

**ENTERPRISE RISK MANAGEMENT AS A BUSINESS ENABLER IN THE CITY  
OF JOHANNESBURG METROPOLITAN MUNICIPALITY.**

By

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## **ABSTRACT**

This exploratory study investigated how the City of Johannesburg Metropolitan Municipality (“the City”) can optimise enterprise risk management as a business enabler. In this regard, the study explored the definition of enterprise risk management and the objectives for enterprise risk management within the City. The alignment of the risk management process with the objectives of enterprise risk management and the governance (accountability and responsibility) structures for enterprise risk management given various municipal Acts were also investigated.

Qualitative research was used in the study. Data was collected by means of a two-part questionnaire comprising of open-ended and close-ended questions. In order to ensure the validity and reliability, open-ended and close-ended questions were self-administered at different stages. The units of coding which are linked to the secondary objectives of the study were used to analyse the data.

The results of the study showed that the City defines risk as a threat, enterprise risk management as managing threats to service delivery, and that there is no **overall** objective for enterprise risk management. Although the risk management process supports the objectives of enterprise risk management, it is not fully embedded and is in early stages of maturity. The study found that appropriate governance (accountability and responsibility) structures are in place. However these governance structures are ineffective in evaluating the effectiveness of enterprise risk management as such enterprise risk management is not evaluated in terms of the achievement of the service delivery objectives. The study also revealed that there is limited understanding of enterprise risk management amongst individuals who have the accountability and responsibility for it. This results in enterprise risk management being not optimised as a business enabler.

## DECLARATION OF ORIGINAL WORK

I, Lekhahla Joseph Makoro, declare that this dissertation is my own unaided work. Any assistance that I have received has been duly acknowledged in the dissertation. It is submitted in partial fulfilment of the requirements for the degree of Master of Commerce at the University of Johannesburg. It has not been submitted before for any degree or examination at this or at any other University.

.....  
Lekhahla Joseph Makoro

.....  
Date



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## **DEDICATION**

I dedicate this study to my wife, Liziwe Edith Ntshinga-Makoro, my son Sebatso Moeletsi Makoro, the Makoro family and the rest of human kind who believe in the power of education.



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- All my colleagues and friends for their encouragement and support.



## **AFFIDAVIT: MASTER'S AND DOCTORAL STUDENTS TO WHOM IT MAY CONCERN**

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This affidavit conforms with the requirements of the JUSTICES OF THE PEACE AND COMMISSIONERS OF OATHS ACT 16 OF 1963 and the applicable Regulations published in the GG GNR 1258 of 21 July 1972; GN 903 of 10 July 1998; GN 109 of 2 February 2001 as amended.

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## LIST OF ACRONYMS

CEO	: Chief Executive Officer
CM	: City Manager
CMU	: Contract Management Unit
CRO	: Chief Risk Officer
COSO	: Committee of Sponsoring Organisation of the Treadway Commission
GDS	: Growth and Development Strategy
GRMC	: Group Risk Management Committee
IDP	: Integrated Development Plan
IIA	: Institute of Internal Audit
IRMSA	: Institute of Risk Management South Africa
KPI	: Key Performance Indicators
MD	: Managing Director
MEC	: Member of the Executive Council
MFMA	: Municipal Finance Management Act
MOEs	: Municipal-Owned Entities
RMF	: Risk Management Framework
RMP	: Risk Management Policy
SLAs	: Service Level Agreements
UACs	: Utilities, Agencies and Corporatised Entities

# CHAPTER 1

## INTRODUCTION

### 1.1 BACKGROUND TO THE STUDY

A dynamic organisation is exposed to a staggering array of risks, as rich and diverse as the opportunities it enjoys (Shimpi, 2001:16). The City of Johannesburg Metropolitan Municipality (“the City”) is not immune to this reality facing organisations around the world. Moody (2008:106) notes that for more and more corporations, enterprise risk management is a key element of their long-term strategic plan. Accordingly, the purpose of this study was to investigate the effective implementation of enterprise risk management in the City. Effectiveness in this context relates to the City management’s objective of becoming “a well governed and managed city” and will be measured against good governance principles. The literature review on corporate governance indicates that effective enterprise risk management is a cornerstone of good governance. Providing a background and context to the study, this introductory chapter explores the statutory provisions relating to the City with respect to risk management in delivery of municipal services, introduces the structure of the City, sets out the problem statement, and introduces the methodology used in doing the research.

Chapter 7 of the Constitution of the Republic of South Africa, 1996 (“the Constitution”) provides for the establishment of the local spheres of government, comprising municipalities throughout the Republic. In terms of Section 152(1) of the Constitution the objectives of local government are to:

- provide democratic and accountable government for local communities;
- ensure the provision of sustainable services to communities;
- promote social and economic development;
- promote a safe and healthy environment; and
- encourage the involvement of communities and community organisations in the matters of local government.

To give effect to the constitutional provision, the Local Government: Municipal Systems Act, No. 32 of 2000 (“the Municipal Systems Act”) was promulgated on 20 November 2000. Sections 4(2)(d) and (i) of the Municipal Systems Act provide that the council of a municipality, within the municipality’s financial and administrative capacity of the municipality and having regard to practical considerations, has a duty to strive to ensure that municipal services are provided to the local community in a financially and environmentally sustainable manner and to promote a safe and healthy working environment in a municipality.

The Municipal Systems Act defines “financially sustainable”, municipal service provision as meaning the provision of a municipal service in a manner aimed at ensuring that the financing of each service from internal and external sources, including budgeted income, grants and subsidies for the service, is sufficient to cover the costs of:

- a) initial capital expenditure required for the service;
- b) operating the service; and
- c) maintaining, repairing and replacing the physical assets used in the provision of a service.

In rendering the above services the local government is exposed to a wide range of risks such as changes in political mandates, skills shortage, high cost of capital, non-compliance with relevant regulations and laws, misuse of financial resources, and failure to satisfy the needs of customers /residents.

Further, Section 55(1) of the Municipal Systems Act provides that the municipal manager is the head of administration of a municipality and his/her responsibility and accountability are subject to the policy directions of the municipal council. In terms of Section 60 of the Local Government: Municipal Finance Management Act, No. 56 of 2003 (“MFMA”), the municipal manager is the accounting officer of the municipality. It can thus be concluded that the municipal manager is ultimately responsible for the management of risk in the local government.

This is supported by Section 62(1)(c)(i) of the MFMA, which provides that the accounting officer of a municipality is responsible for managing the financial administration of the municipality, and must for this purpose take all reasonable steps to ensure that the municipality has and maintains an effective, efficient and transparent system of risk management. Further to this provision, Section 166(1) of the MFMA states that each municipality and municipal entity must have an audit committee. Section 166(2) of the MFMA provides that an audit committee is an independent advisory body which must – advise the municipal council, political office-bearers, the accounting officer and the management staff of the municipality or the board of directors of the entity, on matters relating to:

- internal financial control and internal audits;
- risk management;
- accounting policies;
- the adequacy, reliability and accuracy of financial reporting and information;
- performance management;
- effective governance;
- compliance with MFMA, the annual Division of Revenue Act and other applicable legislation;
- performance evaluation; and
- any other issues referred to it by the municipality or municipal entity.

Over and above the provisions of Sections 62(1)(c)(i) and 166(2) of the MFMA and other legislative provisions, the City has committed itself to good governance. In this regard, it has adopted the entire set of principles embodied in the King II Report on Corporate Governance (“King II Report”), which, amongst other requirements, cover effective enterprise risk management. Accordingly, compliance of the City with the principles of the King II Report within the City is mandatory.



## 1.2 BACKGROUND TO THE CITY

Following the local government elections in 2006, the Executive Mayor of the City, in his first address to the Council on 24 May 2006 unveiled a single vision statement on what the future of the City ought to be like 25 to 30 years to come. This reads as follows:

*“In the future, Johannesburg will continue to lead as South Africa’s primary business city, a dynamic centre of production, innovation, trade, finance and services. This will be a city of opportunity, where the benefits of balanced economic growth will be shared in a way that enables all residents to gain access to the ladder of prosperity, and where the poor, vulnerable and excluded will be supported out of poverty to realize upward social mobility. The result will be a more equitable and spatially integrated city, very different from the divided city of the past. In this world class African city for all, everyone will be able to enjoy decent accommodation, excellent services, the highest standards of health and safety, access to participatory governance, and quality community life in sustainable neighbourhoods and vibrant urban spaces.”* (Masondo, 2006)

To give effect to this vision statement, the Executive Mayor during the same address launched the Growth and Development Strategy (“GDS”). In launching the GDS, he asserted that “In our roadmap, this represents both the direction that we choose to travel and our ultimate destination.” In terms of section 25(1) of the Municipal Systems Act, Masondo, (2006) presented a full five-year Integrated Development Plan (“IDP”) for approval by the Council, saying, “The IDP represents the immediate and intermediate stages of our journey. It charts our five-year or medium-term plan for the development and service delivery.” He emphasised that the IDP was directly informed by the GDS and underpinned by the mayoral priorities, which were:

- Economic growth and job creation;
- Health and community development;
- Housing and service provision;
- Maintaining a safe, clean and green city;

- Ensuring good governance and management of the City; and
- Addressing HIV/AIDS.

The City has set up an administrative structure to manage, formulate policies and procedures and coordinate these activities. The administrative structure includes enterprise risk management and this is described in detail in Chapter 3. The structure consists of the core administration, 7 decentralised administrative regions and 14 municipal owned entities (“MOEs”). These wholly owned entities are in the form of companies, each with its own board of directors (“board”). The companies are utilities, agencies or corporatised entities (“UACs”). The relationship between the City and the MOEs is governed by the service level agreements (“SLAs”). The City has established the Contract Management Unit (“CMU”) to manage these SLAs. For the purpose of this study, the reference to the City includes the core administration, 7 decentralised regions and the 14 MOEs.

The uniqueness of the City’s structure in the local government context, as described above, probably presents it with challenges in its quest for service delivery. These would include the coordination of activities for effective and efficient use of resources for delivery of its constitutional mandate and reporting compliance. The structure brings about different management styles and cultures in different areas of operations within the City. Alignment of these different cultures in order to realise the City’s vision statement and its GDS presents a considerable challenge.

