



University of Science and Technology

**Faculty of Post Graduate Studies and
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**Applying Risk Identification Methods to
Al-Baraka Bank Information System**

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Abstract

Risk management is an activity which integrates recognition of risk, risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources. Some traditional risk managements are focused on risks stemming from physical or legal causes. Risk Management can be defined as a systematic process for identifying, analyzing and controlling risks in projects or organizations. Definitions and illustrations of risks are given especially by a list of risk which occur most frequently in information technology and Software projects.

Risk identification is a process that involves finding, recognize, and describing the risks that could affect the attainment of an organization's objectives. It is used to identify possible sources of risk in addition to the events and situation that could affect the achievement of objectives. It also includes the identification of possible causes and potential consequences.

In this research, we identify risks of the current information system used in El Baraka Bank through the use of the risk identification methodology.

This risk identification methodology used was based on a questionnaire technique. The questionnaire was designing based on identify assets and threats. The result of the identifying process is a Threat Vulnerability Assets work sheet, which shows the denial of services and theft are the highest threats.

المستخلص

إدارة المخاطر هي النشاط الذي يجمع بين تحديد المخاطر وتقييمها ووضع إستراتيجيات لإدارتها والتحقيق منها تركب بعض إدارة المخاطر التقليدية على المخاطر الناجمة عن أسباب مادية وقانونية . إدارة المخاطر يمكن تعريفها بأنها عملية منهجية لتحديد وتحليل ومراقبة المخاطر في المشاريع والمنظمات تقوم بإعطاء تعريفات ورسومات توضيحية من المخاطر التي تحدث في أغلب الأحيان في مشاريع تكنولوجيا المعلومات والبرمجيات .

تحديد المخاطر هي عملية تنطوي على الحقائق والاعترافات واصفه المخاطر التي يمكن أن تؤثر على تحقيق أهداف المنظمة , هذه العملية يتم استخدامها لتحديد المصادر المحتملة للأخطار بالإضافة إلى الأحداث والأوضاع التي قد تؤثر على تحقيق الأهداف التي تشمل تحديد الأسباب المحتملة والعواقب .

هذا البحث حاولنا التعرف على بعض المخاطر لنظام المعلومات الحالي لبنك البركة السوداني من في خلال استخدام منهجية تحديد المخاطر هذه المنهجية تحتوي على عدد من التقنيات المستخدمة لذلك . تم استخدام تقنيه الاستبيان وهو مجموعة من الأسئلة التي تتعلق بنظام البنك تم تقسيم هذا الاستبيان على تم تحليل البيانات المتحصل عليها من هذا الاستبيان كما تم استخدام أداة تقنيه ثم , عدد من فروع البنك (الماصح الضوئي الأمن) تعمل هذه الأداة على اكتشاف الثغرات الأمنية في النظام وتحصلنا على جدول تم فيه حصر الأصول والمهددات والثغرات الأمنية حول نظام بنك البركة.

1.1 Introduction

The word "risk" stems from the Italian verb "risicare", There are many definitions of the term "risk" but no generally accepted one, all definitions implicitly include two characteristics is uncertainty and loss. The Risk management is the coordination of activities that direct and control the department with regard to risks. It is commonly accepted that risk management involves both the management of potentially adverse effects as well as the realization of potential opportunities. In performing our daily activities and responsibilities, risk management can be described as the collection of deliberate actions and activities that we carry out at all levels to identify, understand and manage risks to the achievement of our objectives.

Risk management is the process of measuring or assessing risk and then developing strategies to manage the risk. In general, the strategies employed include transferring the risk to another party, avoiding the risk, reducing the negative effect of the risk, and accepting some or all of the consequences of a particular risk, The benefits of embedding risk management at all levels of the department are: effective management of adverse events or opportunities that impact on our purpose and objectives, ability to make informed decisions regarding management of potential negative effects of risk and take advantage of potential opportunities, improved planning and performance management processes enabling us to focus on core business service delivery and implement business improvements , ability to direct resources to risks of greatest significance or impact, greater organizational efficiencies through avoiding 'surprises' and creation of a positive organizational culture in which people understand their role in contributing to the achievement of objectives.

Risk management process consists of two sub processes, risk assessment and risk control. The risk assessment Risk assessment involves risk identification, risk analysis, and risk prioritization. Risk control involves risk planning, risk mitigation, and risk monitoring ,the risk identification is first step in risk management process in this step the team systematically enumerates as many project risks as possible to make them explicit before they become problems, after risks have been identified and enumerated, the next step is risk analysis. Through risk analysis, we transform the risks that were identified into decision-making information , each risk is considered and a judgment made about the probability and the seriousness of the risk. After the risk analysis the team sort the list so that the high probability, high impact risks percolate to the top of the table and the low-probability, low impact risks drop to the bottom. If the team used categorical values for probability and/or impact, group consensus techniques may need to be used to produce the risk ranking. Related to risk planning, through risk mitigation, the team develops strategies to reduce the possibility or the loss impact of a risk. Risk mitigation produces a situation in which the

risk items are eliminated or otherwise resolved. Risk planning and risk mitigation actions often come with an associated cost. The team must do a cost/benefit analysis to decide whether the benefits accrued by the risk management steps outweigh the costs associated with implementing them.

After risks are identified, analyzed, and prioritized, and actions are established, it is essential that the team regularly monitor the progress of the product and the resolution of the risk items, taking corrective action when necessary. This monitoring can be done as part of the team project management activities or via explicit risk management activities. The development team, marketing, and customer representatives about project risks is essential for effective risk management. This communication enables the sharing of all information and is the cornerstone of effective risk management.

1.2 Research Questions

Organization that use information systems facing more security threats. There form identification of risk due to the use of information systems, is major part of risk identification process for the whole organization. How to identify the risk that from using information system? and how use technical tools in risk identification process ?

1.3 Research Objectives

The objectives of this research are :

- 1- to determine the effectiveness of applying risk identification methods .
- 2- to practice applying risk identification methodology .
- 3- to combine technical tools in risk identification process.

1.4 Research Methodology

Analytical methodology is a type of research that utilizes critical thinking to find out facts about a given topic and from the answers obtained develop new and useful ways of doing thing . In this research , we use the analytical method because the search contains a questionnaire.

1.5 Thesis Organization

This thesis is organized as follows as: chapter two describes the principles of risk management in software project, risk management methods and risk management approaches. Chapter three explain risk identification process in software project and techniques and models used in this process. In chapter four a risk identification

methodology is applied, analysis and results are shown. In chapter five conclusions and recommendations for future work are given .

