

A Proactive Approach for Managing the Organizational Impacts of IT

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INTRODUCTION

Information technology is now a ubiquitous and increasingly critical part of the fabric of the modern organization, supporting its day to day operations and all aspects of the decision-making process, as well as its strategic positioning. Indeed, as Orlikowski (2007; 1435) notes, organisations are '*increasingly constituted by multiple, emergent, shifting and interdependent technologies*'. It is therefore not perhaps surprising that the implementation of a new technology or information system is likely to result in wide array of impacts to the organization as well as the working lives of individual employees. There is a growing consensus within the literature that many such impacts are not deterministic and cannot therefore be easily predicted prior to a system's implementation (Leonardi & Barley, 2008). The corollary of this is that many of the consequences and outcomes of an information system's implementation will be unexpected (Pan et al., 2008). Whilst some of these unanticipated consequences, or incidental side effects, may be of a positive nature, negative impacts are also quite common, as IT-induced organizational change often results in user resistance and, in extreme cases, possibly even system rejection (Martinsons & Chong, 1999).

Information systems projects may not be totally predictable, but it can be argued that many of their organizational impacts only remain unanticipated, because systems developers are reluctant to tackle the human and organizational aspects of IT (Doherty & King, 2005). Systems development projects have typically 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). This is a dangerous strategy,

because unforeseen and unresolved organisational impacts may well increase the likelihood of user resistance and ultimately systems failure (Higgs et al., 2005). Moreover, beneficial impacts, of both a planned and incidental nature, may not be fully realised without an appropriate programme of organizational change. Indeed, Ward and Daniel (2006) argue convincingly that the unacceptably high levels of IT failures are largely due to the absence of formal '*benefits realization*' approaches that explicitly target the organizational change needed to deliver business benefits. Consequently, we would argue that if systems development projects are viewed as an exercise in organizational change, in which all potential organizational impacts are proactively and systematically analysed, then many undesirable impacts could be avoided, whilst the planned benefits can be more effectively realised (Clegg & Shepherd, 2007). The importance of treating organizational issues may now be widely acknowledged (e.g. Eason, 2001, Clegg, 2000), but little progress has been made in the development of practical treatment approaches that have succeeded in making the transition from research laboratory to widespread commercial usage. The primary aim of this article is to present an innovative new benefits-oriented approach for their proactive treatment. However, in advance of this, it is important to establish the importance of treating organizational issues and the need for proactively managing benefits.

WHY TREAT ORGANIZATIONAL ISSUES?

The information systems' literature is very clear on two points; general levels of failure are far too high and the primary cause of this problem is the failure

to adequately treat organizational issues (Doherty & King, 2001). In this context, the term ‘*organizational issue*’ relates to those organizationally-oriented facets of systems development projects that need to be addressed to ensure that the resultant impacts of an information system are likely to be desirable. A comprehensive checklist of important organizational issues, that was originally drawn from the literature, but then validated over a series of studies (e.g. Doherty & King, 2001; Doherty & King, 2003), is presented in Table 1.

To treat a specific organizational issue it is necessary to firstly evaluate the likely organizational impact associated with it, and then if necessary take steps to ensure that the resultant impact is likely to be desirable. For example, if it is found that a proposed system is likely to be poorly suited to an organization’s working practices, then it will be necessary to either modify the system’s technical specification, so that the mis-match is avoided, or redesign the working practices so that they are well aligned with the resultant system. In essence, the treatment of organizational issues is the mechanism by which the project team can align the material properties afforded by a particular technical artifact, when implemented in a particular context (Leonardi, 2011), with the requirements and characteristics of an organization and its individual employees.

System developers typically view the system development process as a science, rather than art, which requires the use of structured methods that focus upon the delivery of technically effective systems, on time and within budget. They are extremely reluctant to tackle intangible, ill-defined and politically-sensitive organizational issues (Doherty & King, 2001), for which they believe themselves to be ill-equipped, in terms of training, competencies and motivation (Clegg, 2000). Consequently, approaches to the treatment of organizational issues have typically been reactive rather than proactive (Clegg et al., 1996): get the system implemented and then worry about its organizational impacts. There is therefore a pressing need to find ways to encourage the systems development community to become more actively engaged in the treatment of organizational issues. One obvious strategy is through the creation of methods, tools and techniques which are specifically designed to facilitate the treatment of organizational issues. A wide variety of organizationally-oriented approaches have now been proposed, which can be categorised as follows:

Table 1. Checklist of organizational issues to address

Issue	Description
Information systems strategy	The system’s alignment with the current information system strategy
Current business needs	The system’s ability to satisfy the organization’s current business needs.
Prioritisation of needs	The prioritising of development effort on those aspects which address the most important business needs.
Future needs of organization	The system’s ability to satisfy the organization’s likely future business needs.
Process design	The system’s impact on the design of key business processes.
Health and safety/ergonomic factors	The likely ergonomic and health and safety implications of the system, such as RSI and eye strain.
User motivation/needs	The system’s ability to satisfy user needs and support user motivations.
User working styles and personal skills	The implications of user working styles and personal skills for the system’s design and ongoing use.
Job redesign	The proposed system’s impact on the design of working practices.
Timing of Implementation	The interaction of the system’s implementation with other planned concurrent changes.
Organizational disruption	The temporary organizational disruption that may be caused by the implementation of the proposed system.
Organizational structure	The system’s effect on the organizational structure, and the lines of authority.
Organizational culture	The proposed system’s impact on the culture in the organization. (<i>i.e. the set of important assumptions (often unstated) which members of an organization share in common.</i>)
Organizational power	The proposed system’s political implications for the distribution of power in the organization.

1. **Socio-Technical Methods:** Socio-technical methods that attempt to produce information systems that are technically efficient and coherent, whilst also being sensitive to organizational and human needs, e.g. Ethics (Mumford, 1996) or Multi-view (Avison et al., 1998). Unfortunately, recent research suggests that such tools and techniques are rarely used, in practice (Baxter & Somerville, 2011).

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