Electronic Commerce and Strategic Change Within Organizations: Lessons from Two Cases

ROBERT D. GALLIERS, London School of Economics, UK
SUE NEWELL, Royal Holloway, University of London, UK

This article reviews and contrasts the experiences of two major companies in attempting significant change projects incorporating information and communication technologies. It does so by utilizing and critiquing the MIT “Management in the 1990s” model and by reflecting on socio-technical approaches to organizational change. It makes the point that while much of current attention is on electronic commerce as it pertains to industry transformation and inter-organizational relations, it is nonetheless a phenomenon that can impact complex internal relations and communication in addition. Additionally, conclusions are drawn with respect to the process of change and the need for further longitudinal studies when researching change projects of this kind.

INTRODUCTION

It goes without saying that electronic commerce has been a major topic of interest in recent years, with considerable importance being placed on the opportunities provided by information and communication technologies (ICTs) to improve coordination between businesses and with customers. Electronic commerce resonates as a potential means of finding solutions to some of the inter-organizational communication issues that confront modern-day businesses. However, with globalization, companies are themselves increasingly widely dispersed geographically so that internal communications are also more difficult and complex. ICTs can therefore also potentially improve communication between individuals and groups within an organization. This suggests that we might usefully broaden and unpack the concept of electronic commerce to include intra-organizational collaboration and partnerships. For example, corporate intranets, ERP systems, corporate databases and even internal email systems are all examples of electronic commerce that are increasingly used within a company. These ICTs enable data, knowledge and information to be shared even when the individuals involved are widely distributed. However, while intra-organizational electronic commerce can provide a communication link between people who are functionally, hierarchically or geographically separated, this does not necessarily mean that the social and psychological barriers between groups will be broken. The cases reported in this paper demonstrate very clearly that technology per se will not automatically improve communication between groups where long-standing barriers exist.

The importance of breaking down functional and hierarchical barriers has long been recognized in the information systems world. In academia, our roots in systems thinking provide us with a conceptual base for viewing organizational issues from a process orientation, with information requirements being associated with those activities necessary to achieve a desired purpose (e.g., Checkland, 1981). This so-called infological approach has been paralleled by what might be called a datalogical perspective, where the focus is on an analysis of the data entities – and their relationships - required to provide necessary information (Martin, 1982). These concepts have found practical form in such phenomena as database technologies and approaches, and more recently in business process reengineering (BPR), and knowledge management and knowledge management systems (KMS) (see, for example, Davenport, 1993; Alavi & Leidner, 1999).

This paper describes research concerning two companies that have been seeking to improve collaboration and communication internally across functional and departmental boundaries through the use of ICT. In one case the development and introduction of the ICT-based system leads to unintended, negative effects; in the other, there is preliminary
evidence to suggest that the results have been much more positive. The experiences of the two companies help to reinforce lessons that have been known for some time as well as providing new insights. The fact that these two cases are contemporary and that there appears to be evidence that some of the lessons of the past have been forgotten or have remained unheard, suggests that the comparison may be enlightening.

The paper is structured as follows. Following this introduction, we will describe the methodology followed in the research upon which the case studies are based. Then we will briefly outline important aspects of each case, the first concerning the experiences of a major multinational bank in implementing KMS, and the second describing the somewhat more emergent and holistic approach adopted by a major international airline. In the next section, we will attempt to extract from the two cases those features that appear to be key. The concluding section provides something of a reflection on more general lessons, in terms of what remains to be done in the current research effort, and of potentially useful directions for future research in this area.

METHODOLOGY

Qualitative methods were used to explore the impact of ICTs on intra-organizational processes since these methods allow the researcher to examine the phenomenon of interest in its natural setting. Case studies were considered most appropriate since they allow for the adoption of multiple data collection methods (Yin, 1984), which was thought to be important in order to develop the rich case descriptions needed to build theoretical understanding. Case studies generate insightful stories, rather than statistical information, and permit a better understanding of organizational complexity from an insider’s viewpoint (Mitchell, 1983) allowing the researcher to formulate a more holistic perspective on the studied phenomenon (Van Maanen, 1979). The cases reported in this paper were drawn from a larger pool of cases that have focused on investigating innovation processes in both manufacturing and service organizations across Europe. These two cases have been selected because they allow some interesting comparisons in relation to intra-organizational electronic commerce. Exploring the contextual similarities and differences between the cases is useful for examining their impacts on intra-organizational electronic commerce (Orlikowski, 1993).

Methods of data collection included interviews, on-site observation and documentation. Adopting multiple methods is important not only to enhance the richness of the findings but also to ensure validity through the process of triangulation (Stake, 1995). The research in each case was conducted over a period of approximately 18 months. This included four visits to the bank during this period and two to the airline. The interviews, in both cases, were conducted primarily with project team members and sponsors and included individuals from various hierarchical levels and divisions. The interviews were conducted face-to-face, using a semi-structured interview schedule, and tape-recorded and later transcribed. The interviews varied in length, but most were between one-and-a-half and two hours. The on-site observation took place during visits to the companies and allowed informal conversations with project members during coffee and lunch breaks. In the bank a two-day workshop was attended which greatly increased the opportunity for informal as well as formal research material to be collected. This allowed the researchers to make sense of the situation from an insider point of view (Evetre & Louis, 1981). The on-site interviews at the airline were supplemented by telephone discussions, and further clarification regarding specific issues was provided via e-mail communication. Documents, such as minutes, reports and intranet sites related to the projects were used to further enhance the richness of the material collected. Observation of subsequent developments has taken place through study of media articles, press releases and the like.

As is typical in inductive studies, writing the case studies was an iterative process in which the data were constantly revisited. Triangulation across the different sources of primary and archival case material revealed a high level of consistency so that the ‘story’ described in each case can be said to be valid. While there were no preconceived hypotheses at the outset of the inquiry, patterns emerged from the data which suggested the potential for using the MIT model (Scott Morton, 1991; p. 20) to compare the two cases in relation to their electronic commerce projects (see below).

CASE 1: THE BANK

The bank has around 70,000 employees and operates in approximately 70 countries worldwide, with its headquarters in Europe. The bank was formed from a merger of two banks from the same country and has subsequently grown via the acquisition of banks in the various countries in which it now operates. ICT has always been an important priority in the bank, as evidenced by the fact that it is the fifth highest spender on IT in Europe. Its structure and functioning is highly decentralized, with resources allocated to the independent divisions and with very few resources retained at the center. It consists of a number of different product divisions including domestic, international and investment banking.

A problem that was exercising the minds of top management in this bank was that they had recently lost a key account thanks to the perceived inability of the bank to adopt similar procedures and provide similar services in the countries in which the global client company was operating. Exasperated by the bank’s apparent inability to present a ‘common face’ worldwide (despite this being a stated strength in its marketing literature), the client company took its business to a rival. The bank’s reaction to this event was to set up a pilot intranet project. This pilot project was a key part of its “Vision 2000” strategy, which was aimed at creating “The Networked Bank”. The strategic intent of this project was thus to create a network
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