

Chapter 2

Digital Economy and Cloud: Trends and Challenges for Healthcare Organizations

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ABSTRACT

This chapter aims to present the trends and challenges healthcare organizations will face as a result of the digital revolution. In particular, the healthcare industry needs to look for a new strategic focus, acquiring new specialties, and establishing new ways of working, defined in new business models in which cloud computing technology will be increasingly present. Understanding what cloud computing is is the first step to better understand the challenges and trends ahead.

INTRODUCTION

Many healthcare organizations, not only at the level of services, but also at the level of specialized suppliers in the sector, are not prepared for the technological challenges that are coming. The strategic vision of these organizations should be, firstly, to realize that adapting to the Digital Economy is important for the success of their business models and secondly, that it is imperative to innovate in the approach to the market and innovate in the diversification of products and services to offer, as well as in management processes, even if it means leaving the comfort zone. In order for these organizations to create new offers and better responses to services, it is necessary to put aside the idea of “we’ve always done it this way and that’s how we got here”.

In the book *Hit Refresh*, the CEO of Microsoft describes very well how his organization had to change the business focus in order to continue to be one of the main players in the market: “we needed to build deeper empathy for our customers and their unarticulated and unmet needs. It was time to hit refresh.” (Nadella, 2017, pp. 29). In a very recent past, Microsoft had the need to create a deeper empathy with

DOI: 10.4018/978-1-7998-4099-2.ch002

its customers, to be closer to their problems and to better understand them. A few years earlier, Drucker (1994) wrote about business models and stated that what had paralyzed IBM in the 1970s and 1980s was the (wrong) assumption by its managers that the industry was driven by hardware. In Drucker's opinion, an organization that wanted to be innovative and well succeed, could not be too focused on selling its "hardware" (that is, its traditional products and services) but should, instead, try to understand its customers in order to provide alternative solutions, more diversified and integrated with its customers' needs. And, if we add the opinion of Nadella (2017) to this thought, in which empathy generates innovation, all of this leads us to the conclusion that a company should be as close as possible to its customers, feeling their needs, problems, "pains" and ambitions, so you can execute an innovative and successful business model.

Understand the true path of a business, creating more and better relationships with its customers, is one of the main steps towards innovation. Organizations that are too focused on their traditional business models, can hardly change and focus on innovation. In an increasingly global and digital world, it is important for organizations to perform a "hit refresh" to their business models.

In this chapter, the authors will address, from a management perspective, not only the trends, but also the challenges related to cloud computing technology and its adoption by the entire ecosystem of organizations and companies operating in the healthcare sector. A qualitative methodology is used based on the documental analysis of healthcare reporting and information collected from several sources and is an important topic for entrepreneurs and other stakeholders concerned with these issues.

In this chapter the authors address the following subjects:

- **What is cloud computing?** What kind of novelty brings this emerging technology?
- **Service and Deployment Models for the Cloud:** Organizations in all business areas, including healthcare, that are willing to adopt cloud computing as part of their business model should understand the types of services and deployment models that most cloud providers supply;
- **Level of Cloud Adoption by Organizations:** Cloud computing is new for most organizations but there are some of them that are already investing in this type of infrastructures. Is it a trendy technology?
- **Challenges of Cloud Computing:** So that cloud computing could be a present technology in business, organizations need to understand the multiple challenges involving the use of cloud as a service;
- **Cloud Security and Privacy:** Of all challenges, security and privacy are fundamental to the healthcare sector;
- **Cloud Adoption and Trends in the Healthcare Industry:** Overloaded systems require higher availability of clinical diagnostics and the huge amount of data generated continues to increase exponentially. How will healthcare organizations manage those challenges? And how are they implementing proper cloud strategies?
- **The Cloud applied on the combat to COVID19 Pandemic:** The importance of cloud computing and technological industry helping healthcare organizations in the facing of COVID19 pandemic.

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