Chapter 37
The Main Concepts Behind the Dematerialization of Business Processes

Liliana Ávila
University of Aveiro, Portugal

Leonor Teixeira
University of Aveiro, Portugal

ABSTRACT

This chapter aims to introduce the main concepts behind the dematerialization of business processes, which is relatively new in the academic literature, although there are already empirical evidences of the benefits arising from its implementation, especially in the public sector. The dematerialization of business processes results from the intersection of three other knowledge domains—electronic document management, workflow management, and reengineering of business processes—whose interconnections will be explored in the chapter. It also emphasizes the role of information and communication technologies as an important tool for any organization that intends to improve its performance through the better management of its information workflows. It presents a comparative analysis performed for some tools available in the market (propriety and open-source solutions) in order to help organizations to understand the benefits and commitments arising from the modernization of processes. Finally, the chapter identifies some opportunities for the conduction of future research.

INTRODUCTION

Currently, Information and Communication Technologies (ICTs) represent an important tool for all the organizations that intend to improve their performance through a better management of their information processes. The dematerialization of business processes emerges as one solution that promotes a clear, structured and transparent process, especially when the problems are associated with the existence of documentation in a paper format. It comprises a range of practices, such as electronic document management, workflow management and reengineering of business processes, aiming the elimination

of inefficiencies caused by the circulation of information in paper format, as well as the elimination of resources associated with the maintenance and retrieval of information in that format. The increase in productivity that often is expected to result with dematerialization of business processes comes from the (i) decrease in the amount of time to perform the tasks, (ii) effectiveness of human resources allocated to those tasks, (iii) quick access to information, and also (iv) improvement of communication flow between different services.

The dematerialization of business processes is not a new concept. It is already implemented in different areas, particularly in the public sector. However, due the lack of a theoretical framework, each organization makes its own interpretation of the concept and adopts its own methodologies and technologies. In this context, it is very important to clarify the concept of dematerialization of business processes in order to achieve a common understanding.

This chapter aims to contribute to this knowledge domain, providing an overview of the main concepts behind the dematerialization of business processes, giving special attention to the vital role of ICTs, through the analysis of some tools that can be used to support the dematerialization of business processes. In this way, the main goal is to help organizations understanding the benefits and commitments that can arise from the modernization of their processes.

INTRODUCING THE DEMATERIALIZATION OF BUSINESS PROCESSES

The dematerialization of business processes is a relatively new concept in the domain of scientific research. Nevertheless, it is possible to find evidences of its implementation, namely in the public sector through the topic known as "e-governance".

Usually, the concept of dematerialization can be defined as the process of scanning paper documents to obtain electronic documents, in order to eliminate the circulation of paper. According to Siatiras (2004), currently the information is probably one of the most important assets in the organizations, and therefore its efficient management is very important.

However, the dematerialization of business processes is not limited to scanning and managing documents, it also allows the organization to manage its workflows. In this sense, the dematerialization of business processes refers to the optimization of information circuits through technological applications, where the information is communicated and stored in digital format in order to expedite and facilitate the monitoring of processes, always ensuring the legal value of those electronic documents (Ávila, Teixeira, & Almeida, in press). The main gains associated with the dematerialization of business processes are the facility in search documents (Ashby, 2011; Schnitzer, 2010; Want, 2009), and the concurrent access by multiple users to the same document regardless their geographic location (Ashby, 2011; Downing, 2006). This is even more important for organizations that are active in different locations and need to exchange information in a regular basis.

The dematerialization of business processes can also be a mean to improve customer service, since the information is readily available on the computer without the need for search in paper files, allowing an immediate response to customer requests and a greater flexibility to respond to a variety of needs (Burns, 2009; Downing, 2006; Medina & Fenner, 2005). Other consequences are the savings in time and costs (Johnston & Bowen, 2005; Schnitzer, 2010; Want, 2009) and the improvement in the quality of processes and their outcomes (Ashby, 2011; Johnston & Bowen, 2005). At the human resources level,

10 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/the-main-concepts-behind-the-dematerialization-of-business-processes/212134

Related Content

Nietzsche's Constructions of Power: Implications for International Business Ethics
Ross A. Jacksonand Amanda M. Reboulet (2019). *International Journal of Responsible Leadership and Ethical Decision-Making (pp. 27-43).*
www.irma-international.org/article/nietzsches-constructions-of-power/264438

The Shop of the Future: Bridging the Online/Offline Experience Gap in Fashion Retail Through Virtual Reality
Christian Hendrik Toma (2018). *Fashion and Textiles: Breakthroughs in Research and Practice (pp. 42-68).*
www.irma-international.org/chapter/the-shop-of-the-future/187839

Transfer Knowledge Using Stories: A Malaysian University Case Study
Khairul Shafee B Kalid (2012). *Organizational Learning and Knowledge: Concepts, Methodologies, Tools and Applications (pp. 2998-3010).*
www.irma-international.org/chapter/transfer-knowledge-using-stories/58254

The Power of Many: A Structured Framework for Collective Innovation
Rick L. Edgeman, Kunal Y. Sevak, Nik Grewy Jensenand Toke Engell Mortensen (2021). *International Journal of R&D Innovation Strategy (pp. 1-17).*
www.irma-international.org/article/the-power-of-many/287875

Teamwork and Performance of Commercial Banks in Anambra State, Nigeria
Ifeoma Rita Anekwe, Nwanah Chizoba Patienceand Grace Akaegbobi (2021). *International Journal of Responsible Leadership and Ethical Decision-Making (pp. 1-6).*
www.irma-international.org/article/teamwork-and-performance-of-commercial-banks-in-anambra-state-nigeria/295090