### **1.3 OPTIMISATION OF ENTERPRISE RISK MANAGEMENT IN THE CITY**

The City formalised the implementation of enterprise risk management on 1 November 2004, with the appointment of the Chief Risk Officer (“CRO”). Taking this step regarding the implementation of enterprise risk management was intended to enable the City to optimise enterprise risk management as a business enabler in meeting its service delivery objectives. However as recently

as the latter part of 2007, the City experienced service delivery protests. On 23 July 2007, SABC News reported that a protest over service delivery held by residents of Kliptown, south of Johannesburg, turned violent when residents barricaded roads with burning tyres and started hurling stones at the police. SABC News further reported that several people were injured during the confrontation. Responding to a similar incident on 5 September 2007 in Protea Glen, Soweto, the MEC of Local Government in Gauteng condemned criminal elements behind the service delivery protest, in which one person died, two photographers were injured and the house of a councillor was burnt down. These kinds of protests are violent and destructive in nature. They are consequently also costly and result in an inefficient use of resources within the City. Instead of limited resources of the City being deployed to new areas of service delivery, they are then directed to damaged infrastructure and provision of healthcare to the injured residents. These kinds of protests indicate that the City has not optimised enterprise risk management as a business enabler as enterprise risk management would have identified these as risk areas with major impact, and appropriate controls and action plans would have been in place to manage them.

#### **1.4 PROBLEM STATEMENT**

The foregoing background description indicates that although the City has implemented enterprise risk management, it does not optimise it as a business enabler.

#### **1.5 RESEARCH QUESTION**

This study addressed the following research question:

How can the City optimise enterprise risk management as a business enabler?

#### **1.6 RESEARCH OBJECTIVES**

The research objectives were two-fold: primary and secondary.

### **1.6.1 The primary objective:**

Optimisation of enterprise risk management for the City of Johannesburg Metropolitan Municipality as a business enabler.

### **1.6.2 Secondary objectives:**

- To establish the definition of enterprise risk management within the City;
- To determine the objectives for enterprise risk management within the City;
- To determine whether the risk management process in place within the City is in support of its objectives;
- To establish the governance (accountability and responsibility) for enterprise risk management in the City given various municipal Acts; and
- To recommend how the City can align enterprise risk management with the provisions of the MFMA and accepted enterprise risk management principles and standards.

## **1.7 RESEARCH METHODOLOGY**

### **1.7.1 Nature of research**

In qualitative research, the goal is to understand the situation under investigation primarily from the participant's and not researcher's perspective (Hancock & Algozzine, 2006:8). Hair, Babin, Money & Samouel (2003:74) state that qualitative data represents descriptions of things that are made without assigning numbers directly. In contrast, quantitative data are measurements in which numbers are used directly to represent the properties of something (Hair et al., 2003:74). These authors also note that with quantitative data, hypotheses are tested by applying statistical criteria to the measures. In contrast, qualitative data requires verbal interpretation (Hair *et al.*, 2003:74). In this study, data were interpreted verbally, not statistically. Therefore the nature of this study is qualitative. Moreover, no numbers have been directly assigned to represent descriptions.

### **1.7.2 Research design**

A research design is a plan or blueprint of how the researcher intends conducting the research (Mouton, 2005:55). Hancock & Algozzine (2006:31) note that one's selection of a research design is determined by how well it allows full investigation of a particular research question. Hair et al. (2003:71) state that if the research question involves primarily discovery or clarification of some issue, an exploratory design is best. Because this study investigated how the City can optimise enterprise risk management as a business enabler, the research design was exploratory. Hair *et al.* (2003:57) note that exploratory designs are discovery-oriented.

### **1.7.3 Sampling**

Cooper & Schindler (2006:402) note that the basic idea of sampling is that through selection of some elements in a population, conclusions may be drawn about the entire population. Hair *et al.* (2003:211) state that in non-probability sampling, the inclusion or exclusion of the elements of a sample is left to the discretion of the researcher. In probability sampling, the selection of elements is based on some random procedure that gives elements a known and non-zero chance of being selected (Hair *et al.*, 2003:211). This study was conducted only amongst the elements (individuals) accountable and responsible for enterprise risk management within the City. Accordingly, a non-probability sampling method was used.

### **1.7.4 Data collection**

A questionnaire is a list of carefully structured questions, chosen after considerable testing, with a view to eliciting reliable responses from a chosen sample (Hussey & Hussey, 1997:161). Data were collected by means of a two-part questionnaire. Part I of the questionnaire comprised of open-ended questions and Part II consisted of closed-ended questions. Open ended questions offer the advantage that the respondents are able to give their opinions as precisely as possible in their own words, whilst closed ended questions are

convenient for collecting factual data (Hussey and Hussey, 1997:166). The list of themes and questions to be covered by the questionnaire were based on the secondary objectives of this study. The questionnaire was self-administered and distributed via electronic mail.

#### **1.7.5 Data analysis**

Analysis of the data was based on categories, groupings and units of coding related to the secondary objectives of this study. Grouping of data for analysis, as an example, was a “definition of enterprise risk management”. Similarly the units of coding could include respondents’ understanding of the definition of enterprise risk management within context of the City. The intention was to elicit an indication of whether a common understanding of enterprise risk management existed within the City which would indicate a shared understanding of the objectives of the City.

#### **1.8 BENEFITS OF THE STUDY**

The intended benefits of this study are that it will:

- contribute to the general understanding of enterprise risk management in local government;
- provides an insight on the status of the development and implementation of an enterprise risk management within the City;
- identify gaps in the implementation of enterprise risk management within the City; and
- provide the City with the recommendations on how to optimise enterprise risk management as a business enabler.

#### **1.9 DELINEATIONS AND LIMITATIONS**

Although this study was conducted within a local government environment, the findings are specific to the City. Given the unique structure of the City in comparison to other structures in local government, the findings may not necessarily be applicable to other municipalities. The study does not purport to

define appropriate governance structures beyond the extent to which these are applicable to the City in relation to enterprise risk management. The findings are based on the information gathered from the respondents. It is therefore assumed that the respondents were forth-right and candid in their responses. Appropriate steps were undertaken to ensure the integrity of unbiased and relevant responses.

### 1.10 CLARIFICATION OF KEY CONCEPTS

This section clarifies the key concepts, which have been used in the study.

- **Assurance:** an independent process which provides confidence that planned objectives will be achieved within an acceptable degree of residual risk.
- **Chief Risk Officer:** a member of senior management with the responsibility to design, implement and maintain an enterprise risk management programme in an organisation.
- **Enterprise risk management:** also referred to as strategic business risk management, is seen as a more robust method of managing risk and opportunity (Chapman, 2006:4).
- **Governance structures:** structures within an organisation with authority to take action or instruct that action or order that action be taken to manage risks which face the organisation on the basis of information at its disposal.
- **Inherent risk:** the risk existing in the absence of any controls management might take to alter either the likelihood or the impact of the risk (The Institute of Internal Auditors Research Foundation, 2005).
- **Residual risk:** the risk remaining after management has implemented preventative controls to alter the risk's likelihood or impact (The Institute of Internal Auditors Research Foundation, 2005).
- **Risk:** uncertainty of outcome, whether positive opportunity or negative threat, of actions and events (The Orange Book, 2004).
- **Risk assessment:** the overall process of risk identification, risk analysis and risk evaluation (AS/NZS 4360:2004).

- **Risk appetite:** the amount of risk that an organisation is prepared to accept, tolerate, or be exposed to any point in time (The Orange Book, 2004).
- **Risk management:** the identification and evaluation of actual and potential risk areas as they pertain to the company as a total entity, followed by a process of either termination, transfer, acceptance (tolerance) or mitigation of each risk (King II Report).
- **Risk management process:** the systematic application of management policies, procedures and practices to the tasks of communicating, establishing the context, identifying, analysing, evaluating, treating, monitoring and reviewing the risk (AS/NZS 4360:2004).
- **Risk profile:** a document illustrating the organisation's overall exposure to risks.
- **Risk treatment:** process of selection and implementation of measures to modify risk (AS/NZS 4360:2004). These measures may include tolerating; transferring; terminating or treating the risk and/or taking the opportunity.
- **The City** refers to the core administration, 7 decentralised regions and the wholly owned municipal entities.
- **The Council** is the highest decision making body of the municipality. The Council holds the executive and legislative authority and is the equivalent of the board of directors in a company setting.
- **The municipality** is part of the local sphere of government established in terms of Chapter 7 of the Constitution of the Republic of South Africa.

## 1.11 OUTLINE OF SUBSEQUENT CHAPTERS

The outline of the remainder of the dissertation is as follows:

**Chapter 1: Introduction** – The background and context relevant to the problem statement are covered, thus laying a foundation for the rest of the study. The concepts that are used in this study are also clarified in this chapter.



**Chapter 2: Literature review** - The concepts of risk, risk management, the risk management process, and enterprise risk management are discussed in this chapter, to clarify their relevance to the optimisation of enterprise risk management as a business enabler at the City.

**Chapter 3: Enterprise risk management at the City** – This chapter documents enterprise risk management at the City as at the time of the study.

**Chapter 4: Research methodology** - The focus of this chapter is on the research design, research population, sampling, research instruments, data collection and analysis, validity and reliability of data and the ethical considerations addressed in the undertaking this study.

**Chapter 5: Presentation of results** - The research results are presented in this chapter.

**Chapter 6: Interpretation of the results and recommendations** - This chapter focuses on the interpretation of the research findings and provides recommendations on how the City can optimise enterprise risk management as a business enabler.

Chapter 1 described the background and the context of this study, defined the problem statement, introduced the research methodology and clarified the concepts that are used in the remainder of the study. The next chapter reviews the literature in relation to the problem to be researched.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

This chapter explores the literature relating to enterprise risk management. This includes a literature review on corporate governance, the concept of risk and risk management, and the risk management process. Also covered are oversight responsibility and the role of assurance providers in enterprise risk management. Enterprise risk management is not a new concept, as the principles of risk management have been practiced over time. However enterprise risk management has risen in prominence in recent years, owing to legislation in both the private and the public sectors, the King II Report on Corporate Governance and similar codes, internationally. Recent phenomenal corporate scandals, in South Africa and internationally, also have helped to underline the need for enterprise risk management. Further, Briers (2005:4) states that risk management has been elevated in status because of rapidly accelerating change. Beasley, Frigo and Litman (2007:25) note that expectations that boards of directors and senior executives are effectively managing risks facing their enterprises are at all-time high. The literature review is based on published academic texts, journals and global standards in risk management. The views of different authors are contrasted and compared in relation to the topic of the study.

