

Chapter 84

Impediments in Healthcare Digital Transformation

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ABSTRACT

This article is addressing the specific impediments that appear in the process of healthcare digital transformation. Enterprise architecture provides the framework for investigating the behavioral and active structural aspects that apply to business and application layers. This includes an analysis of, including inherent relationship between, selected scopes such as strategy, business, and education to standard elements such as process, service, and function of an application. The presented classification and assignment of individual impediments indicate to healthcare managers where they may potentially struggle during different stages of digital transformation. Among others, they facilitate strategic planning and managerial decisions during implementation of the emerging information technologies and techniques. In addition, the idea is to contribute to the successful implementation of healthcare digital transformation, thereby delivering business value within healthcare sector, and consequently to a better quality of life.

INTRODUCTION

Healthcare digital transformation (HDT) was already widespread globally. Within this context this article focuses on business dimension in continuous optimization across processes and the entire business ecosystem that embraces the managerial view as well. This affects not only the conjunctions of Information Systems (ISs), emerging information technologies (IT) and techniques, and other resources in processing of massive amounts of health information. To facilitate further developments in HDT the authors addressed the impediments that include challenges and gaps. The Open Group Enterprise architecture

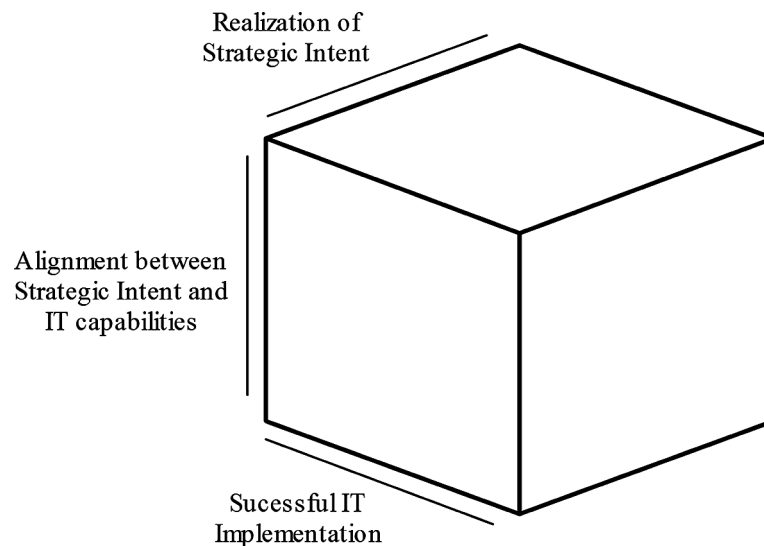
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standards comprise the TOGAF and/or ArchiMate frameworks for investigating the behavioral, and active structural, aspects that apply to business and application layers (The Open Group, 2014, 2017). This includes an analysis of, including inherent relationship between, selected scopes such as strategy, business and education to standard elements such as process, service, and function of an application. The classification and assignment of individual impediments indicate to healthcare managers where they may potentially struggle during different stages of HDT. Among others, the findings facilitate strategic planning and managerial decisions during implementation of modern IT, emerging techniques, and developments of supportive ISs.

BACKGROUND

The business processes during digital transformation have increasingly significant impact on organizations' operations where ISs play strategic role. Within context of business and IT Arvidsson et al. described three critical dimensions (Figure 1) to consider successful implementation of IS strategy (Arvidsson, Holmström, & Lyytinen, 2014). In healthcare, the proper adoption, and effective use, of strategic IS can be the key component of business strategy within HDT in achieving a competitive advantage in patient's care (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013; Chesney, 2003).

Figure 1. Three critical dimensions within IS strategy implementation [source: (Arvidsson et al., 2014)].



In providing the real-time decision support during process of digital transformation the businesses should rely on business ISs. In healthcare the composites of many applications, functions, technology, and people (both developing and using) include Electronic Health Record (EHR) in order to ensure clinical, and financial, information functions (HIMSS Enterprise Information Systems Steering Committee, 2007; Møller, 2006). The business ISs (Figure 2) on one side support an organization's day-to-day business activities and on other side they support managerial decision making (Hardcastle, 2011).

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