BUILDING SUSTAINABLE DATA MARTS FOR EVOLVING BUSINESS AND REGULATORY REPORTING

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ABSTRACT

In today's rapidly changing business landscape, the need for effective and sustainable data marts is paramount for addressing both evolving business requirements and regulatory compliance. This study explores the design and implementation of data marts that are not only aligned with current operational needs but also adaptable to future changes in regulations and market dynamics. By integrating advanced technologies such as cloud computing, machine learning, and data governance frameworks, organizations can build resilient data marts that facilitate real-time reporting and analytics.

We investigate key strategies for ensuring data quality, security, and scalability, emphasizing the importance of collaboration between IT and business units. The research highlights best practices for data mart architecture, including modular design and the use of standardized data models, which allow for efficient updates and maintenance. Furthermore, we examine the role of automation in streamlining data ingestion processes, reducing manual errors, and enhancing the overall efficiency of reporting.

Our findings suggest that organizations that prioritize sustainable data mart development not only improve their compliance with regulatory mandates but also gain a competitive edge by leveraging insights derived from timely and accurate data. Ultimately, this study serves as a framework for businesses seeking to establish data marts that are both responsive to changing requirements and robust enough to support long-term strategic goals, fostering a culture of data-driven decision-making in the process.

KEYWORDS: *Sustainable Data Marts, Business Reporting, Regulatory Compliance, Data Governance, Cloud Computing, Machine Learning, Data Quality, Scalability, Automation, Data-Driven Decision-Making.*