LEVEL OF AWARENESS OF RISK MANAGEMENT WITHIN IT GROUP :

CASE STUDY TM BERHAD

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A thesis submitted in fulfilment of the requirements for the award of the Master of Science (Information Assurance)

ADVANCED INFORMATICS SCHOOL

UNIVERSITI TEKNOLOGI MALAYSIA

JAN 2015

To my beloved mother and father

ACKNOWLEDGEMENT

I would like to convey my greatest gratitude to my supervisor Madam Hafiza Abas for guiding me well through completing this study. Her patience, guidance throughout this project was very helpful in finishing this project.

I also would like to thank my parents for giving me moral support throughout this project. Their understanding and cooperation given during this project was very supportive for me.

I also would like to thank my husband, Mr.Mukunthan for giving me support and encouragement to finish this project. His advice and moral support to finish this project was very helpful and with his help, I manage to complete this project.

ABSTRACT

The purpose of this study is to gauge the level of risk awareness among ITG in TM Berhad. Risk Maturity Model had been used for this study to determine the level of understanding. Enterprise Risk Management (ERM) framework is used as a benchmark to determine the risk awareness. The variables are Internal Environment, Risk Awareness and Risk Communication & Consultation against Risk Maturity. Two stages of findings had been conducted which is initial findings and also final findings. Questionnaires were distributed in initial and final findings while the interview was conducted only for initial findings. Result of this study is level of awareness among the ITG staff in TM Berhad is at normalised and natural level. All the three hyphothesis constructed is true statement. There is positive relationship between the dependent variable and independent variables. There is positive relationship between internal environment, risk communication & consultation, risk awareness and risk maturity. Three research objectives also had been constructed and had been achieved through this study. This study helps the higher management to know on the level of risk management awareness among the staff in ITG. This help them to strategize future plan on how to conduct the awareness/ campaign more effectively. This study also assist the management on to recognize which variables in ERM Framework contributed the level of risk management among the staff.

ABSTRAK

Tujuan kajian ini dijalankan adalah untuk mendapatkan sejauh mana pandangan risiko di kalangan pekerja IT di TM Berhad. Model Risk Maturity telah digunakan untuk menjalankan kajian ini. Rangkakajian Enterprise Risk Management (ERM) telah digunakan untuk mengetahui pandangan terhadap risiko. Pembolehubah yang telah digunakan adalah "Risk Awareness, Internal Environment, Risk Communication & Consultation" dan juga "Risk Maturity". Kajian dijalankan dalam dua peringkat di mana satu adalah peringkat awal dan peringkat terakhir. Soal selidik telah dijalankan di dalam kedua-dua peringkat ini dan hanya soal jawab dijalankan di peringkat awal. Hasil daripada kajian ini menunjukkan bahawa tahap pengetahuan pekerja ITG ialah berada pada "normalised" dan "natural". Tiga hipotesis yang telah dikonstruk telah berjaya dicapai melalui kajian ini. Perhubungan benar di antara pembolehubah bersandar dan tidak bersandar telah dicapai melalui kajian ini. Perhubungan benar di antara Risk Awareness, Internal Environment, Risk Communication & Consultation" dan juga "Risk Maturity" telah dibuktikan melalui kajian ini. Objektif kajian juga telah dibuktikan melaui kajian ini. Kajian ini telah mambantu pihak pengurusan untuk mengetahui sejauh mana pekerja ITG sedar akan aktiviti pengurusan risiko dalam TM Berhad. Pihak pengurusan boleh berfikir bagaimana hendak menjalankan sesi pengurusan risiko dengan lebih efektif kepada pekerja ITG. Pihak pengurusan juga dapat mengetahui pembolehubah apa dalam rangkakerja ERM mempengaruhi pengetahuan risiko di kalangan pekerja ITG.

