Chapter XIII
Maturity of IT–Business Alignment:
An Assessment Tool

Nel Wognum
University of Twente, The Netherlands

Fan Ip-Shing
Cranfield University, UK

ABSTRACT

Enterprise systems hold a large promise for organisations to enhance their strategic position. However, adoption and implementation of enterprise systems is not without problems. Many problems have been reported in the literature with implementation of new technology, many of which seem to reoccur over and over again. It seems difficult for organisations to learn from previous experience and successfully organise and manage complex dynamic projects like an enterprise system implementation project. Although current project and change management methods offer support in organising and managing complex projects, more is needed to increase insight into the specific situation at hand. In this chapter, research is presented aimed at collecting knowledge on the dynamics of enterprise system implementation projects. The knowledge can serve to increase awareness of potential risks and pitfalls in specific new enterprise system implementation situations. To make the knowledge accessible, a tool has been developed for assessing a start-up situation of an enterprise system implementation project in an organisation. The key concept in this assessment is the level of mutual alignment between various organisational aspects of the business in which the system is implemented, the enterprise system, and the implementation project.

INTRODUCTION

More and more enterprise systems are implemented and used in organisations to support enterprise-wide processes. Such processes involve several departments in an organisation or even may cross organisations' borders (see e.g., Davenport, 2000). Examples of enterprise-wide processes are the order-throughput process from customer order to finished product, including purchasing and distribution and the design and engineering process from idea to product specification, including possibly early transfer of information to downstream processes. A well-known enterprise system is an enterprise resource planning (ERP) system, which supports all processes involved in processing customer orders. Another example is a product data management (PDM) system, which supports management of lifecycle aspects of product information. Knowledge management (KM) is yet another solution to managing enterprise-wide information.

Despite the many potential advantages, implementation of an enterprise system is not without problems. About half of all implementation projects only partly meet the envisioned goals or fail completely (see e.g., KPMG, 2002; Kwon & Zmud, 1987; Nash, 2000). Many other projects may meet the goals, but only by consuming considerably more resources than budgeted. In the literature, many dos and donts have been described as well as success and failure factures (see e.g., Adam & O'Doherty, 2000). In addition, many best-practice project management approaches and change management methods are offered that can support people in successfully implementing an enterprise system (Bancroft, Seip, & Sprengel, 1997; Callaway, 1999; Lozinsky, 1998; Welti, 1999). However, the dos and donts and best practices do not sufficiently guide people in organisations in managing a complex process like implementing an enterprise system. Available guidelines and methods apparently are abstracted from real contexts and are difficult to specify for specific situations.

Moreover, in practice, most of the identified problems seem to reoccur over and over again as can be concluded from a vast amount of literature on real-life experiences with implementing new technologies (see e.g., Davenport, 2000; Ruël, 2001). The problems reported are multi-faceted. They are both technical and organisational in nature, with less than 10% of a technical nature. The majority of problem is related to organisational and human issues (Bikson & Gutek, 1984). It seems that in real practice, insight into the specific situation at hand is insufficient for engaging in and managing an enterprise system implementation project.

Enterprise system implementation projects are inherently complex and dynamic, which means that the process and its outcomes cannot be fully predicted. Technology and organisation need to co-develop during an implementation project (Leonard-Barton, 1988; Orlikowski & Robey, 1991), which means that the envisioned outcomes for technology and organisation may change during the project. Moreover, the course of the project may change due to internal and external disturbances or unexpected new opportunities. Although current project and change management methods offer support for managing such projects, they need to be complemented with methods to increase insight into the specific situation in which an enterprise system is to be implemented.

There is a large need for people with extensive experience of managing complex projects. Such people could be consultants who have been guiding and managing many projects in various companies. In-depth experience is, however, scarce. Similarly, people in organisations may have gained experience in earlier implementation projects. Knowledge in organisations may, however, fade away due to possibly large time lag between implementation projects or because people may leave the organisation. The question is how people and organisations can learn from