Chapter 2
A Step-by-Step Procedural Methodology for Improving an Organization's IT Risk Management System

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ABSTRACT

Risks in IT are described as a form of threat in context with data security, network transfer, system scheduled processes, critical applications, and business procedures. IT risk management is broadly defined as the process of managing IT risks, and must be executed on a regular basis. It is neither a product nor a purchase, but a policy of an organization implements to protect its business systems. Managing IT risk plays a vital role in administering any business in today's world. Irrespective of the business, deep knowledge of IT risk leads to increased data security, reduced business cost, and greater compliance. This chapter deals with methodologies to improve risk management in an IT organization, their impact, and some examples.

NTRODUCTION

The basic concept of an information system is to support the objectives and mission of the organization. All organizations are exhibited to risks, many of which affect the organization in an obstructive manner. Risks are nothing but uncertainties about what will happen in the future. The more number of uncertainty leads to a higher number of risks. To support the organization, IT professionals should help management to perceive and manage these risks.

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Managing risks is not an easy task. Completely mitigating all risk is impossible, due to threats, vulnerabilities, and limited resources, threats and vulnerabilities. Therefore, IT professionals should have a methodological approach to support them in allocating resources and articulating, together with technical and business managers, the possible outcomes of various IT-related threats to their objectives.

This methodological approach must be cost effective, accurate, and repeatable, and minimize risks to a justifiable and reasonable level. Risk management is not new. There are many approaches and techniques available for managing IT risks.

This chapter explores risk management with respect to information technology systems, and answers the following questions:

- What is risk in information technology systems?
- What is the importance of understanding risk?
- Why is monitoring risk processes crucial?
- What is risk management?
- How is risk managed efficiently?
- What are the risk management methodologies for improving IT risk management systems?

BACKGROUND

Risk

Risk refers to a prospective warning about a given situation that will incur losses, disrupt service, and lead to system failures such as defects, thereby provoke maltreat to the organization. Its future outcomes and consequences are uncertain by nature, and can be expressed in the form of its possibility of occurrence and the likelihood of consequences.

The impact of the risk is its ability to affect the goals of an organization. Risk cannot be avoided in every situation. It is available in human lives, organizations, and institutions, irrespective of their environments. Risks are acceptable to certain extents, depending upon those impacts and outcomes. Some are adverse by default, and some are neutral. Hence, in simple terms, risk is described as uncertainty of consequences.

Importance of Understanding Risk

Being aware of risk, and in particular of the specific uncertainties related to a system, would empower the system owner to safeguard assets such as information systems

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