


# Bring Your Own Device in Healthcare

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## ABSTRACT

Bring your own device (BYOD) policies have become a very popular topic in information technology, as this approach allows employees to bring their devices into their organizations and use them to access information. This trend has some benefits both for the organization and to employees. This paper aims to identify those benefits as well as the advantages and disadvantages of BYOD usage in organizations. In addition, SWOT analysis of BYOD usage is presented and discussed. Finally, it is introduced as an approach to BYOD in healthcare. Utilizing personal devices at work is beneficial to organizational employees as they are in some way satisfied, and they have more freedom and choice to use their devices. This can easily lead the employees to be more productive and flexible. Organizations who embrace BYOD policies have noticed that their employees are happier, more productive, and more collaborative.

## KEYWORDS

Bring Your Own Device (BYOD), BYOD Benefits, BYOD SWOT Analysis, Mobile Devices in Healthcare

## 1. INTRODUCTION

The growing evolution in the development and adoption of information and communication technologies initiative have also internationally evolved the trends of Bring Your Own Device (BYOD) that are rapidly changing the operating methods of organizations, achieving greater efficiency and productivity. In a globalized, globally connected world, more and more employees are bringing their own devices to the workplace. Although there are cases where the organization itself offers mobile devices to its employees, not all employees use these devices, as they already have the device itself and can use them in the workplace, i.e., this evolution brought new opportunities to employees as it allowed them to bring their own devices to the workplace and integrate them into the organization's network instead of using the organization's devices. The use of personal mobile devices by employees in the workplace has become a new paradigm. Organizations with this paradigm encourage and enable their employees to bring their mobile devices into their network and encourage them to use them. The reason that motivated the accomplishment of this article is the identification and explanation of factors and benefits that BYOD has for organizations.

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Therefore, the main objective of this article is to identify and explain the benefits, advantages, and disadvantages that organizations might have with the implementation of BYOD policies. This new approach has provided significant evidence of the benefits to organizations both for the organization's employees, but also for the organization itself. This article will present and discuss the main benefits, advantages, and disadvantages, and a SWOT analysis that this approach has for both employees and the organization itself. Also, BYOD policies will be presented in a healthcare context. Thus, it is intended to identify the readiness that this approach brings to organizations. The structure of the article is the following: the first chapter being the introductory chapter, the second chapter presents a background study, the third chapter is the introduction and presentation of the BYOD approach. Also, in this chapter, the benefits, advantages, and disadvantages of this approach for organizations are presented. The fourth chapter presents a SWOT analysis of BYOD for organizations. The fifth chapter presents a brief introduction to the benefits of BYOD in healthcare. Finally, the sixth chapter presents the conclusions and the final considerations in the article.

## **2. BACKGROUND**

By applying BYOD policies in the organization, some knowledge about its background is essential. This background knowledge is about pervasive computing, ubiquitous computing, and information in real-time, as organization employees need information in real-time to develop their works.

Pervasive, also called ubiquitous computing, is the growing trend of embedding computational capability into everyday objects to make them effectively communicate and perform useful tasks in a way that minimizes the end user's need to interact with computers as computers. Pervasive computing devices are network-connected. The terms pervasive/ubiquitous signify "existing everywhere", meaning devices that use pervasive/ubiquitous computing are totally connected and consistently available (Rouse, 2016).

Ubiquitous computing is a paradigm in which the processing of information is linked with each activity involving connected devices it can occur in any time, any device, any location, and any format (Rouse, 2016; Sen, 2012). The idea behind using BYOD in organizations with pervasive and ubiquitous computing is to provide a real-time intelligent environment for accessing information and applications through a new class of ubiquitous, intelligent devices that can work easily when and where it is needed. This means that pervasive and ubiquitous computing can be the first step to have the right BYOD policies implemented at the organization.

The evolving concepts of pervasive computing, ubiquitous computing and ambient intelligence are increasingly influencing healthcare and medicine. Because of its ubiquitous and unobtrusive analytically, diagnostic, supportive, information and documentary functions, pervasive computing is predicted to improve traditional healthcare. Some of its capabilities, such as remote, automated patient monitoring and diagnosis, may make pervasive computing an advanced tool in terms of home care and may enhance patient self-care and independent living. Automatic documentation of activities, process control or the right information in specific work situations as supplied by pervasive computing are expected to increase the effectiveness as well as the efficiency of healthcare providers (Orwat, Graefe & Faulwasser, 2008). Pervasive healthcare is able to reach the required quality of the service at any moment and by any anyone, regardless of its location and position, along with other restrictions. Furthermore, it is characterized by heterogeneous information, a dynamic number of interesting parts (stakeholders), and by ubiquitous computing, that connects perfectly the digital infrastructures in our daily lives (Pereira, Portela, Santos, Machado & Abelha, 2016).

## **3. BRING YOUR OWN DEVICE**

Bring Your Own Device (BYOD) is a subset of the consumerization of Information Technologies (IT). Consumerization of IT refers to private or personally owned IT resources, such as computer device

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