#### **2.2 CORPORATE GOVERNANCE**

Naidoo (2002:1) defines corporate governance as essentially the practice by which companies are managed and controlled. It encompasses the:

- creation and ongoing monitoring of a system of checks and balances to ensure a balanced exercise of power within the company;
- implementation of a system to ensure compliance by the company with its legal and regulatory obligations;

- implementation of a process whereby risks to the sustainability of the company's business are identified and managed within agreed parameters;
- development of practices which make and keep the company accountable to the broader society in which it operates (Naidoo, 2002:1).

Biegelman and Bartow (2006:44) define corporate governance as a system of checks and balances between management and all other interested parties, with the aim of producing an effective, efficient, and law-abiding corporation. It is how a company defines itself to its stakeholders, analysts, employees, partners, customers, government regulators, and others in terms of compliance and accountability (Biegelman & Bartow, 2006:44). The King II Report (2002: 76) states that corporate governance can, in part, be viewed as a company's strategic response to the need to assume prudent risks, appropriately mitigated, in exchange for measurable rewards.

King (2006:15) maintains that good governance involves fairness, accountability, responsibility and transparency on a foundation of intellectual honesty. The consequence of bad governance resulting from dishonesty, negligence or unacceptable process, is that stakeholders' support for the company dwindles (King, 2006:14). In the context of the City consequences could be loss of the support and confidence of the voters or incidents of service delivery protests by the residents, as experienced in the City recently and in other parts of the country. King (2006:15) cautions that good governance will not result from a mindless quantitative compliance with a governance code or rules, but rather in employing practised abilities and honestly thinking in an unfettered and unbiased manner in making a decision that is in the best interest of the company.

Corporate governance in South Africa was institutionalised by the publication of the King Report on Corporate Governance ("King Report, 1994") in November 1994 (King II Report, 2002:5). This was supplemented by the King II report, published in 2002. The King II Report (2002:21) states that the board is the focal

point of the corporate governance system and is ultimately accountable and responsible for the performance and the affairs of the company. In the context of the City, the Council is the focal point and is ultimately accountable and responsible for the performance and the affairs of the City. Tonello (2007:64) states that leading board directors are starting to think proactively about governance issues that their companies are facing and about what they should do to ensure that their organisations are capable of anticipating and responding to major risks in this arena.

### **2.3 THE CONCEPT OF RISK**

Every organisation, whether a for-profit-commercial or non-profit business, or a governmental agency, exists to provide value for its stakeholders. These include the employees and stockholders of a commercial organisation, or voters for a government entity (Moeller, 2007: 48). Moeller (2007: 48) holds that all organisations are subject to uncertainties or risks. Risk is inescapable in business activity (Chapman, 2006: 4). Naidoo (2002:117) notes that risk is an inherent and unavoidable element in the conduct of any business and maintaining the optimum balance between risk and return is fundamental to business success.

The Orange Book (2004) defines risk as uncertainty of outcome, whether through positive opportunity or negative threat, of actions and events. Risks are uncertain future developments that could influence the achievement of the objectives of a company (King II Report, 2002: 76). The Committee of Sponsoring Organisations of the Treadway Commission Enterprise Risk Management – Integrated Framework (“COSO Framework”) (2004:16) notes that events can have negative impact, positive impact or both. Barton, Shenkir and Walker (2002: 5) define the term “risk” as including any event or action that “will adversely affect an organisation’s ability to achieve its objectives and execute its strategies successfully”. The COSO Framework (2004:16) defines risk as the possibility that an event will occur and adversely affect the achievement of objectives. Pickett

(2006:55) defines risk as any uncertainty about future events that may have an impact upon the ability of an organisation to achieve its objectives. Risks are uncertain future events which, left unchecked, could adversely influence the achievement of a company's business objectives (Naidoo, 2002:117). Australian/New Zealand Standard: Risk Management ("AS/NZS 4360:2004") (2004:4) defines risk as the chance that something will happen that will have an impact on objectives.

Valsamakis, Vivian and du Toit (2005:27) define risk as the variation of the actual outcome from the expected outcome. Accordingly, the authors (2005:27) conclude that risk implies the presence of uncertainty. In this regard, the authors (2005:27) state that the definition of risk as the deviation of an actual outcome from the expected result or outcome implies that:

- uncertainty surrounds the outcome of the event. The decision-maker is uncertain about the outcome but predicts an expected outcome. If the outcome were certain there would be no uncertainty, no deviation from the expected result and therefore, no risk.
- the degree of uncertainty about the expected outcome determines the level of risk. The greater the possible deviation between the expected and actual outcomes, the greater the risk.

Risk-taking human behaviour characterised by imperfect knowledge about the future outcomes that can variously affect intended rewards (Briers, 2005:110). The idea of "imperfect knowledge", as included in the definition of risk, is based on the principle that risk is not rooted solely in "threats", "hazards", "volatility" and the like but is also concerned with access to information and knowledge (Briers, 2005:111).

AS/NZS 4360:2004 (2004:4) notes that risk is measured in terms of a combination of the consequences of an event and their likelihood. In terms of the Orange Book (2004:9), risk has to be assessed with respect to the combination of the likelihood that something may happen and the consequent impact if it

does. Risk is measured in terms of its impact and the likelihood of its materialising (Pickett, 2006:55). Likelihood is the probability or possibility that the risk will occur (Moeller, 2007:76). Likelihood represents the possibility that a given event will occur, while impact represents its effect (COSO Framework, 2004:50). Risks are assessed on both an inherent and a residual basis (COSO Framework, 2004:49). Pickett (2006:92) states that inherent risk is what faces the organisation as it operates in the business climate in question. Inherent risk is the risk existing in the absence of any actions that management might take to alter either its likelihood or impact. It is also the remaining risk after management has taken actions to alter the risk's likelihood or impact (The Institute of Internal Auditors Research Foundation, 2005:75). It is the risk to an entity in the absence of any actions that management might take to alter its likelihood or impact. It is also the risk that remains after management responds to the risk (COSO Framework, 2004:49). Residual risk is the level of risk that is left when mitigations have been established (Pickett, 2006:92). Moeller (2007:74) defines residual risk as the risk that remains after management responds to risk threats and countermeasures have been applied.

The Institute of Risk Management SA Code of Practice ("IRMSA Code of Practice") highlights the following types of risk:

- Strategic risks;
- Value-based risks;
- Process-based risks;
- People-based risks;
- Information-based risks;
- Environmental risks;
- Compliance risks;
- Asset risks.

Organisations are unique and thus each has its own specific spectrum of risks. Briers (2005:4) notes that many risks are shaped by the unique profile of the enterprise. With regard to the City, in addition to other risks in the spectrum, as a

political institution it has exposure to political risks. These would relate to changes in political office-bearers and the political mandate. Lam (2003:43) notes that risks are by their very nature dynamic, fluid, and highly interdependent.

For the purpose of this research, **risk is defined as uncertainty of outcome, whether positive opportunity or negative threat** (The Orange Book, 2004).

## **2.4 RISK MANAGEMENT**

Every company, regardless of size or corporate structure, must at some level anticipate and plan for the business risks that it faces, so as to improve the prospects for its long term survival (Naidoo, 2002:117). Barton *et al.* (2002:5) note that adding management to integrated, business, or enterprise-wide risk implies a “structured and disciplined approach” that “aligns strategy, processes, people, technology and knowledge with the purpose of evaluating and managing the uncertainties the enterprise faces as it creates value.” The King II Report (2002:76) states that risk management can be defined as the identification and evaluation of actual and potential risk areas as they pertain to the company as a total entity, followed by a process of termination, transfer, acceptance (tolerance) or mitigation of each risk. The process by which the board, in consultation with management, decides which risks to terminate, accept, reduce or transfer is described as ‘risk management’ (Naidoo, 2002:118). AS/NZS 4360:2004 (2004:4) defines risk management as the culture, processes and structures that are directed towards realizing potential opportunities whilst managing adverse effects. Valsamakis *et al.* (2005:12) state that risk management is a managerial function aimed at protecting the organisation, its people, assets, and profits against the physical and financial consequences of risk. It involves planning, coordinating and directing the risk control and the risk financing activities of the organisation (Valsamakis *et al.*, 2005:12). McCathy and Flynn (2004:16) note that regardless of individual risks, risk management consists of two functions: risk assessment and risk response.

Neef (2003:136) comments that in the past decade, however, risk management has come to include a set of processes, activities, and systems that allow the company to monitor day-to-day operational threats (in terms of the health and safety of employees, environmental policy, product safety, or internal malfeasance) which, if not unnoticed and left unattended, can be ruinous to a company. In this context, risk management is the process by which a company actively screens for and reacts to potentially damaging risk incidents in a cogent way (Neef, 2003:136-7). (Neef (2003:139 - 140) highlights some types of risk: strategic marketing risk, non-compliance with regulations or laws and “discretionary issues”. He further states that “discretionary issues” constitute a hybrid category of risks that may not be governed by laws or regulations yet can easily cause outrage among pressure groups, the media, or the public. These types of risk issues involve judgments about issues that may not be obviously illegal but can have a disastrous effect on the corporate reputation (Neef, 2003:140).

Valsamakis *et al.* (2005:14) maintain that the establishment of risk management goals and objectives is critical, “for they serve as the foundation for all risk management activities”. The goals and objectives provide the yardsticks against which the success or failure of the programme is measured, and also determine the philosophy underlying risk management activities. The objectives are formalised in a risk management policy which states the aims and describes the policy measures for their attainment (Valsamakis *et al.*, 2005:14).

Risk management should be considered a four-step process: (1) risk identification, (2) quantitative or qualitative assessment of the documented risks, (3) risk prioritisation and response planning and (4) risk monitoring (Moeller, 2007:22). King II Report (2002:77) recommends that risk management should be practised throughout the company by all staff in their day-to-day activities. Moeller (2007:50) notes the risk management process must be managed by



people who are close enough to that risk situation to understand the various factors surrounding that risk, including its implications.

