

"Business Process Transformation Building a Digital Economy in India": Way from Industry 4.0 to Industry 5.0 From Digital Manufacturing to Digital Society

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Abstract

The focus of this study is to explore the intricate relationship between economic entities within the context of the smart economy and their consequential digital transformation, specifically in the contexts of Industry 4.0 and the emerging Industry 5.0. One of the most challenging aspects of this investigation revolves around defining and structuring the concept of the smart economy, while also delving into the profound impacts of digital business transformations within the distinct realms of Industry 4.0 and the evolving Industry 5.0.

The transition from Industry 4.0 to Industry 5.0 signifies a monumental evolution in the landscape of technological progress and its far-reaching effects on both industries and societies at large. Emergent from the fundamental principles of automation and data-driven optimization, Industry 4.0 spearheaded a revolutionary shift in manufacturing processes through the seamless integration of digital technologies. Notably, this transformation gave birth to the paradigm of smart factories, where the fusion of automation, Internet of Things (IoT) connectivity, and advanced data analytics converged synergistically to amplify efficiency and productivity. A salient feature of this period was the ascendancy of human-machine collaboration, as manufacturing processes acquired newfound intelligence and adaptability. This era ushered in a novel epoch of data-centric decision-making, predictive maintenance strategies guided by anticipatory insights, and the establishment of interconnected and interdependent supply chains.

Keywords:- Industry, Manufacturing, Digital Economy, Technology, Evolution Industry 4.0 and 5.0 etc.

Research Methodology:- This study is mainly based on secondary sources of data such as websites, Journals Articles, News Paper, Govt. Policies, Books and other sources.

Introduction:-

India's digital transformation over the last nine years is unprecedented. It all started with the launch of our Digital India initiative in 2015. It is powered by our unshakeable belief in innovation. It is driven by our commitment to speedy implementation. And, it is motivated by our spirit of inclusion, leaving no one behind. The scale, speed and scope of this transformation is beyond imagination. Today, India has over 850 million internet users, enjoying some of the cheapest data costs in the world. We have leveraged technology to transform Governance, to make it more efficient, inclusive, faster and transparent. Our unique digital identity platform, Aadhaar, covers more than one point three billion of our people. We have used the power of the JAM trinity- Jan Dhan bank accounts, Aadhaar, and Mobile- to revolutionize financial inclusion in India. Every month, nearly 10 billion transactions take place on UPI, our instant payment system. More than 45% of the global real time payments happen in India. Direct Benefits Transfer of government support is plugging leakages, and has saved over 33 billion dollars. Our online public procurement platform- the Government e-Marketplace- has brought transparency and probity into the process. The Open Network for Digital Commerce is democratizing e-Commerce. Fully digitized taxation systems are promoting transparency and