International Journal of Computer Science and Engineering (IJCSE) ISSN (P): 2278–9960; ISSN (E): 2278–9979 Vol. 13, Issue 1, Jan–Jun 2024; 251–278 © IASET



## ADVANCED STRATEGIES FOR MASTER DATA MANAGEMENT AND GOVERNANCE IN SAP ENVIRONMENTS

Nanda Kishore Gannamneni<sup>1</sup>, Shashwat Agrawal<sup>2</sup>, Swetha Singiri<sup>3</sup>, Akshun Chhapola<sup>4</sup>, Om Goel<sup>5</sup> & Shalu Jain<sup>6</sup>

<sup>1</sup>Researcher, Nagarjuna University, Matrusrinagar, Miyapur, Hyderabad, Telangana, India

<sup>2</sup>Independent Researcher, Northeastern University, Ghaziabad, Uttar Pradesh, India

<sup>3</sup>Independent Researcher, JNTU University, Hyderabad, India

<sup>4</sup>Independent Researcher, Delhi Technical University, Delhi, India

<sup>5</sup>Independent Researcher, Abes Engineering College Ghaziabad, India

<sup>6</sup>Research Scholar, Maharaja Agrasen Himalayan Garhwal University, Pauri Garhwal, Uttarakhand, India

## **ABSTRACT**

Master Data Management (MDM) is a critical component in ensuring data integrity and consistency across enterprises, particularly within SAP environments. As organizations increasingly rely on data-driven decision-making, effective MDM strategies become essential for enhancing operational efficiency and compliance. This paper explores advanced MDM strategies and governance frameworks tailored for SAP systems, highlighting the integration of cutting-edge technologies such as artificial intelligence, machine learning, and cloud computing.

We begin by examining the challenges faced by organizations in maintaining accurate and up-to-date master data. Subsequently, we present a comprehensive overview of best practices for data governance, emphasizing the importance of data stewardship, policy development, and continuous monitoring. Case studies illustrate the successful implementation of MDM initiatives that have led to improved data quality and streamlined business processes.

Additionally, the role of automation in MDM is discussed, showcasing how it can reduce manual errors and enhance data synchronization across various platforms. The paper concludes with recommendations for organizations seeking to establish robust MDM frameworks that align with their strategic goals. By adopting these advanced strategies, businesses can achieve a unified view of their master data, driving better decision-making and fostering a culture of data governance that ultimately supports long-term growth and innovation.

**KEYWORDS:** Master Data Management, MDM Strategies, Data Governance, SAP Environments, Data Integrity, Artificial Intelligence, Machine Learning, Cloud Computing, Data Stewardship, Automation, Data Quality, Business Processes

Article History

Received: 20 May2024 | Revised: 25 May2024 | Accepted: 30 May 2024

www.iaset.us editor@iaset.us