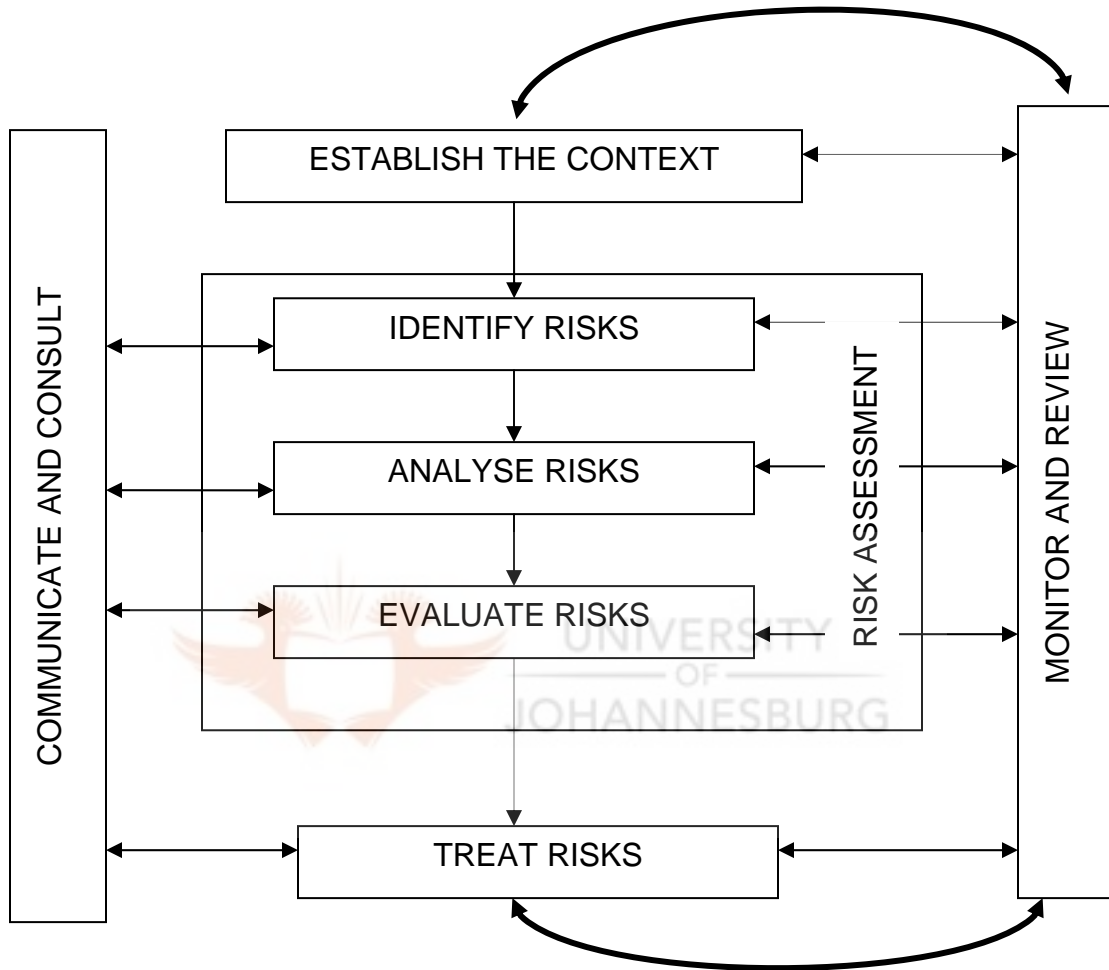
In this research, risk management is defined as the identification and evaluation of actual and potential risk areas as they pertain to the company as a total entity, followed by a process of termination, transfer, acceptance (tolerance) or mitigation of each risk (King II Report).

## **2.5 RISK MANAGEMENT PROCESS**

Understanding the risks facing the organisation and strategies needed to respond to them underpins the risk management process. Moeller (2007:22) states that risk management processes should be enterprise-wide, involving all people at all levels and in all organisation units. The risk management process entails the planning, arranging and controlling of activities and resources to minimise the impact of all risks to levels that can be tolerated by shareholders and other stakeholders whom the board has identified as relevant to the business of the company (King II Report, 2002:76). A risk management process is a structured cycle of activities that provides management with the assurance that all risks within the organisation are being effectively managed (Young, 2006:31).

AS/NZS 4360:2004 (2004:5) defines the risk management process as the systematic application of management policies, procedures and practices to the tasks of communicating, establishing the context, identifying, analysing, evaluating, treating, monitoring and reviewing the risk. Figure 2 below shows the main elements of the risk management process.

FIGURE 1: RISK MANAGEMENT PROCESS – OVERVIEW



Source: AS/NZS 4360:2004 Risk Management

### 2.5.1 Establish the context

Establishing the context defines the basic parameters within which risks for the organisation must be managed and sets the scope for the rest of the risk management process (AS/NZS 4360:2004, 2004:12). The context includes the organisation's external and internal environment and the purpose of the risk management activity (AS/NZS 4360:2004, 2004:12).

In terms of AS/NZS 4360:2004 (2004:14), establishing the external context defines the external environment in which the organisation operates. This may, for example, include:

- the business, social, regulatory, cultural, competitive, financial and political environment;
- the organisation's strengths, weaknesses, opportunities and threats;
- external stakeholders;
- key business drivers (AS/NZS 4360:2004, 2004:14).

AS/NZS 4360:2004 (2004:14) states that establishing the external context is important, to ensure that stakeholders and their objectives are considered when developing risk management criteria and that externally generated threats and opportunities are properly taken into account.

AS/NZS 4360:2004 (2004:14) notes that before a risk management activity, at any level, is commenced, it is necessary to understand the organisation. Key areas include:

- culture;
- internal stakeholders;
- structure;
- capabilities in terms of resources such as people, systems, processes and capital;
- goals and objectives and the strategies that are in place to achieve them (AS/NZS 4360:2004, 2004:14).

Establishing the internal context is important because:

- risk management takes place in the context of the goals and objectives of the organisation;

- the major risk for most organisations is that they fail to achieve their strategic, business or project objectives, or are perceived by stakeholders to have failed;
- the organisational policy, goals and interests help define the organisation's risk policy;
- specific objectives and criteria of a project or activity must be considered in the light of objectives of the organisation as a whole (AS/NZS 4360:2004, 2004:14).

In defining risk policy of the organisation, two key considerations for the board and management are the organisation's risk appetite and risk tolerance. The board must on the basis of these decide which risks it will and will not take in the pursuit of its goals and objectives (King II Report, 2004:77). Risk appetite is the amount of risk, on a broad level, that an entity is willing to accept in pursuit of value (COSO Framework, 2004:19). Corporate risk appetite is the overall amount of risk judged appropriate for an organisation to tolerate, agreed at the board level (The Orange Book, 2004:24). According to The Orange Book (2004:25), once the risk appetite level has been set, it becomes possible to determine whether resources are targeted appropriately. Risk tolerance is the acceptable level of variation relative to achievement of a specific objective, and is often measured in the same units as those used to measure the related objective (COSO Framework, 2004:20). The IIA Research Foundation (2005:76) defines risk tolerance as acceptable variation relative to the achievement of objectives. Moody (2008:107) asserts that at an enterprise level, the risk tolerances should be set so that the aggregation of all risk tolerances ensures that the organisation operates within its ultimate risk appetite.

Regarding the purpose of risk management activity in context, AS/NZS 4360:2004 (2004:15) states that setting the scope and boundaries of an application of risk management involves –

- defining the organisation, process, project or activity, and establishing its goals and objectives;
- specifying the nature of the decisions that have to be made;
- defining the extent of the project, activity or function in terms of time and location;
- identifying any scoping or framing studies needed, their scope and objectives and the resources required;
- defining the depth and breadth of the risk management activities to be carried out, including specific inclusions and exclusions.

Specific issues that may also be discussed include the roles and responsibilities of various parts of the organisation participating in the risk management process, and relationships between the project or activity and other projects or parts of the organisation (AS/NZS 4360:2004, 2004:15).

## **2.5.2 Risk assessment**

Risk assessment allows an organisation to consider the extent to which potential risk-related events may affect an organisation's achievement of its objectives (Moeller, 2007:73; COSO Framework, 2004:49). The primary process goal of "risk assessment" is to assess both the risks and the opportunities related to the business, in terms of their probability and impact (Chapman, 2006:147). King II Report (2002:82) maintains that a systematic, documented assessment of the processes and the outcomes surrounding key risks should be undertaken at least annually. AS/NZS 4360:2004 (2004, 4) defines risk assessment as the overall process of risk identification, risk analysis and risk evaluation.

### **2.5.2.1 Identify risks**

Before a company sets out to manage risks, it must know what risks to manage (Barton *et al.*, 2002:12). Valsamkis *et al.* (2005:97) assert that every risk management programme must necessarily be put in motion by the process of risk identification, for obviously a risk will not be managed if it is not identified.

Moeller (2007:23) states that management should endeavour to identify all possible risks that may impact the success of the enterprise; ranging from the larger or more significant risks to the overall business, down to the less major risks associated with individual projects or smaller business units. The risk identification process requires a studied, deliberate approach to looking at potential risks in each area of operation and then identifying those more significant risk areas that may affect each operation in a reasonable time period (Moeller, 2007:23). AS/NZS 4360:2004 notes that a comprehensive identification using a well-structured systematic process is critical, because a risk not identified at this stage may be excluded from further analysis. In terms of the King II Report (2004:80), risk assessment should address the company's exposure to at least the following:

- physical and operational risks;
- human resources risks;
- technology risks;
- business continuity and disaster recovery;
- credit and market risks;
- compliance risks.

The aim of risk identification is to generate a comprehensive list of sources of risks and events that might have an impact on the achievement of each of the objectives identified in the context (AS/NZS 4360:2004). Chapman (2006:125) notes that the primary process goal of risk identification is to identify the risks to the business, which could reduce or remove the likelihood that the business will reach its objectives, and the opportunities, which could enhance business performance.

According to the Orange Book (2004:15), identifying the risks is the first step in building the risk profile of the organisation. It is necessary to adopt an appropriate approach or tool for the identification of risk (the Orange Book, 2004:16). AS/NZS 4360:2004 states that approaches used to identify risks

include the use of checklists, judgement based on experience and records, flow charts, brainstorming, systems analysis, scenario analysis and systems engineering techniques. The outcome of the risk identification process is a risk register. Pickett (2006:77) defines a risk register as a record of risks, risk assessments, risk mitigations and action plans prepared by the responsible parties that help support the overall enterprise risk management and control the disclosure reporting process. The risk identification process is a key foundation stone in the overall process of risk management, for risks not identified will not be managed (Chapman, 2006:144).

