

Internet of Things (IoT) Applications in SAP: A Survey of Trends, Challenges, and Opportunities

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Abstract: *A revolutionary transformation in industrial operations has been brought about by the fast development of the Internet of Things (IoT), which has made intelligent decision-making and real-time data interchange possible across many different industries. As IoT technologies continue to gain traction, their integration with enterprise resource planning (ERP) systems like SAP is becoming increasingly vital for businesses seeking to optimize operational efficiency, enhance supply chain management, and unlock data-driven insights. This paper explores the synergistic potential of IoT-SAP integration, shedding light on how businesses can harness the power of IoT to streamline processes, improve resource allocation, and foster enhanced customer relationships. However, the adoption of IoT in industrial environments presents significant challenges, including data security concerns, system interoperability, and scalability issues. By examining the latest trends, opportunities, and challenges in IoT-SAP integration, this study provides a comprehensive analysis of how organizations can overcome these barriers and leverage IoT to drive innovation and maintain a competitive edge. Furthermore, the paper delves into the application of IoT across industries like manufacturing, healthcare, and logistics, highlighting the role of IoT in enhancing business processes, improving decision-making, and enabling predictive maintenance. Ultimately, this paper aims to offer valuable insights into the strategic implementation of IoT within SAP systems, demonstrating its potential to revolutionize industries and reshape business landscapes.*

Keywords: Internet of Things (IoT), SAP ERP, Intelligent Enterprise, Manufacturing Logistics, Predictive Analytics, Automation