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LIST OF ABBREVIATIONS

ERM	-	Enterprise Risk Management
AM	-	Assistant Manager
NE	-	Non Executive
AGM	-	Assistant General Manager
RC	-	Risk Coordinator
GBA	-	Group Business Assurance
ITSG	-	Information Technology Strategy & Governance
ITG	-	Information Technology Group
NAS	-	Network Application Services
ITSC	-	Information Technology Services & Control
ITID	-	Information Technology Infrastructure Development
BSM	-	Billing & Settlement Management
GEMS	-	Group Enterprise Management System
CI	-	Customer Interactions
ITOC	-	Information Technology Operations Center

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CHAPTER 1

INTRODUCTION

1.1   Background

According to Information Technology Infrastructure Library (ITIL) Version 3, risk is defined as "A possible event that could cause harm or loss, or affect the ability to achieve objectives. Risk also can be defined as uncertainty of outcome, and can be used in the context of measuring the probability of positive outcomes as well as negative outcomes" (ITIL v3, 2011). Risk also means that anything that hindering an organization from achieving its business objective (TheOur Community team, 2000). The top ten risks surveyed by Aon analytics (2011) is economic slowdown, cash flow/liquidity risk, regulatory/legislative changes, increased competition, damage to reputation and brand, business interruption, failure to innovate/meet customer needs, failure to attract or retain top talent, commodity price risk and technology failure/system failure.

Risk should be accepted for improving business value rather than avoid it or minimize it (Casualty Actuarial Society (CAS), 2003). Risk can be found if anything goes wrong or not working properly. Risk can be occurred in many areas such as in finance, insurance, workplace, daily life and others (Philip Tillman, 2011). Risk is

defined in financial institutions as profit loss, least amount of Return Of Investment(ROI), economy risk, exchange rate and others. Meanwhile, in insurance, risk is found if the person met sudden fatal or accident. Whereas, in the workplace, the risk usually arises when the products or system temporary unavailable or data centre are having problem. In our daily life, we also encounter a lot of risk for an example if we wake up late for work the risk is will reach late at work (Khoo, 2012). Therefore, risk can be occurs anywhere and anytime in an unpredictable way. Risk cannot be avoided but can be mitigated with action plans beforehand (Lap Duong, 2009). Risk can be results in reputation loss, revenue loss, bankruptcy and also disruption in operational activities (Lap Duong, 2009). Companies that facing financial problems usually making fundamental mistakes such as overlooking in the risk, risk measured in narrowed way, fail to manage risks in real time and also failure in communicating risk with others within the company (Stulz, 2009).

Risk is very important aspect in a business because it poses the uncertainty and threats that to be happen in future time (Kannan and Thangavel, 2008).

Since risk is uncertainty, risk management is all about managing this uncertainty (Baradei, 2006). Managing risk involves analyse uncertainties in a company and providing a good solution for the risk (Nor Amalina *et.all*, 2012). We cannot predict the risk when it will be happen but we can identify the potential risk in future. We shall do risk analysis or risk assessment against our working environment to search for the potential risk (Lap Duong, 2009). Risk management is also defined as an early preparation before anything worst happen in future. It is a prediction of possible risks in future by analysing the current problem or any issues and also prepares the mitigation plan to reduce the impact of the risks (TheOur Community team, 2000).

Risk is managed by inspecting all the possible loop holes that risk might arise and finding an effective solution to reduce the likelihood and impact of the risk (Nor Amalina *et.all*, 2012).

Risk management is the process for recognizing, evaluating, and communicating risk and taking, transferring, terminating and treating it to minimize the risk rating to the

lower level by taking into consideration the cost and benefits of any actions taken (DHS Risk Lexicon, 2010).

Risk management should be conducted across the whole company and not based on the risk type or certain areas. It should be conducted consistently and throughout the year and not as when are required (Abrams *et.all*, 2006). Risk is not alike as issues or problem, because issues are something that had happened while risk is potential issues in the future. In the process of identifying risk, we must analyse something that might occur in future consequences from something that is lacking or missing at the present.

For an example, Maintenance and Support will be expired next year for certain products or system. So, the risk would be problem or fixes related to the products or services cannot be fixed. This will affect the life span of the products or services. The products or services might not performing well if the fixes not solved (Beasley, 2006). Therefore, nowadays many companies started to use Enterprise Risk Management (ERM) in managing the risk in their operational activities. ERM identifies all the categories of risk such as financial risk, operational risk, and fraud risk rather than one category of risk. ERM also tackles all the risk across the enterprise rather than one aspect in that company (Ljubljana, 2010).

