Chapter 6

The Contradictions and Complementarities of Combining ERP Systems with Enterprise 2.0 Supported Informal Systems

Yucan Wang
Aston University, UK

Andrew Greasley
Aston University, UK

ABSTRACT

The chapter discusses both the complementary factors and contradictions of adopting ERP based systems with enterprise 2.0. ERP is characterized as achieving efficient business performance by enabling a standardized business process design, but at a cost of flexibility in operations. It is claimed that enterprise 2.0 can support flexible business process management and so incorporate informal and less structured interactions. A traditional view however is that efficiency and flexibility objectives are incompatible as they are different business objectives which are pursued separately in different organizational environments. Thus an ERP system with a primary objective of improving efficiency and an enterprise 2.0 system with a primary aim of improving flexibility may represent a contradiction and lead to a high risk of failure if adopted simultaneously. This chapter will use case study analysis to investigate the use of a combination of ERP and enterprise 2.0 in a single enterprise with the aim of improving both efficiency and flexibility in operations. The chapter provides an in-depth analysis of the combination of ERP with enterprise 2.0 based on social-technical information systems management theory. The chapter also provides a summary of the benefits of the combination of ERP systems and enterprise 2.0 and how they could contribute to

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INTRODUCTION

An Enterprise resource planning system (ERP) is an enterprise system which aims to improve operational efficiency by reducing process cycle time, producing documentation quickly, and eliminating errors and duplicated process design (Young B. Moon, 2007; Simha R. Magal and Jeffrey Word, 2009; Tsai et al., 2011). However, there is an increase awareness of shortcomings of traditional ERP systems, because of high failure rates. These failures have occurred particularly in SMEs and firms of developing countries (Muscatello et al., 2003; Huang et al., 2001; Ngai et al., 2008). Many ERP vendors have developed innovative software and applications to reduce the costs for these firms to implement ERP, such as SaaS, SOA, and cloud computing (Tene, 2011). However, the most important barrier for these corporations to adopt ERP is less structured business process and informal documentation, rather than software costs (Laukkanen et al., 2007; Huang et al., 2001). Mullins (2007) calls these firms ‘informal organizations’ that highlight flexible operations and have working procedures based on social and psychological needs without a formally defined structure. ERP facilitates a formal, structured, planned, transaction-based process management, while the informal organization focuses on different business norms that are informal, less structured, more spontaneous, knowledge-based operations (McAfee, 2009). Thus ERP and informality seem to have some natural contradictions.

So how do the informal enterprises use ERP to achieve these efficiency benefits? Traditionally in order to support a successful ERP implementation it is considered that informal communications and systems should be eliminated (Umble et al., 2003, Boersma & Kingma, 2005). In this view ERP systems are supports for planned and routine process management (Al-Mashari, 2003, Monk & Wagner, 2008). This leads to a view that ERP systems may be incompatible with less structured and spontaneous based informal systems. McAfee (2008) introduces enterprise 2.0 as a way to incorporate the social interactions in firms. Knowledge workers could share and discuss their knowledge through an online communication platform, which makes knowledge and output more visible. This chapter will discuss the complementarities and challenges of a combination of ERP and enterprise 2.0. For instance, from an operational perspective, can this combination really improve both efficiency and flexibility performance objectives? From an organizational perspective, informality is based on a trust based social network. Could this genuine trust be gathered from technical networks? Thus the following research of how to combine ERP and informality reviews these elements both from an organizational as well as a technical perspective.

BACKGROUND

To begin with we will introduce the existing discussion of ERP and the informal organization. This will then lead on to a discussion of the concept of enterprise 2.0.

Efficient ERP Systems and Constraints

According to Slack (2010), operational efficiency means to reduce complexity in operations, reduce the costs and decrease throughput time. ERP is