



REVOLUTIONIZING INDUSTRY 4.0 THROUGH DIGITAL TRANSFORMATION



Editors

**Dr. Shreyanshu Singh, Dr. Ravi Agarwal
Dr. Rinki Verma, Dr. Ankita**

Published by
RUDRA PUBLISHERS & DISTRIBUTORS
C-293A, Street No. 3,
West Karawal Nagar, New Delhi - 110094
Cell : 9873248544, 9312442975
E-mail : rudrapublishers@yahoo.com

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First Published: October, 2023
ISBN: 978-93-88361-66-8

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Printed in India
Published By Ravindra Pratap Yadav
For Rudra Publishers & Distributors
Typesetting By Pratibha Yadav
Printed at Research Press India, New Delhi

“To our parents, the etc

Contents

| | |
|--|------------|
| <i>Acknowledgements</i> | <i>vii</i> |
| <i>Preface</i> | <i>ix</i> |
| 1. Integrating Artificial Intelligence in Sustainable Business Models: Transformations and Challenges <i>Dr. Shreyanshu Singh, Dr. Rinki Verma, Dr. Ravi Agarwal</i> | 1 |
| 2. Reshaping the Future through Digital Transformation: The Closed-Loop Supply Chain and its Resilience during COVID-19 <i>Mr. Pranay Raj Rathore & Dr. Ankita</i> | 17 |
| 3. Impact of Digital Transactions on Inflation and Economic Growth: Evidence from the Indian Economy <i>Mr. Abhishek Singh, Mr. Sarvesh & Ms. Charu Yadav</i> | 33 |
| 4. Role of Augmented Reality in Online Consumer Decision Making Process <i>Ms. Pooja Prasad & Dr. Swati Srivastava</i> | 54 |
| 5. Navigating the Digital Frontier: Exploring Contemporary Trends in Digital Marketing and its Impact on Consumer Buying Behaviour <i>Dr. Ved Prakash & Dr. Saiyid Saif Abbas Abidi</i> | 65 |

| | | |
|-----|--|-----|
| 6. | Digital Banking Revolution: Transforming Financial Inclusion in India | 78 |
| | <i>Dr. Jyoti Shukla & Mr. Rachit Ranjan</i> | |
| 7. | Evolution of Influencer Marketing in India: An Empirical Study | 93 |
| | <i>Ms. Saliha Anjum</i> | |
| 8. | Driving Sustainability: An Integrated Approach of 4G Model for Green Manufacturing, Retailing, Advertising, and Product Offering | 112 |
| | <i>Ms. Pragati Sonali Srivastava, Ms. Rafat Fatma & Dr. Afreen Fatima</i> | |
| 9. | Reimagining Talent Management in the Era of the Fourth Industrial Revolution | 125 |
| | <i>Dr. Bhawana Pande</i> | |
| 10. | The Road from Industry 1.0 to Industry 4.0: Overview on Historic Aspects | 146 |
| | <i>Dr. Zia Afroz & Dr. Neha Singh</i> | |
| 11. | A Study on the Impact of Covid-19 on Indian Banking Sector: An Exploratory Study | 156 |
| | <i>Dr. Reetika Agarwal & Dr. Shyamali Dubey</i> | |
| 12. | A Comprehensive Analysis of FinTech: Tech-Enabled Financial Services | 165 |
| | <i>Ms. Mansi Saroj</i> | |
| 13. | Central Bank Digital Currency (CBDC): A Comprehensive Analysis | 182 |
| | <i>Ms. Kalyani Upadhyay</i> | |

Integrating Business Mo

Dr. Shreyanshu Singh
Assistant Professor
School of Management
BBD University, Lucknow

Abstract

This study inv
(AI) into sustainal
impacts and chal
increasingly seek t
responsibility, AI
business practices
optimize resource
chain sustainabili
various case studi
sustainable busine
ethical, and opera
such as data priv
investment costs.
offering insights
sustainable busin
businesses aiming
as for policymake

Keywords :

Artificial Inte
Challenges, Susta

1. Introduction

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The Road from Industry 1.0 to Industry 4.0: Overview on Historic Aspects

Dr. Zia Afroz

Assistant Professor

Dept. of Humanities and Social Sciences

Integral University, Lucknow

Dr. Neha Singh

Assistant Professor

School of Management

BBD University, Lucknow

Abstract

The onset of the industrial revolution in the 18th century has witnessed tremendous strides in the new economy. For centuries products and weapons were labour intensive and handmade, which includes guns, tools, food, clothes, and homes, which were crafted or used from work by animals. However, this method improved in the late 18th century with the introduction of the industrial revolution. Development in Industry 1.0 was the climbing stone leading up to the next manufacturing age known as Industry 4.0. The summary of this evolution will be discussed here. This article takes a theoretical approach to looking at Industry 4.0 as the Fourth generation. Industry Internet also known as Industry 4.0 is the fourth industrial revolution, which is evolving all around the globe. In this article, we study the landscape of Industry 4.0 and beyond empowered by the seamless collaboration of Information Technology (IT), Internet of Things (IOT), Artificial Intelligence (AI), Industrial Internet (4.0), Digitalization and Integration. Specifically, IOT collaboration is regarded as a main improvement of Industry 4.0 compared to the previous industrial revolutions. The summary of these evolutions will be discussed here. We commence by reviewing the previous three industrial revolutions i.e. Industry 1.0 (Mechanical Era), Industry 2.0 (Electric Era), Industry 3.0 (Digital Era) and Industry 4.0 (Smart Era) where we argue that the key feature of Industry 4.0 is the AI and IOT

The Road from Industry 1.0 to Industry 4.0
collaboration known as the smart
key elements of each Industrial
of the era which are technol
changes. It has been studied in
Industry 4.0 has witnessed new
governmental policies and eme
an Industry 4.0 production sys
and customized products. Th
facilitate an understanding o
enablers, goals and limitations

Keywords :

Industry 1.0 to 4.0, In
Integration, Value Chain, Art

1. Introduction

Industry 1.0 To 4.0

From ancient times, pro
handmade, but by the be
introduction of Industry 1
and from there operations
Here is an overview of

Industry 1.0

In the 19th Century,
developed to help work
businesses expanded wh
dependent with the nee
employees serving custo

Industry 1.0 (Mechanical)

- This era, also kn
in the late 18th c
- Key technologi
production (e.g