

Chapter 6.31

From Strategic Management to Strategic Experimentation: The Convergence of IT, Knowledge Management, and Strategy

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ABSTRACT

The new competitive landscape of the 21st century is forcing organizations to move away from traditional conceptualizations of strategy formulation towards an approach of strategic experimentation. The central objective of this chapter is to articulate the requirements that will be placed on IT as organizations move toward strategic experimentation. We base our central argument in contingency theory, which has postulated that to maximize organizational effectiveness, the IT infrastructure

must be congruent with organizational structure and processes. Strategic experimentation requires different IT and knowledge management tools to support it than the ones currently prevalent. Information technology, knowledge management, and strategy formulation will have to coevolve for strategic experimentation to fulfill its promise. Each will have to change while maintaining its fit with the other two elements. This gives a renewed mandate for a strategic role of IT in organizations, a role that is central to organizational success.

Over the last decade, developments in information technology (IT) and strategic management have become increasingly intertwined in two major ways. First, advances in information technology and associated business processes (CAD, CAM, CIM, MIS, to name a few) have enabled an ever-increasing pace of product and process innovation, leading to a “hypercompetitive environment” (D’Aveni, 1994). Second, this new competitive landscape is forcing organizations to move away from traditional conceptualizations of strategy formulation towards an approach labeled “strategic experimentation.” Still in its infancy and hence only partially practiced in many organizations, the emergent approach relies on knowledge management and enabling information technologies. It has, in turn, renewed the mandate for a strategic role of IT in organizations. Thus, as we enter the 21st century, the merging of the roles of strategy formulation and IT is fast becoming a major requirement for the competitiveness and success of the modern corporation.

The central objective of this chapter is to articulate the requirements that will be placed on IT as organizations move toward strategic experimentation. We base our central argument in contingency theory, which has postulated that for organizational effectiveness, the IT infrastructure should be congruent with organizational structure and processes. During the 1980s, the IT infrastructure changed to keep pace with the evolution of strategy formulation; indeed, the present “state of the art” IT infrastructure has emerged to support the dominant mode of strategy formulation—“strategic management”—practiced in large corporations. However, the hypercompetitive environments of the late 1990s have made it necessary for organizations to move towards a strategic experimentation mode, which requires different knowledge management tools to support it than the ones currently prevalent. We will argue that some fundamental changes in IT infrastructure are needed to support these knowledge management tools.

The plan of this chapter is as follows. First, we define key terms and introduce contingency theory as the root theory of our argument. Second, we articulate the concept of strategy and discuss its use of knowledge and information. Third, we focus on the role of IT and knowledge management in traditional strategic management approaches. In the fourth section we go on to argue that technological and environmental shifts increasingly require a new approach to strategic planning. This “strategic experimentation” approach is highlighted in the fifth section, setting the stage for our discussion of strategic experimentation’s knowledge management and information technology requirements. We conclude with some thoughts on the developments in IT that are needed to enable this evolution towards strategic experimentation.

THEORETICAL BACKGROUND

Clarification of Terms

Information technology. When discussing technology, people often use the terms information systems and information technology interchangeably. While in some contexts the differences are relatively insignificant, we choose to differentiate between the two. For the purposes of this chapter, information technology is defined as the physical equipment (hardware), software, and telecommunications technology, including data, image and voice networks, employed to support business processes (Whitten & Bentley, 1998). The overarching plan for IT deployment within an organization is called the IT architecture. Technology infrastructure refers to the architecture, including the physical facilities, the services, and the management that support all computing resources in an organization (Turban, McLean, & Wetherbe, 1996).

Knowledge management. The meaning of the term “knowledge” has been the subject of much

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