Chapter 6
Managing IT Risks in Virtual Enterprise Networks: A Proposed Governance Framework

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ABSTRACT

Information Technology (IT) has proven to be a critical enabler for the formation and operation of Virtual Enterprises (VEs) and a provider of unique business enabling capabilities. Nevertheless, IT integration with VE business model particularities is never a trivial task, thus calling for a special approach to discover and mitigate risks and apply controls related to the continuously growing of IT usage and support in a VE environment. The main objective of this chapter is to provide a comprehensive in depth analysis of risks and issues associated with the IT aspects of Virtual Enterprise Networks (VENs) from technical and procedural point of view and to prescribe specific guidelines to mitigate the effects of the identified and analyzed risks, processes and consequences; In that context, this chapter also aims to promote and suggest an IT risk governance framework that will address the IT risks related to Virtual Enterprises following the recent trend of organic risk management.

INTRODUCTION

Historically, IT risk management practice has presented asthmatic behavior when it comes to keeping the pace with enterprise strategy and objectives. The first reason for that behavior is that too many executives tend to relegate IT risk to technical specialists outside the boardroom failing to recognize their importance and thus the need to be managed in a same fashion as traditional high profile risks that are incorporated into the strategic decision making process. The second reason is related to IT focus which has been on protecting the infrastructure and systems processing and storing the vast majority of information rather than in the information itself, its movement and flow. However, both approaches proved as too narrow to accomplish the level of integration, process assurance and overall protection that is now required especially for wide spread integrated platforms like virtual enterprises.

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Nowadays, this is changing. The recent control and audit laws and regulations are holding the enterprise executives as directly liable for any loss or legal implications result from IT risks and malfunctioning since IT is becoming a core element in enterprise performance directly affecting enterprise objectives and strategy. In addition, IT focus is currently shifted to the information itself, where IT and networking must achieve the seemingly impossible, to simultaneously open and protect enterprise information effectively balancing risks with opportunities, while responding to the requirements of emerging business models like VEs. All IT relevant activities should be completed in a full equilibrium to protect the enterprises most critical asset; information and reputation in a seamless business integration and continuous operation.

Managing IT risks is still a work in process, and in that context various attempts to develop risk management methodologies do exist in the literature (Walewiski & Gibson, 2003). Still, there are many potential risk avenues to explore and actions to be taken, especially where the existing approaches and frameworks are not up to the task. Efforts must be well organized across various stakeholders including enterprise workers and executives, academia and regulatory bodies, as any individual and isolated approach will simply perpetuate the lack of consistency and increase the possibility that significant gaps will continue to exist if not grow. On the contrary, joint efforts illustrate coordinated efforts to bridge the gap between risk exposure and risk management practice, toward the age of organic risk management which aims to support risk management programs to manage the full range of IT risks as a compulsory part of the enterprise overall corporate governance, risk and compliance structure. IT risk governance is a framework that forms a strong basis to promote and support the organic risk concept, and also paves the road towards the new era of managing IT risks by integrating several existing risk and IT control frameworks.

The main objective of this chapter is to analyze and list the IT risks associated with virtual enterprise networks including technical and procedural risks, and then to provide guidelines for risk mitigation in the VE context. More importantly, this chapter aims to propose an IT risk governance framework that will address the IT risks related to Virtual Enterprises following the recent trend of organic risk management.

BACKGROUND

IT risk governance represents a fundamentally new way to conceptualize and manage IT risks especially when applied to virtual enterprise networks. Four major dimensions can be identified in literature, these being Information Technology, governance, risk management and virtual enterprises all evolving with plenty of research dedicated to each topic individually or bi-combined with another (Aven, 2008; De Haes & Grembergen, 2009; Goranson, 1999). Still, research correlating the four topics jointly is at its infancy.

Virtualization and IT transformations have reshaped significantly the business domains (Menken & Blokdijk, 2008). The information technology is increasingly recognized as a key enterprise asset, justifying what was stated by Peter Drucker (1999) that the diffusion of technology and the co-modification of information will transform the role of information into a resource equal in importance to land, labor and capital. This is obvious today with many enterprises establishing IT in the core of their operations or even going completely digital (Turban, 2008). Virtual enterprises constitute a live example of a digital domain where business is truly enabled by IT. That is why board members are being directly accountable for IT and requiring strong IT governance in analogy to their responsibility for enterprise objectives and key assets (Hardy, 2006). Such changes elevate the IT role in the enterprise development and shift the focus from
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