



Chapter 8

Method over Mayhem in Managing e-Commerce Risk

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Under the system of e-commerce, organisations leave themselves open to attack which can have catastrophic consequences. Recent well-publicised business disruptions to firms such as Northwest Airlines and Ebay have had significant business impacts. The chapter identifies the differences in risk management approaches for older information technology systems and those required for e-commerce. The benefits and the critical success factors for an e-commerce risk management methodology are identified and discussed. A literature survey revealed the existence of only two methodologies with potential suitability for e-commerce risk management. They are evaluated against the critical success factors. The chapter recommends a program of research to make risk management more dynamic and interactive particularly for the operational aspects of e-commerce.

INTRODUCTION

E-commerce is a multi-faceted business where organisations sell their products to consumers, business combine with other businesses to form virtual enterprises, and suppliers link with partners in a virtual supply chain. The driving force behind the new digital economy is the Internet and technologies, such as the World Wide Web (Web), underpinning this network of networks. The Internet can be described as a non-hierarchical, democratically structured, collaborative arrangement entered into by millions of network users.

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Organisations practising e-commerce leave themselves open to attack and compromise which can have catastrophic consequences. New forms of crime are developing (e.g., denial of service) which have not been experienced before. These inherent insecurities require that stringent Risk Management (RM) practices are adopted. However, because of the speed with which network topologies, services and applications change and the whole interconnected nature of the business world in an e-commerce environment, RM systems must operate in a dynamic way. E-commerce is starting to create a true “just-in-time” economy and RM approaches need to reflect this.

In this chapter, we recognise the potential for mayhem in e-commerce if risk is not adequately managed. We then proceed to identify the risk areas of e-commerce and compare these with the traditional forms of IT risk. To cope with the new risk environment we outline the benefits of using RM methodologies and survey the literature to establish the existence of e-commerce oriented RM methodologies and their suitability according to criteria we established from our analysis of e-commerce risks.

POTENTIAL FOR MAYHEM

Computer systems employed to facilitate e-commerce “will become the new form of catastrophic exposure that will replace earthquakes and hurricanes as the number one form of catastrophic risk” according to Mullaney of F&D/Zurich (quoted by Hays, 2000). Gow of ACE USA holds a similar view; “If a major operation’s network is intentionally compromised, it could interrupt a daily revenue in the millions” (quoted by Hays, 2000). The major compromises for e-commerce were identified as hacker’s blackmail, corruption of data, disgruntled employees and unauthorised acts of system administrators.

There are changes taking place within e-commerce that have the potential for significant damage. The consequences of someone meddling with the Web site can range from mild (e.g. the introduction of a detectable virus) to catastrophic (a prolonged system outage leading to the loss of customers). Then there are risk such as out-of-date information, misinformation and defamation on the Web site, even if only there for a brief period, that can lead to lawsuits and claims for damages against the organisation. Added to this is the uncertainty of jurisdiction since the physical space has been replaced by the virtual space. “The velocity and scope of disasters that occur in cyberspace have no real boundaries” (Davis, 1999). The Internet is being called a “legal vacuum.”

Negative consequences of using the Internet have been experienced by organisations and have been well publicised. Disruptions in e-commerce have led to lawsuits, significant losses and dissatisfied customers. Table 1 shows recent e-business outages and the business impact they had.

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