

Dynamic Planning Models for E-Business Strategy

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INTRODUCTION

Much has been written about e-business and how this concept will transform industries into virtual networks of customers and suppliers working together to create value-added processes (Fahey, Srivastava, Sharon, & Smith, 2001). Typically, successful organisations will have embraced enterprise resource planning (ERP) systems to integrate e-business processes within the organisation and to underpin the creation of integrated interorganisational systems. This frequently results in new business processes, organisational structures, human resource skill requirements, management roles, and knowledge management systems (Robey et al., 2002). To be successful in this new climate, however, organisations have to learn new approaches to strategy and planning for collaborative systems and to manage e-business enabled cycles of innovation (Wheeler, 2002; Zahra & George, 2002). Few studies have explored the dynamics of e-business strategic planning and little information is available on how to implement new paradigms successfully and how to ensure more effective e-business performance as a result (Damanpour, 2001; Kallio, Saarinen, & Tannila, 2002).

This article reports on the findings from multiple case studies of e-business projects in ERP-enabled organisations. Each organisation was investigated in a three stage study over 4 years, using three theoretical models of e-business implementations to assess success. The key findings from each case study were captured into a staged model for e-business transformation and related to a dynamic planning model that can be applied across all stages of growth of the extended enterprise.

BACKGROUND

Planning for E-Business

Fahey et al. (2001) stated that:

E-business embodies the most pervasive, disruptive, and disconcerting form of change: it leaves no aspect of managing organisations untouched, it challenges long-accepted business models, and organisation leaders have little to draw on from their past experience to manage its effects. In particular, its capacity to transform business processes is no longer in dispute. Senior executives—thus confront a central challenge: How should they endeavour to capture, analyse, and project the transformational impact of e-business on their organisation's most critical or core processes? (p. 890)

Strategic planning for such systems has to encompass capabilities for managing, measuring and evaluating organisational abilities to create value across the network of alliances and hence requires evolutionary approaches which can be tailored to organisational needs at different stages of e-business growth (Ash & Burn, 2003; Wheeler, 2002). This whole process is sometimes described as IT governance, including strategic planning processes, change management processes and accountability and return on investment (Kallio et al., 2002; Patel, 2002). Planning cannot take place in isolation and must encompass all aspects of the emergent learning organisation in virtual networks of value alliances.

In order to study this environment in detail the authors embarked on a longitudinal study of organisations implementing large-scale e-business applications over a 4 year period. The 11 organisations were visited three times

during this period, and a minimum of three interviewees participated on each visit. The structured interviews were focused on three separate models of business change to investigate different aspects of e-business governance, and the results from these investigations brought together into a dynamic planning model for e-business transformation. The use of three research models was specifically intended to give breadth to the study and allow the incorporation of a variety of strategic views that informed the planning process.

Theoretical Framework

E-business implementations were investigated from the perspective of three strategic theories: Virtual Organising, e-Business Change, and Benefits of B2B, where:

1. Virtual organising is measured along a continuum applied to each of the three dimensions of customer interaction, asset configuration, and organisational knowledge (Venkatraman & Henderson, 1998).
2. E-business change processes are measured across eleven interrelated components within three broad categories of organisational change, strategic management innovation, and information systems evaluation (Guha, Grover, & Kettinger, 1997).
3. Benefits of B2B are related directly to a comprehensive set of B2B models: B2B^B, B2B^C and B2B^S, B2C, B2E.

Each model reflects a different business focus: organisational strategy, change management, and e-business work practices. The resulting conceptual frameworks are described in terms of an e-business strategy model and a dynamic planning model for e-business implementation. The dynamic planning approach is a strategic collaborative process between alliances where there is a continual

review of alignment of the e-business transformation against business objectives. This is quite distinct from the ‘one size fits all’ approach of centralised planning and allows strategy to evolve with changing market conditions. This approach provides the means to explicitly define and manage relationships between supply network partners and to monitor trends and trigger a revisiting of strategic decisions across the network (Oliver, Chung, & Samanich, 2003).

Methodology

Data were gathered from three sources: primary, secondary, and tertiary:

1. **Primary Data:** From semistructured interviews conducted November 1999, June 2000, and June 2001. Three separate interviewees were identified within each organisation and revisited across the study.
2. **Secondary Data:** From company documents collected or sent via e-mails.
3. **Tertiary Data:** From case research papers written by third-party specialists.

The case material collected was used to verify all the strategic characteristics of e-business transformation and to develop the dynamic planning model.

E-BUSINESS STRATEGY MODEL

The model in Figure 1 shows the focus for strategic planning shifting through three stages of development with outcomes and performance gains realised through greater progression towards extended enterprise resource planning:

Table 1. Participating organisations

Case Organisation	Industry	B2E Interaction	e-Business Project Title	No. of Users
1. Halliburton	Engineering	Intranet access to ERP	“Employee Tracking Intranet”	~1,100 staff
2. UBS	Banking	ERP	“Employee Networking”	~40,000 emps
		B2C Interaction		
3. Wine Society	Retailing	Internet access to ERP	Online Ordering by Members	~60 staff
4. UNICEF Aust.	National Charity	Internet access to ERP by ASP	1 st Australian Charity Web site	~35 employees +30 volunteers
		B2B Interaction	(B2B ^S and B2B ^C)	
5. Biotech	Biotechnology	ERP to supplier catalogues and Intranet access to ERP data	Staff research procurement	~240 staff
6. Novartis	Chemical		Sales Order and Rapid Delivery	~22,000
7. Bertelsmann	Media		Simple Ordering e-catalogue	~28,000
8. Statoil	Oil and Gas		Staff travel procurement	~18,000
9. Employee-Nat	Employment		Simple Ordering e-catalogue	~14,000
10. FSC - Fujitsu Siemens computer	Computer	ERP to corporate customers	Order Request System extended to an e-Mall of 3 companies	~11,000
11. Dell corp with LSI Logic corp	Computer with Electronics	non-ERP with ERP	Customised online sales Integrated with customers MRO procurement	~27,000 ~14,000

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