Almost all of the top performing companies performing risk capabilities twice per year rather than low performing companies. Integration between compliance and risk are contributing to financial profit in an organization. Many companies also look forward risk management as a contribution towards the business performance. Average performance companies are doing basis risk assessment while top performing companies implementing robust risk assessment. Communication with stakeholder is strengthening through implementing risk governance (Ernst & Young Global Report, 2013).

Weak risk assessment had leads NASA to not implementing cloud to its full capability (National Aeronautics and Space Administration (NASA) Agency report, 2013). Fines that handed over by Financial Services Authority (FSA) in 2011 was a result of weak risk management by the companies which found by Chartered Institute of Internal Auditors (Chartered Institute of Internal Auditors Report, 2011).

Severe consequences will be faced by the companies if risk management is not implemented thoroughly. Therefore, numerous standards and guidelines had been established to mitigate risk. Some of the standards that had been introduced are Australia & New Zealand Risk Management Standards 4360:1999, Committee of Sponsoring Organizations (COSO) ERM Framework, MS ISO 31000 and others. Currently, Telekom Malaysia (TM) Berhad are following ISO 31000 risk management process. The steps in this standard are Communication & Consultation, Establishing the Context, Risk Identification, Risk Analysis, Risk Assessment, Risk Response, and Monitoring & Review (TM Berhad Annual Report, 2012).

A lot of earlier research had been done which is related to Risk Management. Risk Management had been implemented in many and various area (Andrew Rae, Rob Alexander, 2014). This shows that how important managing risks in an organizations or projects (Guangshe Jia *et all*, 2012).

Previous research is done for all the staff in TM Berhad not specifically for IT Group (ITG). This research gathers the level of risk awareness among all the staff in TM. This paper investigate on how to implement risk management in future by identifying how the risk maturity in TM Berhad(Masuan, 2013). Awareness level needs to be analysed in order to determine the risk maturity in ITG. Most of the risk conducted in Information Systems is not implemented using Risk Maturity Model instead using fuzzy logic (E. Vicente Q1 *et all*, 2014). Risk Maturity Model (RMM) is chosen for this study because it found to be suitable theory in identifying level of risk awareness.

TM Berhad is one of the largest telecommunication companies in Malaysia. TM had been awarded as Telecom Service Provider of the Year for the year 2013. Group Business Assurance (GBA) had been established in TM to oversee all the risk in TM and also in the divisions (TM Annual Report, 2013). Risk Coordinator (RC) had been appointed in each of the group in TM to helps GBA to identify risk within their area and report them to GBA.

Higher level management in an organization usually are responsible to create risk aware culture among their staff. They should be educating their staff to be risk aware whenever they are in working environment. Their staff should be cautious of any risk

when handling daily operation activities (Oliver Bungartz, 2010). Therefore, this study will gather the level of risk awareness among the working level in TM especially in ITG. There are five working level in ITG which is Non Executive (NE), Assistant Manager (AM), Manager, Assistant General Manager (AGM) and General Manager (GM). AM and Manager is at executive level while AGM and GM is at management level. Sample for this study will be taken ranging from NE to Assistant General Manager (AGM). The sample of the respondent will consist of database administrator, IT human resource department, architecture, application user, operation team and etc. They will be chosen randomly.

Responses gathered from the respondents will be presented to management level for their acknowledgement or attention. This statistics will give them overview of how risk had been adopted by their staff. They also will be aware whether risk awareness or campaign they had conducted is effective or not. They also can see the risk culture in ITG among the staff. These will be beneficial information for the management because they will know whether risk management is taken as a serious matter by their staff. They also must consider also risks that are facing by the operational staff. By doing this, all the risk will be listed without left any of the risk. They will be more cautious whenever carrying out duties and they know where and how to report the risk.

1.2   Statement of the Problem

Companies which identify a lot of risk within their company tend to be a successful company or leading company. This is because they identify their potential risk beforehand and mitigate the risk as soon as possible. This prevents them from

having a lot of audit issues and more efficiency in work in future. Companies which hiding their risk underneath will lead to a lot of problems or issues later. Those companies which hide all their risk is fear to face the risk and do not dare any failure in their business. Those companies tend to be a failure or bankrupt company in future (Ernst & Young Global Report, 2013).