### **2.5.2.2 Analyse risks**

Moeller (2007:29) notes that once the significant risks impacting the enterprise at various levels have been identified, a next step is to assess them for their likelihood and relative significance. Chapman (2006:157) states that the objective of assessing the risks, by whatever method, is to ensure that management action prioritises responding to the most serious risks first. The objectives of risk analysis are to separate the minor, acceptable risks from the major ones, and to provide data to assist in the evaluation and treatment of the risks (Young, 2006:60). Risk analysis involves consideration of the sources of risk, their positive and negative consequences and the likelihood that those consequences may occur (AS/NZS 4360:2004, 2004:16-17). The Orange Book (2004:19) states that there are three important principles involved in assessing risk:

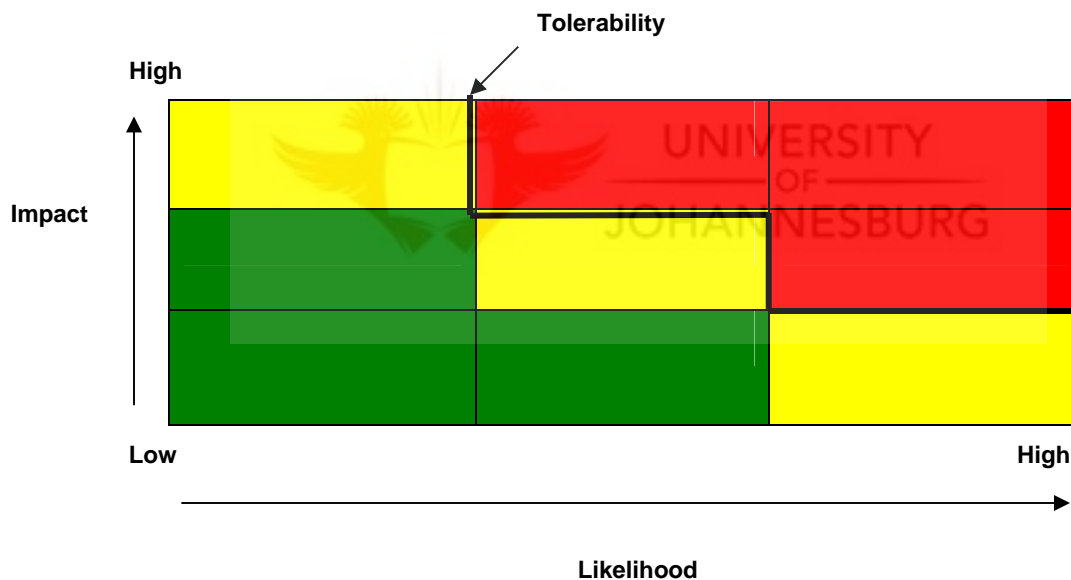
- ensuring implementation of a clearly structured process in which both likelihood and impact are considered for each risk;
- recording the assessment of risk in a way which facilitates monitoring and the identification of risk priorities;
- clarifying the difference between inherent and residual risk.

Analysis may be qualitative, quantitative, semi-quantitative or a combination of these, depending on the circumstances (AS/NZS 4360:2004, 2004:18). Qualitative analysis uses words to describe the magnitude of the potential

consequences and the likelihood that those consequences will occur (AS/NZS 4360:2004, 2004:18). Quantitative and semi-quantitative analysis uses numerical (rather than descriptive) scales relating to consequences and likelihood, using data from variety of sources (AS/NZS 4360:2004, 2004:19).

The Orange Book (2004:19) holds that there is no absolute standard for the scale of risk matrices and that the organisation should reach a judgement about the level of analysis that it finds most practical for its circumstances. In this regard, the Orange Book (2004:16) proposes that a simple colour (traffic lights), as depicted below, can be used to further clarify the significance of risks.

FIGURE 2: SIMPLE RISK/TOLERABILITY MATRIX



Source: The Orange Book (2004:16)

The above matrix, being a 3x3, shows the least basics that the organisation requires in assessing its risks. The Orange Book (2004:21) notes that once the risks have been assessed, the risk priorities for the organisation will emerge. The highest priority risks (the key risks) should be given regular attention at the highest level of the organisation, and should consequently be considered



regularly by the board (The Orange Book, 2004:21). In terms of Figure 3, risk/tolerability matrix, these will be the risks that lie within the red colour area.

### **2.5.2.3 Evaluate risks**

Valsamakis *et al.* (2005:111) state that risk evaluation can be defined as expression of risk in numerical terms. Risk evaluation involves comparing the level of risk found during the analysis process with the risk criteria established when the context was considered (AS/NZS 4360:2004, 2004:19). Young (2006:61) defines risk evaluation as the assessment and measurement of the identified risk exposures with the aim of managing and controlling the risks that could negatively influence the business strategy and the achievement of the objectives. The purpose of risk evaluation is to make decisions based on the outcome of risk analysis, about which risks need treatment and about treatment priorities (AS/NZS 4360:2004, 2004:19). The primary goal of risk evaluation is to assess both the risks and opportunities of the business, in terms of aggregate impact on the business as a whole or on specific projects (Chapman, 2006:159). Valsamakis *et al.* (2005:111) state that the purpose is to provide some indication of the size of each different risk and its potential impact on capital, earnings, cash flow or other key performance indicators, such as reputation, of the company. Having performed risk evaluation, management should take steps to manage and control the risks facing the organisation (Young, 2006:88).

## **2.5.3 Response to risk**

### **2.5.3.1 Controls**

According to The Orange Book, the option in addressing risk can be analysed into four different types of controls: preventative, corrective, directive, and detective controls. Preventative ones are designed to limit the possibility of realisation of an undesirable outcome and are applied at inherent risk level. The remaining risk, after inherent risk has been subjected to preventative controls, is residual risk. Corrective controls are designed to correct undesirable outcomes which have been realised. Directive controls are designed to ensure that a

particular outcome is achieved (The Orange Book, 2004:28). The detective controls are designed to identify occasions when undesirable outcomes have been realised (The Orange Book, 2004:29).

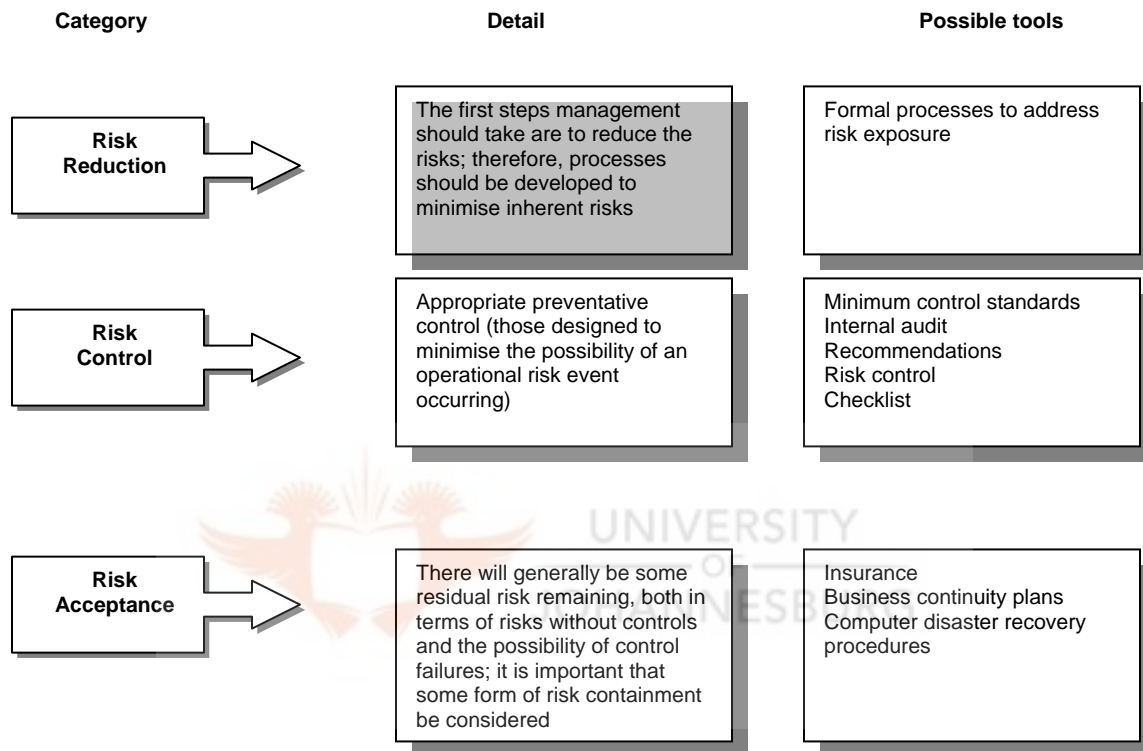
### **2.5.3.2 Response strategies**

The various more significant risks having been assessed and identified, the next step is to determine how to respond to them (Moeller, 2007:77). Moeller (2007:77) states that it is a responsibility of management to perform a careful review of estimated likelihoods and potential impacts and, with consideration given to associated costs and benefits, to develop appropriate risk response strategies. Risk control entails any activity that is aimed at the prevention of losses and the minimisation of the consequences of losses that may arise from any risks facing an organisation (Young, 2006:88). The broad aims of risk control are reduction of the potential impact of loss-producing events and reduction of the frequency or probability of such events (Briers, 2005:15). According to the AS/NZS 4360:2004 (2004:19), risk treatment involves identifying the range of options for treating risks, assessing these options and preparing and implementing the treatment plans.

The purpose of addressing risks is to turn uncertainty to the benefit of the organisation by constraining threats and taking advantage of the opportunities (The Orange Book, 2004:27). According to the Orange Book (2004:27), there are five key aspects of addressing risk: namely tolerating, treating, transferring, terminating, and taking the opportunity. Moeller (2007:78) states that management must develop a general response strategy for each of its risks, using an approach built around one of the four general strategies: avoidance, reduction, sharing, and acceptance. Chapman (2006:188-190) proposes the following risk response strategies: risk reduction, risk removal, risk transfer or reassignment and risk retention. Briers (2005:15) holds that essentially management's decision-making process on how to respond to risks revolves around whether to tolerate, treat, terminate or transfer risks. According to Young

(2006:90-91), the practice available for the mitigation of risks, together with the tools that may assist with this, may be divided into three categories, as shown in Figure 3.

FIGURE 3: CATEGORIES OF RISK CONTROL DECISIONS



Source: Young (2006:91)

The discussion that follows provides a brief expanded description of the risk response strategies noted above.

**Tolerate:** The exposure to risk may be tolerable without any further action being taken (The Orange Book, 2004:27). Moeller (2007:78) states that acceptance is a strategy of taking no action. Risk retention is the strategy adopted either when it is more economical to do so or when there is no alternative as the option to transfer, reduce or remove the threat is not available (Chapman, 2006:190).

