Available online at www.sciencedirect.com
SCIENCE DIRECT®
International Journal of Project Management 24 (2006) 38–52
INTERNATIONAL JOURNAL OF PROJECT MANAGEMENT
www.elsevier.com/locate/ijproman

Interpreting an ERP-implementation project from a stakeholder perspective

Albert Boonstra *

University of Groningen, Faculty of Management and Organisation, Landleven 7/P.O. Box 800, 9700 AV Groningen, The Netherlands

Received 7 September 2004; received in revised form 10 November 2004; accepted 7 June 2005

Abstract

ERP-systems are software packages that enable the integration of transactions oriented data and business processes throughout an organisation. ERP-implementation projects can be viewed as processes of organisational change: many problems related to ERP-implementation are related to a misfit of the system with the characteristics of the organisation. This article uses the evidence of a case study to uncover some important dimensions of the organisational change issues related to ERP-projects. The study shows how ERP-implementation can impact the interests of stakeholders of the ERP-system and how these groups may react by influencing the course of events, for example by altering the design and implementation in ways that are more consistent with their interests. Understanding the possible impact of ERP on particular interests of stakeholders may help project managers and others to manage ERP-implementations more effectively.

Keywords: ERP (enterprise resource planning system); Stakeholder analysis; Change; Information technology; Implementation

1. Introduction

ERP-systems are commercial software packages that enable the integration of transactions oriented data and business processes throughout an organisation [1]. From a base in manufacturing and financial systems, ERP-systems may eventually allow for integration of inter-organisational supply chains [2,3]. Because these systems affect so many aspects of a company's internal and external operations, their successful deployment and use are critical to organisational performance and survival. In the case of ERP successful implementation is urgent, since the costs and risks of these technology investments rival their potential pay-offs. Failures of ERP-system implementation projects may lead to bankruptcy [3–6]. A study of 100 projects by Sirkin and Dikel [32] found that their sponsors considered them successful in only one-third of the cases and that tangible financial impact was achieved in only 37% of cases.

A study of Markus et al. [2] shows that many problems related to ERP-implementation are related to a misfit of the system with the characteristics of the organisation. This is consistent with the finding of Davenport [4], who argues that ERP '*tends to impose its own logic on a company's strategy, culture, and organisation*' which may or may not fit with the existing organisational arrangements. This means that ERP-project can be viewed as an organisational change project, rather than as the replacement of a piece of technology.

This article aims to uncover some important dimensions of the organisational change issues around ERP-implementation projects by focusing on how ERP-implementation can impact the interests of stakeholders around the ERP-system and how these groups may react by trying to influence the course of events and to alter the design in ways that are more consistent

* Tel.: +31 50 363 7289; fax: +31 50 363 2275.
E-mail address: a.boonstra@bdk.rug.nl.

0263-7863/$30.00 © 2005 Elsevier Ltd and IPMA. All rights reserved.
doi:10.1016/j.ijproman.2005.06.003

with their interests. Understanding the possible impact of ERP on particular interests of stakeholders may help project managers and others to manage ERP-implementations more effectively [7]. The paper draws mainly on a two-year study of an organisation that tried to implement an ERP-system in three of its business units.

So the specific contribution of this paper is to show how the outcome of ERP-system implementation can be affected by the meaning, which various stakeholders attach to the system, and by the actions they take throughout the project. There are just few descriptive accounts of how groups and individuals in organisations interpret IS-proposals and how they respond subsequently [8]. Especially empirical case studies that focus on the role of politics and stakeholders in relation to IS-implementation are scarce [8–12]. As a result, our insight into the role of stakeholders in the design and implementation of IS-applications in general and of ERP-applications in particular is constrained, which means that we have a lack of understanding of why groups and individuals act in the way they do. This paper aims to contribute by providing insight in the role that different stakeholders may play during ERP-implementations. Based on this insight guidelines will be offered to manage politics related project risks during ERP-implementations.

2. Backgrounds

The empirical research for this paper was informed by interpretive [13], processual [14] and integrationist [15] models of change. These models emphasise how various groups of people in organisations may have different interpretations of an information system that may shape their actions and influence the implementation and evolution of the IS [13,16]. The change view is rooted in social constructivism, which studies the meaning that people attach towards a particular technology [17] Social constructivism found its way to IS research by the so called interpretive approaches [13,15] and emphasise the subjective meanings that actors ascribe to an information system, which are based on particular interests, preferences, history and so on. From this view, system implementation can be explained by studying the interplay of attitudes and actions of various stakeholders, which may change over time [14].

Pettigrew [18–20] argues that organisational change can be understood by considering the interactions between the substance, context and process of change in the organisation. He also suggests that the change agent must be willing to intervene in the political systems of the organisation, and to legitimate the change in the face of competing proposals and ideas. Bennis [21] suggests that management of change is 'management of meaning', or with attempts to establish the credibility and legitimacy of particular definitions of problems and solutions with others, and to gain consent and compliance [14,22]. Dawson [14] developed this processual perspective on change more fully and argues that, to understand change, we need to take into consideration: (1) the past, present and future context in which the organisation functions, (2) the substance of the change itself and its significance, (3) the transition process, tasks, activities, decisions, (4) political activity, and (5) the interactions of these factors.

Orlikowski [15] proposes that the results of IT investments depend on the interaction of both technology and people over an extended period. Information systems are both a product of human action and an influence of human action. People initiate, design and use an IT system. Designers construct the system according priorities and expectations. Then, various stakeholders, such as users and managers, react in different ways, e.g., by welcoming, rejecting or adapting it. In doing so they socially construct the technology in the sense that these reactions may become features of the system. This continuing interaction means that the results eventually obtained are different from those, which were originally expected. The model of Orlikowski suggests that people can modify technologies during design, implementation and use, since people and technology interact. Orlikowski also suggests that IT is not a fixed, given piece of technology. To understand how a system functions in a business we must understand the nature of the relationship between various stakeholders and their interactions with the system. This understanding includes culture and power relationships. This is consistent with the findings of Markus et al. [2] who suggests that ERP-systems are inherently flexible which means that stakeholders have many opportunities to influence the form of technology during the initial decision-making, the development, the implementation and also the use of the system. An ERP-system is not a finished product but it alters over its lifetime [31].

Pinch and Bijker [17] propose that as people design a system they do not interact with their context in a linear way, moving systematically from idea to working model. A better description would be "multi-directional", in which many possible forms of the artifact exist in the early stages of development – but only some survive. Why they survive and others fail depends on the actions of the stakeholders in the project. "*The social groups concerned with the artifact, and the meanings that those groups give to the artifact, play a crucial role: a problem is defined as such only when there is a social group for which it constitutes a 'problem'*" [17]. The most influential of these groups will ensure that the system deals with "their" problem.

McLoughlin [23] defined these stakeholders as: "*those who share a particular set of understandings and meanings concerning the development of a given technology*....