Business Process Modeling: Perceived Benefits

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Abstract. The process-centered design of organizations and information systems is globally seen as an appropriate response to the increased economic pressure on organizations. At the methodological core of process-centered management is process modeling. However, business process modeling in large initiatives can be a time-consuming and costly exercise, making it potentially difficult to convince executive management of its benefits. To date, and despite substantial interest and research in the area of process modeling, the understanding of the actual benefits of process modeling in academia and practice is limited. To address this gap, this paper explores the perception of benefits derived from process modeling initiatives, as reported through a global Delphi study. The study incorporates the views of three groups of stakeholders – academics, practitioners and vendors. Our findings lead to the first identification and ranking of 19 unique benefits associated with process modeling. The study in particular found that process modeling benefits vary significantly between practitioners and academics. We argue that the variations may point to a disconnect between research projects and practical demands.

Keywords: Business process modeling, benefits, modeling advantages, Delphi study.

1 Introduction

Business process modeling – an approach to depict the way organizations conduct current or future business processes – is a fundamental pre-requisite for organizations wishing to engage in business process improvement or Business Process Management (BPM) initiatives. In their most basic form, process models describe, typically in a graphical way, the activities, events and control flow logic that constitutes a business process [1]. Additional information, such as goals, risks and performance metrics for example, can also be included. Accordingly, process models are considered a key instrument for the analysis and design of process-aware Information Systems [2], organizational documentation and re-engineering [3], and the design of service-oriented architectures [4].

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Globalization, recent economic turbulence, and regulatory body mandates for process compliance have further contributed to an increased interest in BPM [5] and, hence, business process modeling. A recent study showed that process modeling is behind four of the top six purposes of conceptual modeling [6]. The increased interest is in part manifested by an increase in enquiries and requests for process modeling executive training in the Australian market (e.g., www.bpm-training.com). Anecdotal evidence further suggests that this phenomenon is also present in the USA and the European market. Other indications include, for example, the rapidly growing popularity of the Business Process Modeling Notation (BPMN) [7].

Process modeling on a large, company-wide scale, however, can require substantial efforts in terms of investments in tools, methodologies, training and the actual conduct of process modeling. This scale of modeling demands sound business cases. Studies indicate that individuals (for example, business analysts, managers) have difficulty in obtaining executive management support for process modeling initiatives in organizations [e.g., 8]. Typically, they are unable to communicate and quantify the benefits that can be expected from process modeling activities. In return, executive management often does not see enough evidence to support investments in process modeling initiatives. While substantial research over the last decade contributed to a significantly matured process modeling capability, a wider uptake of process modeling is often limited by such economic assessments. In fact, demonstrating the value of process modeling (and not specific methodological or grammar related issues) is seen as the major challenge by process modeling professionals [9], yet little guidance or related study exists in this area. This finding is a significant problem for initiating process modeling initiatives since rational decision makers make decisions on the basis of their net benefits as perceived by them for their circumstances - that is, benefits outweighing costs. Decision making theory tells us that this has to be evaluated from individual stakeholder perspectives [10]. Therefore, as a first step in this process, we were motivated to explore the perceptions of benefits of process modeling though a large Delphi study.

The main goal of this study is to identify and explore the most compelling benefits that can be derived from process modeling. In reaching such a goal, we are able to provide guidance to organizations on the main process modeling expectations, as well as identify implications for consultancy and tool development and future process modeling research. Accordingly, our study is based on the following research question: *What are the main perceived benefits of process modeling?* We explore this question in a Delphi study setting with three main stakeholder groups of the process modeling ecosystem*, viz.*, *academics* in the business process modeling domain, business process modeling *practitioners*, and *vendors* of business process modeling software tools and consultancy offerings. Our objective is to identify the most compelling benefits believed to be associated with process modeling initiatives, reach consensus on these benefits, and identify how the perception of benefits differs across the three stakeholder groups.