**Treat:** The purpose of treatment while the activity giving rise to the risk continues within the organisation is to take action (control) to constrain the risk to an

acceptable level (The Orange Book, 2004:27). Control measures are required in order to eliminate the risk exposure or minimise the effects should a loss occur (Young, 2006:91). Moeller (2007:77) notes that a wide range of business decisions may be able to reduce certain risks. Splitting an IT operations centre into two geographically separate locations will reduce the risk of some catastrophic failure (Moeller, 2007:77). In terms of the AS/NZS 4360:2004 (2004:20), treatment options for risks having potentially positive outcomes (opportunities) which are not necessarily mutually exclusive or appropriate in all circumstances, include:

- actively seeking the opportunity by deciding to start or continue with an activity likely to create or maintain it;
- changing the likelihood of the opportunity, to enhance the likelihood of a beneficial outcome;
- changing the consequences, to increase the extent of the gains;
- sharing opportunity;
- retaining the residual opportunity.

Treatment options for risks having potentially negative outcomes are similar in concept to those for treating risks with potentially positive ones, although the interpretation and implications are clearly different (AS/NZS 4360:2004, 2004:20). Options include:

- avoiding the risks by deciding not to start or continue with the activity that gives rise to them;
- changing the likelihood of the risk, to reduce the likelihood of the negative outcomes;
- changing the consequences, to reduce the extent of the losses;
- sharing the risk;
- reducing the risk (AS/NZS 4360:2004, 2004:20-21).

**Transfer:** Lam (2003:95) states that put simply, risk transfer is the act of moving risk from one entity to another. Risk transfer is the strategy adopted to move a

risk onto another entity, business or organisation (Chapman, 2006:189). Chapman (2006:189) states that the commonest form of risk transfer is by means of insurance. Virtually all organisations, as well as individuals, regularly share some of their risks by purchasing insurance to hedge or share their risks (Moeller, 2007:77). Mechanisms include the use of contracts, insurance arrangements and organisational structures such as partnerships and joint ventures, to spread responsibility and liability (AS/NZS 4360:2004, 2004:21).

**Terminate:** Avoidance is a strategy of walking away from the risk; such as selling a business unit that gives rise to the risk, exiting from a geographical area of concern, or dropping the product line (Moeller, 2007:77). Risk removal is the strategy adopted to eliminate a risk altogether when a negative outcome is anticipated (Chapman, 2007:188). In The Orange Book (2004:27) it is noted that the option of termination activities may be more severely limited in government entities than in the private sector, owing to the number of activities conducted in government sector, because the associated risks are so great that there is no alternative way in which the output or outcome, required for the public benefit, can be achieved.

**Take the opportunity:** Risk response considerations should not be limited to solely reducing identified risks but also should include consideration of new opportunities for the entity (COSO Framework, 2004:58). Taking the opportunity is not an alternative; rather, it is an option which should be considered whenever tolerating, transferring or treating risk (The Orange Book, 2004:28). Two aspects worth considering in relation to taking the opportunity are the possibilities that while threats are being mitigated, an opportunity to exploit positive impact may simultaneously arise and that circumstances might occur which, whilst not generating threats, may offer positive opportunities (The Orange Book, 2004:28).

AS/NZS 4360:2004 (2004:21) cautions that selecting the most appropriate option involves balancing costs of implementing each option against the benefits derived from it. In general, the cost of managing risks needs to be commensurate with the benefits obtained (AS/NZS 4360:2004, 2004:21). According to AS/NZS

4360:2004 (2004:21), it is important to consider all direct and indirect costs and benefits, whether tangible or intangible, and whether measured in financial or other terms. Chapman states that the time, effort and energy expended in the earlier risk management process of developing planned actions to respond to the risks and opportunities identified will largely be wasted unless this is done. In this regard, the what, when, and who of execution will have been agreed and recorded in the plan process (Chapman, 2006:196).

#### **2.5.4 Monitor and review**

The activities agreed upon in the plan process having been executed, it is necessary to monitor progress against the plan and assess whether everything is proceeding healthily (Chapman, 2006:196). Ongoing review is essential, to ensure that the management plan remains relevant (AS/NZS 4360:2004, 2004:22). Moeller (2007:173) states that a process should be in place to assess the effectiveness of established internal control components and to take corrective actions when appropriate. According to Chapman (2006:196) a system of early warning indicators (predetermined trigger points) is required, to draw managers' attention to either the lack of effectiveness of risk management actions or changes in essential measures. Comparison of actual progress against risk treatment plans provides important performance measurement and should be incorporated into the performance management, measurement and reporting system of the organisation (AS/NZS 4360:2004, 2004:22).

#### **2.5.5 Communicate and consult**

AS/NZS 4360:2004 (2004:11) states that communication and consultation are important considerations in each step of the risk management process. These should involve a dialogue with stakeholders, with efforts focused on consultation rather than a one way flow of information from the decision-maker to other stakeholders (AS/NZS 4360:2004, 2004:11). In AS/NZS 4360:2004 (2004:11) the importance of developing a communication plan for both internal and external stakeholders at the earliest stage of the process is noted. Moeller believes that

perhaps the most important component of communication is that all stakeholders should periodically receive messages from senior management, reminding them that internal control responsibilities must be taken seriously. This message is part of “tone at the top” and it should be communicated throughout the enterprise (Moeller, 2007:171). In The Orange Book (2004:35) it is noted that communication within the organisation about risk issues is important:

- to ensure that everybody understands, in a way appropriate to their role, what the organisation’s risk strategy is, what the risk priorities are, and how particular their particular responsibilities in the organisation fit into that framework;
- to ensure that transferable lessons are learned and communicated to those who can benefit from them;
- to ensure that each level of management, including Board, actively seeks and receives appropriate and regular assurance about management of risk within their span of control.

Moeller (2007:172) mentions that there is no one correct means of communicating internal control information within the enterprise. According to the COSO Framework (2004:74), communication can take forms such as policy manuals, memoranda, emails, bulletin board notices, webcasts, and videotaped messages.

Every enterprise needs to establish appropriate communication channels with interested outside parties, including customers, suppliers, shareholders, bankers, regulators, and others (Moeller, 2007:172). In its annual report statement of how the company has dealt with risk and control, the board should:

- state that the board is responsible for risk management and the system of internal control, including the establishment and communication of risk tolerance and risk control strategies and policies in the company, and for reviewing the system of risk management for effectiveness;
- report that there is an ongoing process for identifying, evaluating and managing the significant business risks faced by the company, and that it has

been in place for the year under review and up to the date of approval of the annual report (King II Report, 2004:87).

The information provided to outside parties should be relevant to their needs so that they can better understand an enterprise and the challenges it faces (Moeller, 2007:172). Communication should be meaningful, pertinent, and timely, and conform to legal and regulatory requirements (COSO Framework, 2004:73).

## **2.6 ENTERPRISE RISK MANAGEMENT**

The literature review has focused on the concepts of risk, risk management and risk management processes. The ensuing sections explore the concept of enterprise risk management and its effective implementation. Chapman (2006:4) notes that historically, within private and public organisations, risk management has traditionally been segmented and carried out in “silos”. Abrams *et al.* (2007:222) state that as companies begin to manage risk, they typically come to the conclusion that they cannot manage it in an *ad hoc* manner by vertical business unit, by specific regulation, or by domain; it becomes apparent that risk management must be conducted in a structured way and integrated throughout the whole enterprise. In this regard, Chapman (2006:4) suggests that enterprise risk management is a response to the sense of inadequacy experienced in using a silo-based approach to manage increasingly interdependent risks. Beasley and Frigo (2007:26) note that more organisations are embracing enterprise risk management, a holistic approach to effective risk management for the entire enterprise. The discipline of enterprise risk management, sometimes referred to as strategic business risk management, is seen as a more robust method of managing risk and opportunity (Chapman, 2006:4). The goal of enterprise-wide risk management initiative is to create, protect and enhance shareholder value by managing the uncertainties that could either negatively or positively influence achievement of the organisation’s objectives (Barton *et al.*, 2002:5).



### **2.6.1 Concept of enterprise risk management**

Enterprise risk management entails the alignment of an organisation's strategy, processes, people, technology and knowledge to meet its risk management purpose and offers a systematic and integrated way of identifying and responding to all the sources of risk (Valsamakis *et al.*, 2005:78). Accordingly, Valsamakis *et al.* (2005:79) define enterprise risk management as the process by which organisations identify, assess, control, exploit, finance, and monitor risks from all sources for the purpose of increasing the organisation's short and long term value to its shareholders. The COSO Framework (2004:16) defines enterprise risk management as a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk alignment with its risk appetite, to provide reasonable assurance regarding the achievement of the entity's objectives. These definitions show that enterprise risk management is geared towards assisting the entity in achieving its objectives. The IRMSA Code of Practice defines enterprise risk management as a formal response to corporate risk. It is a structured and systematic process that is interwoven into existing management responsibilities (the IRMSA Code of Practice). Barton *et al.* (2002:11) note that enterprise-wide risk management represents a paradigm shift in the way that businesses manage the uncertainties that stand in the way of achieving their strategic, operational, and financial objectives.

According to Lam (2003:45), there are three major benefits to enterprise risk management:

- increased organisational effectiveness – organisational effectiveness relates to achieving organisational goals and objectives;
- better risk reporting – provision of timely risk reports to the relevant stakeholders within and external to the organisation;
- improved business performance – improved efficiencies in the business.

Companies that adopt an enterprise risk management approach have experienced significant improvements in business performance (Lam, 2003:46).

### **2.6.2 Implementing enterprise risk management**

To build an enterprise-wide risk management system, an overall “big picture of the world” is needed, to frame an organised way of thinking about business risks (Abrams, von Känel, Müller, Pfitzmann & Ruschka-Taylor, 2007:224). (Barton et al. (2002:30) note that adopting enterprise-wide risk management involves a major cultural change for a company. To succeed, it needs commitment from the highest levels of management (Barton et al., 2002:30). Abrams *et al.* (2007:230) state that the senior management team need to commit to enterprise risk management as part of their vision for their company’s future, and the current state of the firm’s readiness must be assessed before any formulation of further steps towards enterprise risk management can be undertaken. The IRMSA Code of Practice, attesting the concept of enterprise risk management, proposes that there should be one consistent framework for responding to risk in a corporate setting. An enterprise risk management initiative begins with a risk policy – a statement of the corporation’s overall commitment to the effort (Lam, 2003:66). A risk policy is best formulated at corporate management level, with input from business units, and approved by the board (Lam, 2003:66).

Valsamkis *et al.* (2005:83-84) state that the steps to implementing enterprise risk management are as follows:

- Development of a common framework for risk;
- Establishment of overall risk management goals;
- Development of risk management strategies.

