


Chapter 2

The Power of Intelligent Automation

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ABSTRACT

This chapter explores the transformative impact of intelligent automation across various industries, re-shaping conventional practices to enhance efficiency, productivity, and innovation. From manufacturing to healthcare, finance, logistics, and education, intelligent automation revolutionizes processes through advanced robotics, AI algorithms, and real-time tracking. Examples include streamlined assembly lines, AI diagnostics, and personalized learning experiences. This chapter articulates the unparalleled transformative potential of intelligent automation, urging organizations to embrace its innovative capacity for sustained growth amidst dynamic evolution.

I. INTRODUCTION

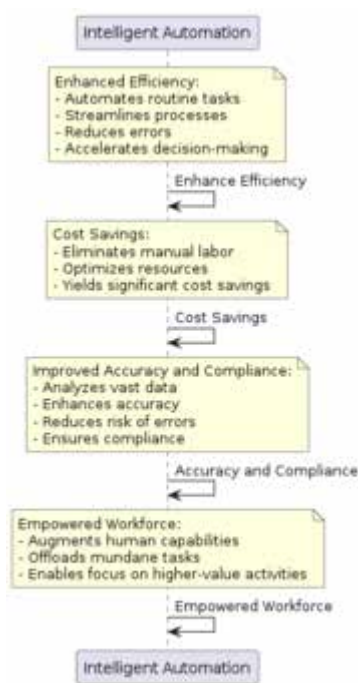
In today's rapidly evolving business landscape, the convergence of artificial intelligence (AI), machine learning (ML), and robotics has given rise to a transformative force known as intelligent automation. This introduction serves as a gateway into understanding the fundamentals and implications of this powerful technology.

DOI: 10.4018/979-8-3693-3354-9.ch002

Defining Intelligent Automation

Intelligent automation represents the fusion of AI-driven decision-making capabilities with robotic process automation (RPA) to automate complex workflows and tasks traditionally performed by humans. Unlike conventional automation, which relies on predefined rules and scripts, intelligent automation leverages advanced algorithms and data analytics to make informed decisions and adapt to dynamic environments autonomously.

Figure 1. Intelligent Automation



Components of Intelligent Automation

At its core, intelligent automation is composed of several key components:

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