Time that spent for mitigate the unidentifiable risk is more than usual time taken for mitigate the identified risk. Unproductive time is spent for mitigate the risk instead of doing the daily operational task. It also takes longer time to resolve the risk that occurs. Longer time needed to identify the root causes, consequences, controls and action plan. If this risk had been identified earlier, all the mitigation plan will be in place beforehand. If the risk occurs, the employee just needs to follow the mitigation plan instead of just want to begin to identify the mitigation plan (Baradei, 2006).

TM Berhad especially in ITG, risk had been implemented more than ten years. Therefore, ITG need to gauge the level of risk maturity in ITG. Even though a lot of awareness and campaign had been carried out by the management, they need to aware how effective their campaign. Campaign and awareness that had conducted by them includes ERM snippet, workshop, brainstorming session and strengthen the risk governance. ERM snippet will be broadcast via email communication to all the ITG staff quarterly. Workshop and brainstorming session will be conducted with every GMs and RCs of each division. Risk governance also will be revised to ensure its applicability and follow the international standards (Masuan, 2013).

1.3   Purpose of the Research

TM Berhad had been implementing risk management more than ten years using different standards and exercise. Therefore, the purpose of this study is to gauge the level of risk maturity in TM Berhad especially in ITG. This study will highlight to the management on how effective the awareness campaign conducted by them. This study also will inform the management whether the message that they would like to convey through campaign is really worth of it. Level of realization of how important the risk is among the employees also can be revealed through this study.

They also can be aware of what are the factors that contributing the level of awareness. It could be the task that involved in each of the division contributes to the level of risk maturity. List of risk in each of the division also can be identified during this study. They can recognize whether the level of understanding to be important factor in the number of risk listed.

1.4   Significance of the Research

This study helps to create more awareness among the staff in TM Berhad. More staff will be aware of the risk and risk can be mitigated earlier. Time taken to mitigate the risk also will be minimized in the future time. Audit issues will be dramatically decrease due to there will be fewer problems or issues occurred.

1.5   Research Questions

This research will be answering all the following questions;

(i) Is level of position contributed to the level of awareness of risk management?

(ii) What is the level of risk awareness among the ITG staff?

(iii)Does the awareness campaign conducted is effective enough to educate the staff in ITG?

1.6   Research Objectives

The aim of this study is to examine the level of risk maturity among the staff in TM Berhad after more than ten years of ERM implementation in TM Berhad. This study will examine the level of risk maturity based on few variables of ERM which is internal environment and risk communication & consultation. This study also will extends to the new variable which is risk awareness. The objectives for this study are defined as follows;

(i) To identify the level of risk awareness among the staff in ITG, TM Berhad after ten years of ERM implementation in TM Berhad.

1.8   Hypothesis Development

Hypothesis is an early assumptions made by researchers before conducting the research. They predict the outcome of the results before the real outcomes. They will give an assumptions to the research they will be conducted. Below are the three hypotheses that developed for this study.

(i)   H1: There is a positive relationship between internal environment and risk maturity level.

(ii) H2: There is a positive relationship between risk communication & consultation an risk maturity level.

(iii) H3: There is a positive relationship between risk awareness and risk maturity level.

1.9 Definitions of Terms

(i)   Risk – Risk is any event or uncertainty that may enhance or impede the company's ability to achieve its current or future business objectives.

(ii)   Risk Management - Risk management is systematic, proactive identification of threats to resources and the development of appropriate strategies, which will minimize downside risks and maximize upside risk.

(iii)   Risk Maturity – A maturity level is a well-defined evolutionary plateau toward achieving a mature software process. Each maturity level provides a layer in the foundation for continuous process improvement.

(iv)   Risk Assessment – Risk assessment is a systematic process for identifying and evaluating events (i.e., possible risks and opportunities) that could affect the achievement of objectives, positively or negatively.

(v)   ISO 31000 - *Principles and guidelines*, provides principles, framework and a process for managing risk. It can be used by any organization regardless of its size, activity or sector. Using ISO 31000 can help organizations increase the likelihood of achieving objectives, improve the identification of opportunities and threats and effectively allocate and use resources for risk treatment.

(vi)   Risk Coordinator - To assist Business Unit (BU) management in the management and administration of the BU risks portfolios.

(vii)   Enterprise Risk Management (ERM) - This framework defines essential enterprise risk management components, discusses key ERM principles and concepts, suggests a common ERM language, and provides clear direction and guidance for enterprise risk management.

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