



ISBN:978-81-973939-1-4

FROM DATA TO DELIVERY

AI IN SUPPLY CHAIN MANAGEMENT

DR. PRACHI SINGH

***From Data to Delivery:
AI in Supply Chain Management***

Author

Dr. Prachi Singh

Professor

School of Commerce Management and Research

ITM University, Raipur

Raipur, Chhattisgarh, India



Aditi Publication

Publisher:

Aditi Publication, Raipur, Chhattisgarh, India

Ph.: +91 9425210308

***From Data to Delivery:
AI in Supply Chain Management***

Year: **2024**
Edition - **01**

Author

Dr. Prachi Singh

Professor

School of Commerce Management and Research

ITM University, Raipur

Raipur, Chhattisgarh, India

ISBN : **978-81-973939-1-4**

Copyright© All Rights Reserved

No parts of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, mechanical, photocopying, recording or otherwise, without prior written permission of original Author.

Price : Rs. **399/-**

Publisher & Printer:

Aditi Publication,

Opp. New Panchajanya vidya Mandir, Near Tiranga Chowk,

Kushalpur, Raipur, Chhattisgarh, INDIA

+91 9425210308

Content

S.No	Title	Page No
1	Introduction to AI in Supply Chain Management	1
2	Predictive Analytics and Demand Forecasting	33
3	Inventory Optimization	58
4	AI in Procurement and Supplier Management	81
5	Smart Warehousing and Logistics	100
6	Blockchain and AI for Supply Chain Transparency	134
7	Risk Management and Resilience Building	163
8	Sustainability and Green Supply Chains	190
9	Ethics and Challenges of AI Implementation	206
10	The Future of AI in Supply Chain Management	223



I am Dr. Prachi Singh, a Professor in the Faculty of Commerce and Management at ITM University, Raipur, Chhattisgarh, with 15 years of professional experience. I hold a Doctorate in Commerce, NET (Commerce), and an MBA in HR. My research interests include General Management, HR, Women Entrepreneurs, Tourism Management, and Organizational Behavior. Two Ph.D. scholars have submitted their theses under my guidance. I also hold a Diploma in Training and Development from ISTD, Delhi, and am actively involved in curriculum design, expert lectures, and conferences as a session chair and keynote speaker. My publications in reputed journals reflect my commitment to inspiring students and advancing knowledge in higher education and management.

Dedication

To my cherished parents, whose wisdom and unwavering support have shaped who I am.

To my loving in-laws, for their kindness, encouragement, and belief in my dreams.

To my incredible husband, whose steadfast love, strength, and partnership light up my journey.

And to my precious children, whose joy, curiosity, and boundless energy remind me every day of life's greatest blessings.

This book is a tribute to your love, guidance, and inspiration—
my pillars of strength and my heart's deepest treasures.

