Chapter 9

Applications and Impact of Internet of Things in Digital Marketing

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ABSTRACT

Over the past few decades, curiosity and enthusiasm in science and technology have grown tremendously, to the extent that IoT is now being applied to a wide variety of sectors including business, marketing, manufacturing, sustainability, blockchain, and sports. Digital marketers are leveraging IoT technology in the current digital age to develop marketing strategies and adapt to changing industry trends. Marketers can implement new service-oriented strategies by combining IoT, Big Data, and data analytics. Among these technologies, IoT is crucial in assisting businesses in increasing utilization and manufacturing organizations. With the extensive exploration of IoT solutions, marketing practitioners and businesses can collect consumer data, store it in databases, increase sales, improve products and services, and develop revenue-boosting strategies. This chapter specifies how the consistent use of IoT technologies results in substantial organizational competitiveness and explains how IoT can be referred to as a new component of business analytics and digital marketing.

INTRODUCTION

Modern Information and Communication Technology (ICT) rapid development significantly impacts our daily activities, employment, way of life, and way of thinking. Household appliances could be controlled via our smartphones and exchange data using built-in sensors, while cars could choose the best route to avoid traffic and automatically order a new part to replace a broken one from the nearest workshop (Angelova et al., 2017). Technology makes life easier by providing convenience, accelerating access to

services, and automating management (Angelova et al., 2017). Among other technologies, the Internet of Things (IoT) plays a vital role in developing more intelligent manufacturing processes. The IoT includes services, machines, production modules, and products that can exchange information, trigger actions, and control each other, enabling an intelligent manufacturing environment (Weyer et al., 2015). These "smart" devices were part of science and fiction a few years ago, but technology has changed today's world. According to a McKinsey Global Institution report (& McKinsey & Company., 2018), IoT could have an annual economic impact of $3.9 trillion to $11.1 trillion by 2025 in various platforms such as factories, cities, retail environments, and the human body, as shown in figure 1.1.

Figure 1. Potential economic impact by segment

Because of the heterogeneity of the technology and hardware, there is no single unified definition of the term 'Thing' resulting in multiple interpretations of the concept of things and the IoT. Consequently, each stakeholder has defined the concept have a view of "Internet" and "Thing," which describe their features, ways of connecting, and ways of interacting. Niccolò Machiavelli- history's great futurist, might have predicted the Internet of Things (IoT) when he quotes, "There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success than to take the lead in the introduction of a new order of things" (Patel et al., 2018). The Internet of Things (IoT) refers to the emerging trend of augmenting physical objects and devices with sensing, computing, and communication capabilities, connecting them to form a network, and leveraging the collective effect of networked objects (Guo et al., 2013).

According to Adrin McEwen (McEwen & Cassimally, 2014) "The internet of things is formed by the combination of physical objects, controllers, sensors, and actuators, as well as the Internet, where actua-

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