Chapter 5
The Impact of IoT on Intelligent Businesses

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ABSTRACT

IoT is about improving trade forms and arrangements using sensors, gadgets, doors, and stages. Utilizing the IoT by collecting all data in one put, producers can make intelligent decisions in their business and design more efficient and optimal processes. Therefore, the IoT can be useful for companies by reducing costs, increasing efficiency, progressing client involvement and fulfillment, and expanding dynamism and adaptability. As a result, by utilizing the IoT in businesses, they have lower upkeep costs and superior disappointment administration. In an inventive trade, an observing framework based on the IoT predicts issues and permits ideal time planning for exercises. By utilizing the IoT, companies can robotize forms and decrease labor costs. It also moves forward benefit conveyance and gives transparency in exchanges to the client. In this respect, this chapter bargains with the essential definition of the IoT, the sorts of IoT gadgets, how to utilize them in businesses, the reason for clever companies, and when it is considered intelligent.

1. INTRODUCTION

IoT is difficult to define for two reasons. First, there are a variety of uses for IoT, like lighting homes, halting trains, and monitoring supply chains. Since IoT technologies have diverse applications, it can be challenging to identify the precise characteristics that link them. Second, technology is frequently mentioned as a triangle component at the heart of the Fourth Industrial Revolution (4IR), along with Artificial Intelligence

(AI) and Big Data. This classification makes sense because IoT is a source of the Big Data required to develop AI algorithms, but because of this linkage, we know very little about IoT itself. So, with numerous viewpoints on the technology, the definitions of IoT have evolved throughout the years (Chadli et al., 2022).

IoT can be defined as a network of networked devices that can share data through the Internet in its most basic form. IoT gadgets, including sensors, smart refrigerators, smart home systems, cameras, and fitness trackers, are called "Things" in this context. The term "thing" refers to any item that can connect to the Internet and is used in IoT networks. The potential for exploiting data makes it very clear how much IoT will influence business growth. Businesses may be able to make decisions more quickly because of the direct connection between sensors and real-time data transmission (Kolisnyk et al., 2022).

IoT can change the corporate and customer scene by interfacing with the physical and digital worlds. Any industry that depends on making, transporting, or offering things that weren't already associated with the Internet will benefit. The precise advantages IoT can offer a company will depend on how the technology is applied. For instance, sensors can optimize lighting or heating based on occupancy levels or decrease product spoiling in transit by keeping an eye on temperatures (Lang et al., 2021). IoT may also enhance production and bring in money. For example, acoustic offshore oilfield sensors can analyze pipeline activity to maximize output and find new resource sources. It's helpful to think about the five primary IoT capabilities, connecting, collecting, monitoring, monetizing, and optimizing, to assist in developing an understanding of the possibilities for IoT in any particular firm (Nozari & Ghahremani-Nahr, 2023).

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