A common framework for risk enables managers to identify and prioritize all the risks in the organisation and also helps in developing a common understanding of what risk is (Valsamkis *et al.*, 2005:83-84). Codifying the commitment to risk management and the organisation’s risk appetite into the risk policy helps

management communicate the overall approach to risk management throughout the organisation (Lam, 2003:66).

According to Chapman (2006:103), key success factors for the successful implementation of enterprise risk management include the following:

- Clarification of the objectives;
- Development of a clear plan with objectives, deliverables, responsibilities and timeframe;
- Assignment of an experienced and knowledgeable risk management professional to lead the assignment;
- Use of consistent terminology throughout any reports produced and production of a glossary of terms where appropriate;
- Ensuring that key business representatives participate in the assignment.

### **2.6.3 Enterprise risk management organisational structure**

Moeller (2007:115) states that a key component of effective enterprise risk management is having some level of enterprise leadership responsible for the overall risk management process. Accordingly, Moeller (2007:114) proposes that for a large enterprise with multiple and differing business operations, there may be a need for separate risk management units but all should report to a single responsible risk unit headed by a Chief Risk Officer (“CRO”). Ideally, day-to-day responsibility for implementing enterprise risk management should rest with an independent risk management functionary who reports directly to the Chief Executive Officer (“CEO”) or board [through the CRO, if so appointed] (Lam: 2003:67). The CRO, a designated senior enterprise officer, is responsible for administering and monitoring the overall enterprise risk management function in an enterprise (Moeller, 2007:115). Lam (2003:45) notes that a growing number of companies now have a CRO who is responsible for overseeing all aspects of risk within the organisation. The King II Report (2002:79) states that although management may appoint a CRO or risk facilitator to assist in the execution of the risk management process, the accountability to the board remains with

management and should be the responsibility of every employee. Lam (2003:67) maintains that the appointment of the CRO and independence of the risk management function ensure that the risk management function will be unbiased and objective and that the risk management office has sufficient power within the organisation to motivate good risk management practices.

The appointment of a CRO and the establishment of an enterprise risk function provide the top-down coordination necessary to make various functions of risk management work efficiently (Lam, 2003:46). Accordingly, Lam (2003:49-50) states that in general, the office of the CRO is directly responsible for:

- Providing overall leadership, vision and direction for enterprise risk management;
- Establishing an integrated risk management framework for all aspects of risks across the organisation;
- Developing risk management policies, including the quantification of management's appetite through specific risk limits;
- Implementing a set of risk indicators and reports, including losses and incidents, key risk exposures and early warning indicators;
- Allocating economic capital to business activities based on risk and optimising the risk portfolio of the company through business activities and risk transfer strategies;
- Communicating the risk profile of the company to key stakeholders such as the board of directors, regulators, stock analysts, rating agencies and business partners;
- Developing analytical, systems, and data management capabilities to support the risk management program.

The major responsibilities of the CRO should be management of the process of assessing risks throughout the enterprise, implementation of appropriate corrective actions, and communication of risk issues and events to all levels of the enterprise (Moeller, 2007:116).

Chapman (2006:6) notes that over and above the appointment of the CRO, who is empowered with the responsibility and authority to act on all risk management matters, for the board to ensure effectiveness of their risk model they should:

- ensure that the CRO is independent and can work objectively with the company's external advisers (external audit, legal) and the governing decision-maker and oversight function (the CEO and board);
- be satisfied from the standpoint of identification, assessment and mitigation. as to the adequacy of the depth of current risk analysis actions;
- be confident that the risk management information that board members receive is accurate, clear and relevant;
- actively seek and participate in regular dialogue with key stakeholders, to understand whether their objectives have been captured, debated and aligned and are being met and whether stakeholders may derail current initiatives;
- strive to build a culture where risk management and strategic planning are intertwined;
- ensure that risk management remains focused on the most serious issues;
- ensure that risk management is embedded throughout the organisation.

## **2.7 ENTERPRISE RISK MANAGEMENT GOVERNANCE STRUCTURES**

In terms of the King II Report (2002:77), the board is responsible for the total process of risk management, as well as for forming its opinion on the effectiveness of the process. In this regard, the board is responsible for ensuring that a systematic, documented assessment of the processes and outcomes surrounding key risks is undertaken, at least annually, for the purpose of making its public statement on risk management (King II Report, 2002:79). Moeller (2007:221) comments that risk oversight and management are components of board responsibilities. Moeller also notes that a growing number of corporate boards are beginning to establish separate risk committees. These board-level committees directly supervise the activities of the CRO, monitor risk issues at a very high level, coordinate closely with the audit committee and communicate

risk-related issues with the board (Moeller, 2007:229-230). Management is accountable to the board for design, implementation and monitoring of the process of risk management, and for its integration into the day-to-day activities of the company (King II Report, 2002:77). Risk management should also be practised throughout the company by all staff in their day-to-day activities (King II Report, 2004:77).

## **2.8 CONCLUSION**

The literature review on risk, risk management, the risk management process, and enterprise risk management clearly shows that related management activities should be aimed at assisting the organisation to achieve its objectives. The review also indicates that the development and effective implementation of enterprise risk management is a systematic, continuous, and methodological process permeating the whole organisation. The effectiveness of enterprise risk management should be measured against the success of the organisation in meeting its strategic objectives and is dependent upon the collaboration and cooperation of various role-players within and outside the organisation. The board and management, as key role-players, have responsibility and accountability for the total process of risk management. In light of these conclusions, the next chapter discusses enterprise risk management in the City.

## **CHAPTER 3**

### **ENTERPRISE RISK MANAGEMENT AT THE CITY**

#### **3.1 INTRODUCTION**

The preceding chapter presented the literature overview on enterprise risk management. This chapter documents enterprise risk management at the City as at the time of this research. The researcher acknowledges that enterprise risk management within the City is evolving and dynamic and therefore the contents of this chapter may not necessarily reflect the state of enterprise risk management at the City at a future point in time.

Chapter 1 noted that at the core administration level of the City, enterprise risk management was formalised on 1 November 2006, with the appointment of the Chief Risk Officer (“CRO”). On appointment, the CRO reported to the City Treasurer, who in turn reported to the Executive Director: Finance. At about the same time or even earlier in some instances, the municipal-owned entities (“MOEs”) also formalised the implementation of enterprise risk management within their own areas of operation. The approach to enterprise risk management at different levels of the City was rather inconsistent. As a result of these inconsistencies, the early stages of implementation focused on the development of an enterprise risk management policy and framework, which would provide for a consistent approach to risk management throughout the City. The policy and framework were approved by Council during August 2007. In August 2007, the City also changed the reporting responsibilities of the CRO from the City Treasurer to the Executive Head: Risk and Audit Services, who in turn reports to the City Manager. These developments laid a foundation for the subsequent implementation of enterprise risk management.

The contents of this chapter are based on the provisions of the enterprise risk management policy and framework, which for the purposes of this research will be referred to as the Risk Management Policy “RMP” and Risk Management

Framework “RMF” respectively. The extent to which the City has embedded and optimised enterprise risk management as a business enabler is presented in Chapter 5.

## **3.2 RISK MANAGEMENT POLICY**

The objective of the RMP (2007) is to pursue a structured approach to effective management of risk. The RMP (2007) notes that successful service delivery is contingent upon effective and cohesive management of risks. In this regard, the RMP defines the responsibility of the CRO, Departmental Heads, and MOE Boards and management towards enterprise risk management and these are discussed below.

### **3.2.1 The Chief Risk Officer**

The RMP provides for the establishment of the Office of the Chief Risk Officer as a custodian of the risk management function. In terms of the RMP, the CRO Office provides support and direction on risk management to the City and MOEs. The RMP, amongst others, states that the CRO Office is responsible for monitoring the implementation of the policy and to ensure alignment to the framework by the MOEs. The policy details the responsibilities of the CRO Office as follows:

- drive the risk management strategy and framework in the City and its MOEs;
- provide advice and support on risk management matters to Council, City Manager and all officials;
- coordinate the activities of the Group Risk Management Committee (“GRMC”);
- provide secretarial function and strategic support to the GRMC;
- coordinate and chair the Chief Risk Officers’ Forum (“the Forum”);
- maintain and update the RMP and RMF;
- review and analyse all risk management reports from the MOEs before submission to the GRMC;



- compile a consolidated risk register and reports on risk management activities to be tabled at the GRMC;
- communicate the RMP and RMF throughout the City;
- implement a framework for conducting risk assessments at both strategic and operational levels and monitor and report on risk management;
- facilitate risk management training across the City;
- source consultants;
- manage, monitor and report on risk management expenditure including reporting on the total cost of risk to the GRMC; and
- provide expertise in risk financing including self funding (RMP, 2007).

In executing the above, the CRO is supported by the Heads: Risk Finance, Business Risk, Strategic Risk, Risk Control and Special Projects.

### **3.2.2 The Departmental Heads**

In terms of the RMP, the responsibilities of the Departmental Heads, Executive Directors and Directors with regards to risk management are to:

- implement the RMP and RMF;
- identify and evaluate the fundamental risks faced by the department;
- provide adequate information in a timely manner to the office of the CRO and GRMC on the status of risks and controls;
- assist the GRMC to undertake an annual review of risk management and the effectiveness of the system of internal control; and
- embed risk management as part of the system of internal control (RMP, 2007).

