Chapter 5.20
Enterprise Information Systems Change, Adaptation and Adoption:
A Qualitative Study and Conceptualization Framework

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ABSTRACT

This article introduces and discusses the process and system conceptualization framework for adoption and ongoing evaluation of enterprise information systems, based on the series of recursive high and base-level conceptualizations of organization's existing (as-is) and desired (to-be) processes and systems. The motivation for the framework is provided by a qualitative study that reveals two distinct approaches to the organizations' systems adoption and change. The approaches are labeled as systems view and process view, centered on organizations' processes and systems respectively; where process oriented approach is more likely to result in better fit between the adopted systems and corporate needs. Consistent with this finding, the purpose of the introduced framework is to guide organizations toward embracing the process-centric approach to the adoption of enterprise information systems, by placing particular emphasis on processes' and supporting systems' fit with organization's strategic goals.

INTRODUCTION

Continuous pressures to cut costs, increase productivity and capture a competitive edge in global markets are among the main drivers of ongoing investment in change and adoption of information systems and system components in many enterprises. Nevertheless, the success rates of enterprise systems implementation have been fairly low with respect to a variety of evaluation criteria, such as on-time and on-budget completion, system match with functional requirements, and cancellation rates (Hong & Kim, 2002; Legris, Ingham & Collerette, 2003). Reported failure-rates vary somewhat, but typically are estimated at 30-50% (Surmacz, 2003). Consequently, a great deal of research has explored the factors influencing the effectiveness of managerial decisions about information system adoption, as well as the quality of the implementation of these decisions.

This problem has been approached from many perspectives using a host of methodologies. Many different empirical models have been published, including cognitive models at an individual level such as the Technology Acceptance Model (TAM) (Davis, 1989), behavioral models such as the Theory of Planned Behavior model (Ajzen, 1991), and firm resource-based models (Srinivasan, Lilien & Rangaswamy, 2002). This large and diverse body of research has added much to our understanding of technology adoption on an organizational level, especially in the identification and classification of a variety of factors according to their source (internal vs. external to the organization), size, explanatory power, and level of managerial control in influencing their size and impact (Champy & Hammer, 1993).

Some empirical research has recognized the importance of organizational contexts in determining the success of information systems planning. A study (Hong & Kim, 2002) has concentrated on the influence of organizational fit on success of system implementation. In this study, organizational fit was defined as the degree of alignment between the existing software package and organizational needs in terms of data, processes, and users. The authors recommended that the implementation team as well as top managers should undertake this assessment of fit, ahead of the actual adoption process, with continuous measurements during the implementation phase. This, and similar, studies touch on the issue of alignment among organizational strategy, business processes, and enterprise systems.

In addition, recent published work investigated the relationships among strategic goals of an organization, its business processes and structure, and its information systems. According to Attaran (2004), the role of information technology capabilities is emphasized in process planning and redesign. Information technology is described as a critical enabling tool to advance firm performance through business process reengineering by facilitating communication across functions, improving process performance, and by helping management to model, optimize, and assess the consequences of business process change. In Attaran (2004) these processes were described as tools for organizations to achieve success.

Given the known connections among strategies, processes, and systems, why is change and adoption failure still common? Perhaps there are additional factors that have not yet been widely recognized and accepted by the industry. In particular, the importance of the conceptualization of processes and systems at multiple levels of complexity is an important, but often underappreciated, factor in system change and adoption. The conceptualization process can often be a moderating factor in success, in that other established success factors are enhanced by the organizational commitment to conceptualization of processes and systems. This article introduces a framework that outlines, in an increasing level of detail, the recommended flow of conceptualization efforts in an organizational system change and adoption process, the constituencies involved in the different stages, and appropriate methodolo-

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