

Chapter 2

Exploring Business Process Agility From the Designer's Perspective: The Case of CMMN

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ABSTRACT

Business process agility remains an intriguing issue for business process management (BPM) when it comes to modeling human-centric processes. Several attempts were made from academia to find alternative approaches, with the reputable adaptive case management to be introduced recently as an alternative to BPM methodology and case management modeling and notation (CMMN) standard, as an alternative language of business process management notation (BPMN), targeting the modeling of human-centric processes characterized by agility. This chapter identifies the nature of human-centric processes, as its main objective is to examine whether using CMMN for the design and modeling of such processes could cover their agility requirements.

INTRODUCTION

When considering business processes design, what comes to mind is a predefined set of specific actions that must be accomplished in a predetermined order. Indeed, BPMN had been used seamlessly for the design of action-driven processes. In such processes, a rigid sequence is defined as tasks are being performed according to the order imposed. However, there are processes for which task sequence cannot

DOI: 10.4018/978-1-5225-7271-8.ch002

be prescribed, as which activities are to be performed is strongly based upon human decision influenced by the circumstances as well as unpredicted contingencies. Such processes are characterized by dynamic behavior and intense human involvement and cannot be described by a specific order of actions. (Alexopoulou, et al., 2009) Human-centric processes is an identical example of such processes, making agility a challenging and important factor for them, due to the fact that these processes are not so well defined. Many research attempts refer to this topic, including (Alexopoulou, et al., 2013), where it is indicated that business process design is an equally important phase of the business process lifecycle and that the exploration of agility from the designer's perspective has not been given the attention it deserves.

The objective of this chapter is to explore agility at the designing phase of human-centric processes introducing ACM as a methodology that will ensure agility in human-intensive processes and CMMN as the modeling language that could cover the agility requirements of such a process presented in (Alexopoulou, et al., 2013). For this purpose, a typical human-centric process is used as a case study, the one of Patient Treatment.

This chapter is organized as follows. The background of the notions discussed during this work is presented in the second section. In the third section, a holistic approach towards business process agility is analytically presented. The nature of human-intensive processes is identified in the fourth section. The fifth section presents Adaptive Case Management and its perspective of agility, in comparison to BPM, while the sixth section projects how the CMMN could be used for the agile modeling of human-centric processes. The Future Research Directions and the Conclusion of this chapter are presented in the final two sections, outlining both possible future extensions to the research presented in this work and useful conclusions as far as how the agility of human-centric processes modeled with CMMN could be improved.

BACKGROUND

Business Process Agility

Business process agility (or flexibility) has been a matter of interest for numerous researchers (Milanovic et al., 2011; Van der Aalst et al., 2009; Snowdon et al., 2007; Pesic et al., 2007; Daoudi & Nurcan, 2007; Reijers, 2006; ShuiGuang et al., 2004; Rinderle et al. 2004; Mangan & Sadiq, 2002; Millie & Balasubramanian, 1997). Agility in the context of business processes can be defined as the ability of an organization to effect changes in the process components (activities, roles, resources, information etc.) in a timely manner, usually in response to changes in business environment and stakeholders' needs (Alexopoulou et al., 2008). The intense interest on business process agility stems from the fact that business process automation supported by the utilization of process-aware information systems (Dumas et al., 2005) has increased accuracy and efficiency in process execution on one hand, but it has also rendered business process modification a complex and time-consuming task. This is because well-structured business process models executed by Business Process Management Systems (BPMS) (Dumas et al., 2005) proved to be inflexible to change. Since modern enterprises operate in highly turbulent environments having to cope with a frenetic pace of change (Oosterhout et al., 2006) and continuously sense opportunities for competitive action in their product-market spaces, it is business process agility, which underlies enterprises' success in constantly enhancing and redefining their value creation in highly dynamic environments (Sambamurthy et al., 2003).

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