

Enterprise Modeling for Business and IT Alignment: Challenges and Recommendations

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ABSTRACT

In order to achieve Business and IT Alignment (BITA) it is required to capture and analyze both business and IT dimensions of enterprises. In this regard Enterprise Modeling (EM) is acknowledged as one useful mean. One of the central roles during EM is EM practitioner who drives and coordinates the EM project. Conducting EM is a highly collaborative activity that requires considerable skills and experience since EM practitioner has to deal with various challenges throughout the project. Despite a quite wide range of research, EM challenges needs to be further investigated, in particular concerning practical recommendations related to creation and usage of enterprise models. This article presents a framework with challenges and recommendations for EM that is aimed on facilitating business and IT alignment. The empirical base for the study consists of interviews with EM practitioners that have significant experience in EM.

Keywords: *Business and IT Alignment, Enterprise Modeling, Enterprise Modeling Challenges, Enterprise Modeling Practice, Enterprise Modeling Practitioner, Enterprise Modeling Recommendations*

1. INTRODUCTION

An evident challenge for enterprises is to remain competitive in a dynamic and evolving business environment (Clark, Matthes, Barn, & Brown, 2014). Some enterprises are forced to deal with transformation and change more reactively while others have the possibility to be more proactive in the planning, design and implementation of changes. Regardless of type

of change (reactive or proactive) there appears to be a need to agree on future vision and strategy among the stakeholders and to have a common understanding about the current praxis in the enterprise (Siegerroth, 2011). Enterprise Modeling (EM) has in this context been described as one of the means to reach these goals (Chen, Kazman, & Garg, 2005; Stirna & Persson, 2009).

According to Stirna, Persson, & Sandkuhl (2007) EM is an activity that creates integrated

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and commonly shared models, which captures various aspects of the enterprise. Chen, Kazman, & Garg (2005) define enterprise models as visual structures, which represent the key components of the business that needs to be understood. Enterprise models usually focus on different facets of the domain (focal areas, c.f. Seigerroth, 2011), for example: processes, business rules, concepts, information, data, vision, goals, actors, etc. The inherent power of enterprise models is their ability to depict and represent an enterprise from a number of perspectives (*ibid*). Therefore EM can foster a multidimensional understanding of an enterprise and it can integrate these dimensions into a coherent structure where different parts (focal areas) contribute to the whole structure (Frank, 2002). This capability of EM makes it useful for a broad range of purposes such as: development of business vision and strategies, redesign of business practice, development of supporting IS/IT infrastructure, knowledge sharing about business practice, decision-making (Persson & Stirna, 2001).

In the context of change EM has also been acknowledged as one of the means to facilitate business and IT alignment (BITA). BITA has held the interest of both practitioners and researchers for some time (Luftman & McLean, 2004; Chan & Reich, 2007; Seigerroth 2011) and the potential of EM to facilitate BITA has been recognized, for instance by Wegmann, Regev, & Loison (2005); Seigerroth (2011). In relation to BITA EM can be used to bridge the gap between the organizational context and technology (and information systems in particular).

One way to link organization and technology is to view enterprises from an action perspective where actions are performed by humans and artifacts. Socio-instrumental pragmatism (Goldkuhl & Röstlinger, 2002) incorporates human, organizational, and IS/IT-enabled actions within a single, coherent ontology. This concern of theorizing actions has also been acknowledged by actor-network theory (ANT) (Latour, 1991), where technology and people are both regarded as social actors.

As identified by Goldkuhl & Ågerfalk (2005) it is necessary, therefore, to acknowledge both the social in the technical and the technical in the social – a duality that is a main concern within BITA.

This study focuses on participative EM, which is a highly collaborative process, where various stakeholders' interests and perspectives are considered and consolidated (Stirna & Kirikova, 2008) (e.g., the process of developing/creating models of different views on the whole enterprise as well as specific parts of the enterprise). The aim of modeling sessions is to collect required information about the enterprise (domain knowledge) and transform this information into models. The models usually evolve through discussion that enables their incremental refinement. There are usually two parties involved in such collaborative EM efforts: (1) participants from the enterprise who have domain knowledge (domain experts) and (2) an EM practitioner (also called modeling expert, modeling facilitator or modeler) who leads and coordinates the modeling session(s).

The role of the EM practitioner is vital for the success of modeling initiatives and for managing the collaborative dimensions of EM (Rosemann, Lind, Hjalmarsson, & Recker, 2011). EM practitioners therefore need to have a broad range of knowledge about collaborative EM techniques and considerable experience of EM execution, since various problems and challenges can occur during the actual EM sessions and during the follow-up activities (Stirna & Persson, 2009). EM practitioners express a need for structured recommendations, a requirement that has been highlighted by several scholars (i.e. cf. Bandara, Gable, & Rosemann, 2005; Stirna & Persson, 2009; Mendling, Reijers, & van der Aalst, 2010). Identification of EM challenges can be used in this context as a base for generating such recommendations. There is a number of studies available that present different modeling challenges and recommendations (Gulla & Brasethvik, 2000; Bandara, Gable, & Rosemann, 2005; Mendling, Reijers, & van der Aalst, 2010; Kaczmarek, Seigerroth, & Shilov, 2012). However, most of these studies do not

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