Chapter II

From Technical Change to Socio-Technical Change: Towards a Proactive Approach to the Treatment of Organisational Issues

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ABSTRACT

The organisational application of information technology commonly evokes a wide variety of impacts upon the enterprise as a whole, and the individual members of staff affected by it. However, there is much evidence to suggest that the identification and management of such impacts, which is typically referred to as the treatment of organisational issues, is poorly handled in practice. The primary aim of the research project, described in this chapter, was to develop a proactive approach to the analysis of organisational impacts. The aim of the approach, which is presented as a flow diagram, is to clearly articulate the sequence of activities that have to be undertaken and the decisions that need to be addressed to ensure that all organisational issues are treated effectively. This approach has been formulated from an extensive review of the literature, and the authors' experience working in this domain for the past six years. It is argued that this approach may well succeed, where many of its predecessors have failed, as it complements, rather than replaces, existing development tools and methods. Moreover, as this approach adopts a common-sense perspective, it should be relatively easy to learn and apply.
Finally, it benefits from adopting a proactive, flexible and coherent approach to the treatment of organisational issues.

“There is nothing more difficult to plan, more doubtful of success, nor more dangerous to manage than the creation of a new system. For the initiator has the enmity of all who would profit by the preservation of the old system, and merely lukewarm defenders in those who would gain by the new one.”

Count Machiavelli (1513)

INTRODUCTION

The implementation of information technology within organisations almost invariably results in a wide variety of impacts upon the design of the business, its economic performance and the working conditions of members of staff; technical change is the catalyst for organisational change. For example, the introduction of an enterprise resource planning system (ERP) within a manufacturing company is likely to have a significant impact on that organisation’s business processes, structure, culture and enterprise level performance, as well as the motivation, job specifications and performance of individual employees. It is suggested that while many impacts can be classified as planned outcomes, others are resultant side effects, which can be of a positive or a negative nature. Indeed, negative impacts are quite common, as IT-induced organisational change often results in user resistance and, in extreme cases, possibly even system rejection (Marcus & Robey, 1983; Cooper, 1994). These views are echoed by Martinsons and Chong (1999) who note that “Even good technology can be sabotaged if it is perceived to interfere with the established social network.”

Historically, information systems development projects have been viewed as exercises in technical change, rather than socio-technical change: “Most investments in IT are technology-led, reflecting too technical an emphasis” (Clegg, 2000). As Eason (1988; p 44) has noted, “Traditional approaches to the development of information systems have concentrated on the delivery of the technology, rather than emphasising the human and organisational changes that are required in order to ensure that the system delivers meaningful benefits.” This is a dangerous strategy, because unforeseen and unresolved negative impacts may increase the likelihood of systems failure. Moreover, beneficial impacts, of both a planned and resultant nature, may not be fully realised without an appropriate programme of organisational change. Systems development projects, therefore, should be primarily considered to be an exercise in organisational change, in which all organisational issues need to be proactively managed.
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