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Chapter VII

A Framework for Extending Potency and Reducing Competitive Risk in the IT Strategic Systems Portfolio

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ABSTRACT

This research proposes that, in addition to balancing risk in the total IT project portfolio as McFarlan suggested in 1981, organizations should also balance risk in their strategic IT portfolios. A framework is distilled from the literature that will both minimize the total risk of an organization's strategic project portfolio, and identify opportunities to extend the strategic life of its information systems. The framework's validity is assessed by using four classic cases in the strategic use of technology. Results indicate that overall strategic IT risk may be reduced by evaluating an organization's

strategic IT portfolio against the five dimensions of the framework, and then seeking strategic IT projects and opportunities that would bring greater balance to the organization's efforts. In addition, by moving across boundaries in each of the five dimensions, strategic systems can adapt to competitive marketplace or technology changes, and thus maintain their strategic potency over extended time periods.

INTRODUCTION

In 1981, McFarlan proposed that organizations develop aggregate risk profiles for their IT project portfolios. This research builds upon that idea by suggesting that organizations construct and analyze a risk profile specific to their strategic IT initiative portfolio. As Clemons (1999) noted, risks are rising as traditional, technical, and financial, and project risks are being supplemented or replaced by new kinds of strategic project risk, including functionality risk and political risk. These additional risks have increased primarily due to the accelerated pace of change in the competitive environment. Despite such increased risks to strategic IT projects, little research has been directed at better managing competitive risk in strategic IT initiatives. This chapter addresses that void. It also builds upon the work of those who have noted the difficulties involved in sustaining competitive advantage, including Leininger (1992) and Mata et al. (1995), by providing a comprehensive framework that organizations can use to identify methods of extending the potency of their strategic systems.

BACKGROUND

This research proposes a five-dimensional framework that can be used to evaluate and balance risk in the strategic IT project portfolio and to extend the strategic life of IT systems. The Five Dimensions of IT Strategy, which were first presented at the 2002 Information Resources Management Association Conference (Knight et al.) built upon earlier work by White (2000). They are summarized in Figure 1. These dimensions are based upon the literature, as the following discussion of the five dimensions reveals.

Dimension 1: Primary Strategic Resource

An organization may strategically leverage either technology itself, or the information that IT systems track and analyze (King et al., 1989). One company, for example, may take advantage of technological advances in computing to provide a new way of relating to its customers, while another company may use the information created by its computer system processing, such as customer demographics or production and inventory status, as a key resource to support

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