From the
EDITOR'S DESK

Industry 5.0: Building Intelligent, Sustainable and Resilient Enterprises

Industry 5.0: Building Intelligent, Sustainable and Resilient Enterprise highlights a new approach to industrial transformation that places humans, technology, and sustainability at the centre of development. Human-centric manufacturing systems and human–machine collaboration through cobots can enhance productivity, safety, flexibility, and employee well-being. At the same time, sustainable and circular production models encourage efficient use of resources, waste reduction, and environmentally responsible manufacturing practices.

The integration of advanced digital technologies, resilient and adaptive supply chains, and smart and connected industrial ecosystems is enabling enterprises to respond effectively to changing markets and global disruptions. Technologies such as Artificial Intelligence, IoT, robotics, digital twins, and data analytics are creating more intelligent and connected industrial environments. Industry 5.0 therefore offers an opportunity to build enterprises that are not only technologically advanced, but also sustainable, resilient, inclusive, and human-centric.

Our theme for this issue of *The Management Accountant* is Industry 5.0: Building Intelligent, Sustainable and Resilient Enterprises. The articles explore how emerging technologies and management accounting can drive sustainability, resilience, circularity and long-term value creation.

Digital Cost Management 2.0: Advanced Technologies for Sustainable and Resilient Heavy Industries – This paper presents Digital Cost Management 2.0 (DCM 2.0), moving management accounting from historical variance reporting towards predictive optimisation through AI and Advanced Analytics, Digital Twins, IIoT with Edge Computing, and BIM platforms.

Industry 5.0 and Management Accounting: Bridging Digital Transformation and Business Value – This conceptual paper develops a framework linking digital technologies, Industry 5.0 capabilities, management accounting, and enterprise value. It highlights the evolving role of management accountants in translating digital information into effective decisions regarding cost, performance, capital allocation, risk, and enterprise value.

Making Waste Visible: Material Flow Cost Accounting under ISO 14051 as the Costing Spine of Circular Production – The article explains MFCA through a quantity-centre matrix and the Nitto Denko case, demonstrating how visibility of loss costs can influence capital allocation. It also connects MFCA with BRSR requirements and highlights the role of Cost and Management Accountants in its adoption.

Costing The Circle: A Fused Industrial Engineering– Cost Accounting Model for Sustainable Production – This article shows how IE and CMA tools can jointly enable circular production by making material losses, energy waste and end-of-life costs financially visible.

Industry 5.0: Redefining Strategic Cost Management for Sustainable Value Creation – The research examines how MFCA, LCA and ESG measures can support circular manufacturing, resource efficiency, sustainability and India's vision of Viksit Bharat 2047.

This issue brings together a range of contemporary topics of professional significance. We are pleased to feature an exclusive interview with CMA Bikram Ghosh, Director (Finance), Western Coalfields Limited, Nagpur, offering valuable perspectives on governance, leadership, and the changing responsibilities of Cost and Management Accountants. The edition also includes an insightful communication on "Application of Cost Management – Prudent Cost Management is the Lifeblood of Healthcare Operations," highlighting the importance of effective cost management in the healthcare sector.

We gratefully acknowledge all our contributors for their valuable research, professional insights, and thought leadership, which have enriched this edition. We welcome your feedback and suggestions at editor@icmai.in as we continue our efforts to enhance the journal's quality and relevance.

We hope you find this edition informative, insightful, and enriching. Keep reading and stay connected with us.