16351-0 (hbk)

ISBN: 978-1-041-16417-3 (pbk)

ISBN: 978-1-003-68449-7 (ebk)

DOI: 10.1201/9781003684497

Typeset in Times New Roman
by MPS Limited, Chennai, India

Table of Contents

<i>Preface</i>	xi
<i>Acknowledgements</i>	xiii
<i>About the Editors</i>	xv
Strategic Integration of Artificial Intelligence to Drive Sustainable Business Transformation in the Digital Era <i>Amir Teymourian</i>	1
Key Organizational Practices in Fostering a Sustainable Workplace <i>Jayendira P. Sankar</i>	8
Artificial Intelligence Solutions in the Support of E-commerce Management: A Qualitative Approach <i>Leszek Ziara and Steven J. Hyde</i>	14
Revisiting Strategic Fit Theory: Aligning Technological Adoption with Supply Chain Strategy for Competitive Advantage <i>Aruldas Kalarickal Thomas, Shabana Faizal, Viju Samuel, Nidhi S. Menon, and M. Sampath Nagi</i>	20
Application of Rough Set Theory to Analyse the Relationship between Students' Use of AI Tools and Their Perceived Automation Potential in Enterprises <i>Damian Dziembek, Karol Kuczera, and Oskar Szumski</i>	26
Two Faces of Green AI: Supporting Sustainability and Achieving Sustainable Operation <i>Dorota Jelonek</i>	31
AI and Machine Learning Enhance Fraud Detection Accuracy and Efficiency in Accounting <i>Maryam AlSalman, Esra Ahmed, Mona Hammad, Abdul Wahid Muhammad Afzal, and AbdulRahman AlMulla</i>	36
Integrating Artificial Intelligence and Strategic Management for Sustainable Organizational Transformation: A Case Study Approach <i>Kusum Lata and Bindiya Tater</i>	40
The Impact of Leadership Style on Employee Satisfaction in Bahrain's Telecom Sector <i>Zainab Ahmed A. Alhaddad</i>	46
Enhancing Customer Retention through AI-Driven CRM Analytics: A Scikit-Learn Approach in Kerala's Service Sector <i>C Vairavan, Stephen Retnamony Chellakan, F Praveena, and S R Anusree</i>	52
Revitalizing Entrepreneurial Education: Holistic Approach to Achieving Entrepreneurial Skill Development and Internal Mobility <i>Danilo C. Diotay and Manolo L. Anto</i>	57

Machine Learning Analysis of GST Impact on Retailers in Chennai: Compliance, Adaptation, and Revenue Growth <i>F. Praveena, Stephen Retnamony Chellakan, and M Josephin Rangith</i>	63
Transforming Digital Finance: The Role of Green Fintech in Advancing ESG Investments and Sustainable Development Among Young Investors in Pakistan <i>Muhammad Saad, Zahid Bashir, Abid Mehmood, and Muhammad Sabeeh Iqbal</i>	69
Evaluating E-Learning's Impact on Examination Quality – A Systematic Literature Review <i>Bahja A. Al-Mubarak and Hafiza Abas</i>	75
Econometric Insights into Sustainable Development Practices in GCC Economies: A Panel Data Approach (2010–2023) <i>R. Stephen Chellakan</i>	82
A SLR Exploring the Intersection of Anti-Counterfeit Tech & AI in Business IT Hardware <i>Paul Abraham J E and G. Rajni</i>	90
AI Influence on Teachers Productivity: A Perspective from Schools in Bahrain <i>Wedad Al Modaweb and Mahmood Akbar</i>	97
Exposing 2139 Exchange – Identity Fraud, Licensing Deception, and Trust Erosion in Digital Finance <i>Reem Abdalla and LA Hidaytalla</i>	102
Sustainable Digital Marketing: Green Branding and Consumer Engagement <i>V. Bala Ruby</i>	107
The Role of Artificial Intelligence in Enhancing Marketing Effectiveness: An Empirical Study <i>Surjit Victor, Vishwas Chakranarayan, Redha Shaker, Maryam Salman, and Esra Ahmed</i>	112
Cross-Regional AI Readiness: An Empirical Comparison of MENA and Southeast Asia Using Elastic Net Regression <i>Mark Doblaz, Mary Benitta Rani, Andres A. Regondola, and Jishanis Mae Becaro-Lapiz</i>	118
Inclusive Marketing by Hypermarkets for Low-Income Expatriate Consumers in the Middle East: Designing for Affordability Without Compromising Value <i>Vishwas Chakranarayan</i>	124
Sustainable Development and Inclusive Parenting: Social Approaches for Empowering Children with Disabilities <i>Arun Aloysius Magesh A and Benjamin Franklin S</i>	129
Strategic Marketing Approaches on Micro-ventures towards Increased Revenues: An Assessment in Bahrain <i>Steve Salamat Guansi</i>	136
Optimal Working Capital Policy and Sustainable Practices in Financially Constraint Firms <i>Rabia Bashir, Muhammad Ahmad, Muhammad Saad, and Asad Ur Rehman</i>	143

