

# Managing E-Business Change

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## INTRODUCTION

Kalakota and Robinson (1999) state that “the creation and implementation of an e-business project is inextricably linked to the management of change” (p. 60). This requires systematic attention to learning processes, organisational culture, technology infrastructure, people and systems thinking. E-business change (eBC) is defined as the processes surrounding the effective management of different stages of online business development and growth. Guha, Grover, Kettinger, and Teng (1997) view this as an organisational initiative designed as a business project “to achieve significant breakthrough improvements in business performance” (p. 121). For example; cost reductions, responsiveness and flexibility, customer satisfaction, shareholder value, and other critical” e-business measures. Planning and managing such systems requires an integrated and multi-dimensional approach to the development of new e-business processes (Kumar & Crooks, 1999; Scheer & Habermann, 2000). Sharma (2004) recommend “a change management framework for e-business solutions” (pp. 54-69).

This article reports on the findings from multiple case studies of e-business projects in ERP enabled organisations. The summation of the findings from four case studies is captured into a pattern of generalisations for the components of an established research model. Various patterns are developed as indicators of success, trends and variance that have implications for both research and practice. This suggests an improved model of eBC management, refined in terms of the relationships between the elements of the model. Such a model would represent a comprehensive tool, for assisting managers in diagnosing the key facilitators and inhibitors of successful e-business projects for B2B interaction.

## BACKGROUND

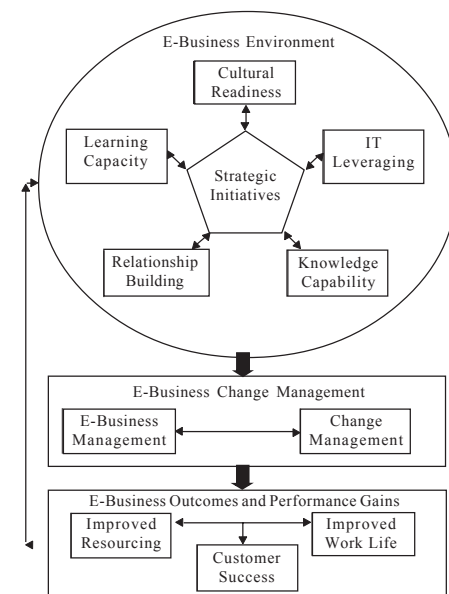
In trying to bring about e-business change: “managers would do well to recognise the complementary nature of

*technology, business models, and e-business readiness throughout the value chain from their suppliers to their customers”* (Barua, Konana, Whinston, & Yin, 2001, p. 39).

## Theoretical Framework

The study used an established theoretical framework (Figure 1) from business process change case-based research (Guha et al., 1997), for identifying and examining the facilitators and inhibitors of successful e-business projects. The model represented by Figure 1 was adapted from previous research on business process change by Guha et al. (1997, p. 121) to include e-business change. Also it acknowledges the existences of inter-relationships between components, as suggested by Kaplan and Norton in developing their Balanced Scorecard (2000, p. 168, 2004, p. 55).

*Figure 1. Model of e-business change (Adapted from Guha et al., 1997, p. 121)*



## Research Approach

The research proposed three questions:

1. Which components of eBC framework facilitate and/or inhibit success of e-business projects?
2. What are the critical success factors of e-Business projects?
3. Is the eBC framework appropriate for identifying patterns of change?

Embedded multiple case study analysis was chosen to investigate the research questions concerning the complex phenomenon of e-business change projects, in eight organisations (Yin, 1989). Embedded approaches enlist the use of multiple units of analysis: (1) the company (strategy), (2) the project team, and (3) the project. This triangulation attempts to validate primary data (Eisenhardt, 1989).

The case study selection criterion required a major e-business project, which had organisational implications. Also, as the focus was on studying antecedents to organisational performance, a set of projects having a range of B2B initiatives with variance across cases, but with the same outcome measures was required: cost reductions, responsiveness and customer satisfaction, shareholder value, and other e-business metrics (Venkatraman & Henderson, 1998, p. 34).

Case information for this study was gathered from three data sources:

1. **Primary Data:** From interviews using an established semi-structured questionnaire with questions that map the eBC items in Table 1, conducted between June and July 2000.
2. **Secondary Data:** From company documents collected or sent via e-mails in 2001.
3. **Tertiary Data:** From case articles written by authors and other researchers in 2002.

Data-collection methods included a semi-structured case protocol as; (1) a qualitative interview questionnaire, (2) multiple documents and archival records, and (3) telephone interviews. Such triangulation reduces bias and is recommended in case research (Kean & Parent, 1998, p. 308).

## Case Selection

Eight cases were used for an initial assessment of the components of the eBC framework. A "Summary of Comments" table was constructed for each case by identifying key comments captured from case interviews. In each case,

the components were assessed for their contribution or influence to the project success, using a 3-point scale.

Four cases out the eight that participated were selected to provide the detailed content for analysis against the eBC model. Halliburton is the representative of the four cases that exhibited little or no inter-organisational focus; that is with 'nil' B2B interaction:

- Case 1, Halliburton: [nil] business-to-employee (B2E) "Employee Tracking"
- Case 2, British Biotech: [low] business-to-supplier (B2S) "B2B Procurement"
- Case 3, Fujitsu-Siemens: [mod] business-to-customer (B2C) "Online Sales"
- Case 4, Dell & LSI: [high] B2S + B2C "B2B E-Commerce Integration"

## CASE SUMMARIES

### Case 1

For Halliburton, the primary beneficiaries were the offshore project managers who needed access to the HR employee tables for personnel management and gained this through the innovative use of web-based technology. The result was one of considerable cost savings and improvement of staff resourcing through improved decision making by the project managers when working offshore. The intrinsic motivation and self-management of autonomous knowledge within the development team played an important role in the successful implementation. The emphasis was much more on collective performance rather than individual, but at the same time, development and maintenance of personal and professional reputations was a significant driver. Interestingly, while the project was rated highly successful there was strong opposition from their partner operations to implement the same system. This came from the counterpart HR staff who had not been exposed to the participative development process. The organisational management was lukewarm in their support initially, viewing the proposed system as a threat to a strongly centralised control culture. Once the benefits broke down their initial reluctance, management assumed responsibility for the success and leadership for global implementation.

*We are very proud of our Web-based Personnel reporting system.* (SAP project manager)

### Case 2

British Biotech is a research and development stage pharmaceutical company based in the UK. Its mission is

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