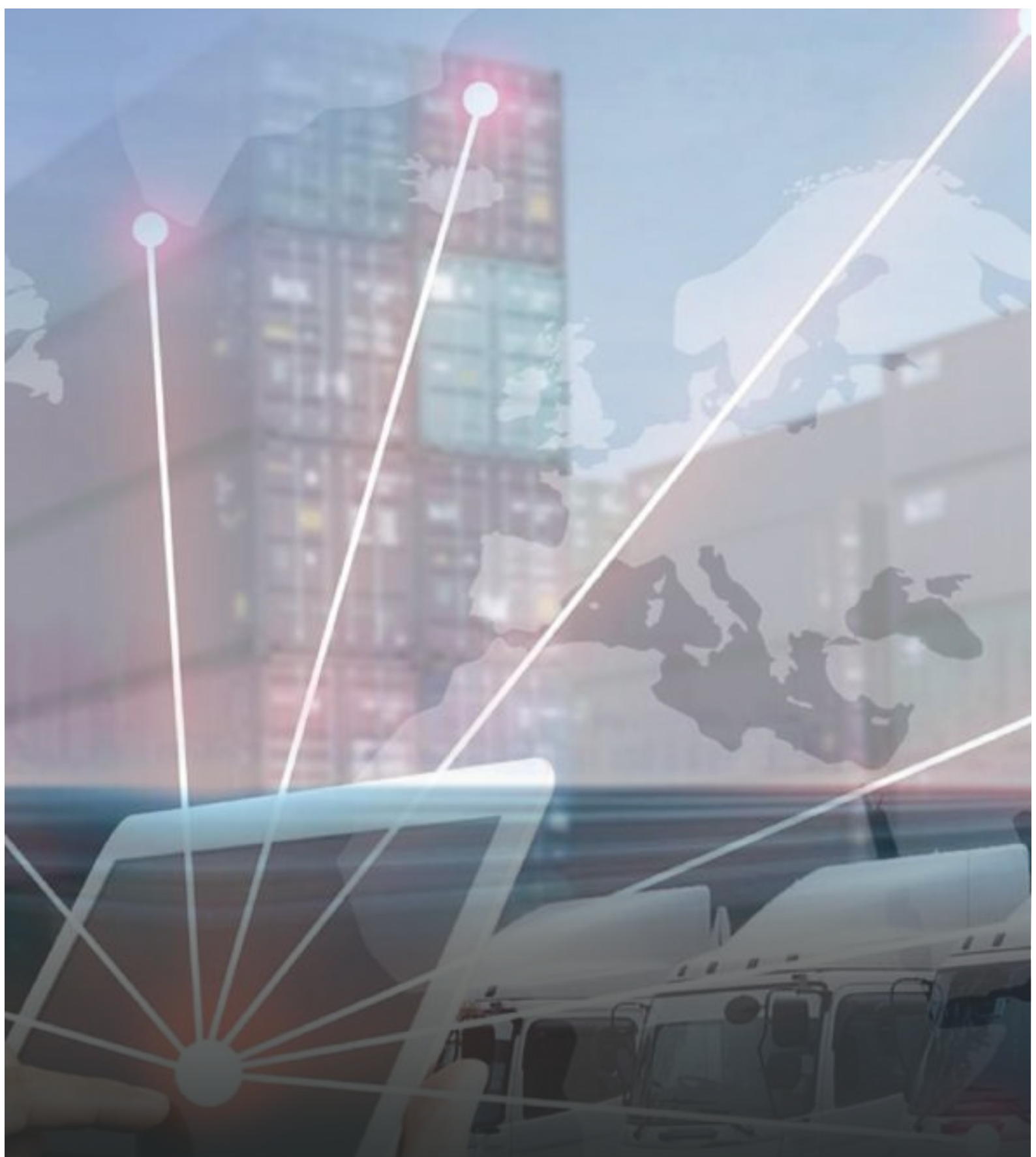
Preface

"From Data to Delivery: AI in Supply Chain Management" delves into the transformative role of artificial intelligence (AI) in revolutionizing supply chain management (SCM). As global supply chains grow increasingly complex, AI offers unmatched opportunities to enhance efficiency, resilience, and sustainability. This book is a comprehensive resource for business leaders, practitioners, researchers, and students seeking to understand and utilize AI's potential in SCM.

The book begins with "Introduction to AI in Supply Chain Management," which establishes the foundational concepts of AI and their relevance to supply chain operations. Chapters such as "Predictive Analytics and Demand Forecasting" and "Inventory Optimization" explore AI's ability to improve demand accuracy, optimize stock levels, and minimize disruptions. Specific applications are addressed in "AI in Procurement and Supplier Management," which examines AI's role in streamlining sourcing decisions, and "Smart Warehousing and Logistics," which highlights how automation transforms storage and transportation.

The synergy between blockchain and AI is explored in "Blockchain and AI for Supply Chain Transparency," emphasizing enhanced traceability and ethical sourcing. The book also addresses contemporary challenges in "Risk Management and Resilience Building" and "Sustainability and Green Supply Chains," showcasing how AI mitigates risks and promotes eco-friendly practices. Critical ethical and practical considerations are discussed in "Ethics and Challenges of AI Implementation," offering strategies for navigating data privacy, bias, and regulations. Finally, "The Future of AI in Supply Chain Management" envisions emerging trends shaping the next generation of SCM ecosystems.

This book bridges theoretical and practical knowledge, empowering readers to harness AI for smarter, sustainable supply chains and drive innovation in a competitive global landscape.



Aditi Publication

Opp. New Panchjanya Vidya Mandir, Near Tiranga Chowk,
Kushalpur, Dist.- Raipur-492001, Chhattisgarh
shodhsamagam1@gmail.com, +91 94252 10308

ISBN:978-81-973939-1-4



9 788197 393914

₹ 399