### **3.2.3 MOE Boards and Management**

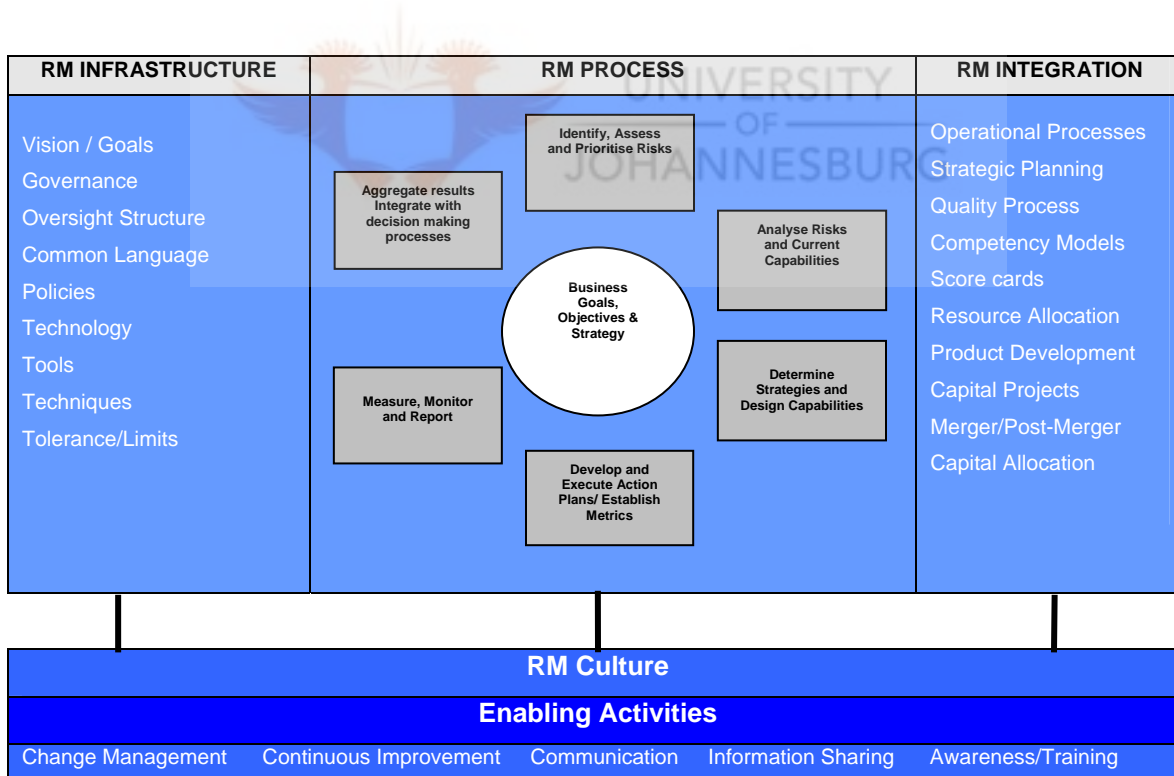
The RMP states that the boards and management of the MOEs are required to maintain risk management within the MOEs and are obliged to establish a Risk Committee as a committee of the board. The RMP (2007) further prescribes that the chairperson of the Risk Committee shall report to the board and the GRMC. In terms of the RMP, the Risk Committee has the responsibility to ensure that a

risk register for the MOE is maintained and continuously updated through regular risk assessments. MOEs are required to establish a dedicated risk management function.

### 3.3 RISK MANAGEMENT FRAMEWORK

In terms of the RMF (2007:24), enterprise risk management model comprises of risk management infrastructure, risk management process and risk management integration. These elements are underpinned by the risk management culture and enabling activities, namely change management, continuous improvement, communication, information sharing, and awareness and training. The risk model is depicted in Figure 4.

FIGURE 4: THE RISK MODEL



Source: RMF (2007:24)

The ensuing sections discuss the elements of the risk model as contained in Figure 4 in more detail.

### **3.3.1 Risk management infrastructure**

In terms of the risk model, the sub-elements of risk management infrastructure include the vision/goals, governance oversight structure, common language, policies, technology, tools, techniques, and tolerance/limits. The objectives of enterprise risk management are codified in the RMF and these are to:

- establish an appropriate framework which addresses risk infrastructure, maintain a process of systematic identification and assessment of the risks that threaten the achievement of the City's objectives, ensure integration across MOEs and Departments and embed a culture of Risk Management within the City;
- ensure risk management accountability by establishing key functional criteria at managerial levels which includes the MOEs and Departmental Heads;
- establish clear roles, responsibilities and reporting lines for the risk management activities through management performance contracts and independently assessed key performance indicators ("KPIs");
- link and embed risk management with other policies, strategies, procedures and processes that govern the City, including all projects and activities;
- reinforce the importance of effective risk management practices in the day-to-day provision of the services to personnel involved in service delivery;
- provide opportunities for shared learning on risk management;
- offer a framework for allocating resources to identified priority risk areas;
- identify and evaluate potential risk exposures on an on-going basis, including risk assessments of new areas of activity;
- regularly monitor reports by departmental Heads on the effectiveness of the risk response strategies;

- schedule quarterly meetings of the GRMC to review, develop and co-ordinate activities so as to ensure a systematic approach to risk management;
- regularly assess and determine appropriate risk financing and transfer strategies to protect against catastrophic losses;
- assess, define and measure the risk appetite and tolerance levels; and
- ensure that risk management is sustained and embedded in the context of organisational change (RMF, 2007:17).

The RMF (2007:19) establishes that Council has overall responsibility for risk management at the City and that the GRMC has a responsibility to oversee the implementation of the policy and the framework. In order to give effect to its oversight responsibility, the GRMC meets on a quarterly basis. The Council appoints the members of the GRMC and approves its terms of reference/charter (“Charter”). In terms of the Charter, the GRMC shall consist of four independent members who are experts in the risk management field. The Charter also states that the Councillors and the employees of the City may not be members of the GRMC. However, the following ex-officio members are normally in attendance at the GRMC meetings:

- The City Manager;
- The Chief Risk Officer;
- The Executive Director: Finance;
- The Executive Head: Risk and Audit Services; and
- Chairpersons of the Risk Committees from MOEs.

Ex-officio means that the members participate in the deliberations of the GRMC, but do not have voting rights. This arrangement has advantages in that it:

- maintains the separation of powers between the GRMC members and the officials;
- allows for informed and timely decisions by the GRMC members; and
- makes it easier for the ex-officio members to implement the decisions of the GRMC.

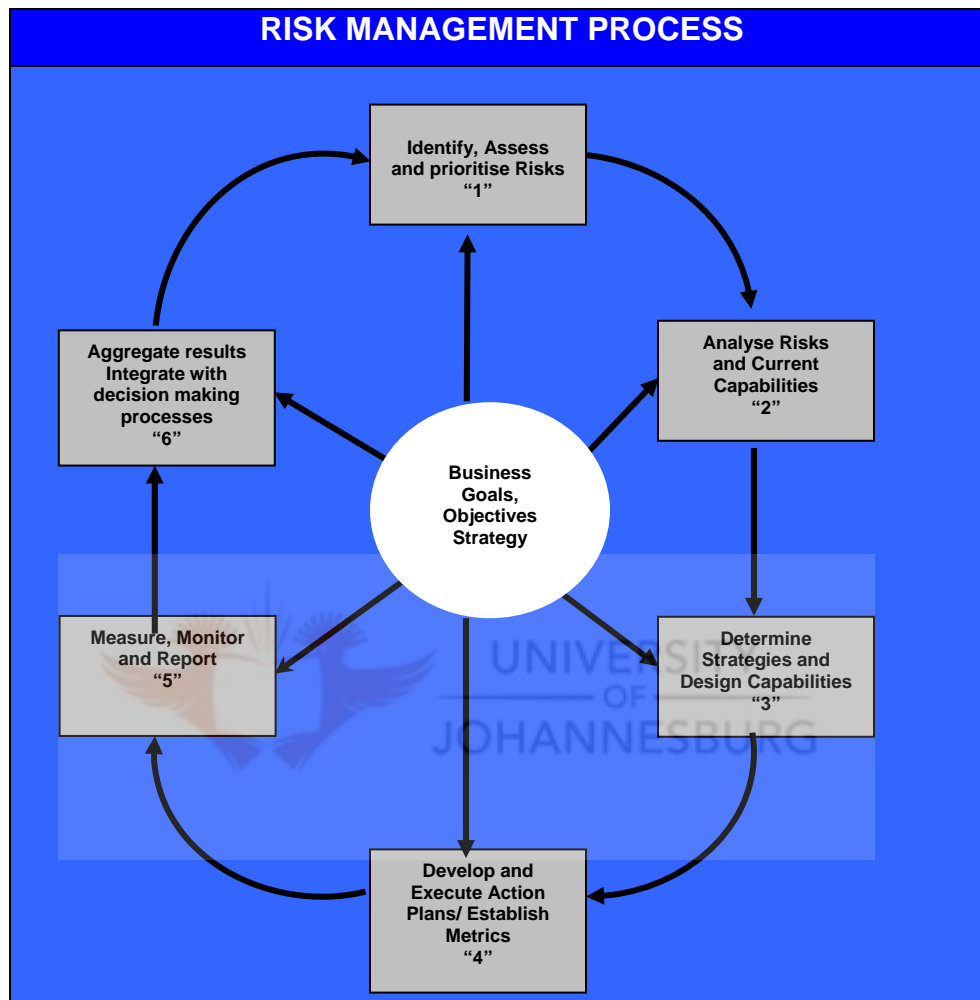
The RMF (2007:19) also provides for the establishment of the Chief Risk Officers' forum ("the Forum"). The Forum provides advice and support on matters relating to risk management to the management and its members. The membership of the Forum includes the CROs throughout the City and the departmental risk champions / officers.

On common language, the RMF sets out general risk terminology that is used at the City. As an example, the RMF (2007:6) defines risk treatment as a "process of selection and implementation of measures to modify risk." The remainder of the elements of the risk management infrastructure including tools, techniques, and tolerance/limits are incorporated in the discussions that follow.

### **3.3.2 Risk Management process**

The RMF (2007:26) notes that in order for the risk management process to be effective and consistent, it is vital that the risk management process is clearly communicated throughout the organisation. Accordingly, the RMF (2007:26) states that the stakeholders must have a clear understanding of their roles and the methodologies that have been adopted by the City. The risk management process is depicted in Figure 5 below.

FIGURE 5: THE RISK MANAGEMENT PROCESS



Source: Adapted from RMF (2007:26)

Some of the elements embedded in the risk management process are discussed in detail below:

- **Risk identification:** The risk management process in the City starts with risk identification. The RMF (2007:27) notes that informed decisions can only be made if the risks involved in delivery or improvement of services are properly identified. The City uses any one of the following techniques in risk identification: individual interviews, workshops, staff surveys or

selected groupings or a combination thereof. The outcome of the risk identification is the risk register and ultimately the City's risk profile once the risks in the risk register have been assessed and analysed. A report on the City's top ten risks was approved by the GRMC in June 2008.

- **Risk assessment:** The City adopts a two-stage risk assessment process in assessing and quantifying the identified risks. The **first** stage of risk assessment involves an assessment of the potential impact (severity) of each risk and the likelihood of the event occurring (RMF, 2007:29). As is discussed below, the risk assessment is done using a five-by-five risk assessment matrix. Tables 1 and 2 below indicate the likelihood and impact assessment criteria adopted by the City respectively.

TABLE 1: LIKELIHOOD ASSESSMENT CRITERIA

Likelihood Descriptor	Description	Probability
Almost Certain – 5	Event has occurred within the last year repeatedly.	The event is certain to occur within this financial year.
Likely – 4	Event has occurred within the last financial year.	The event is likely to occur within this financial year.
Possible – 3	The event has a probability of occurring at some time, in the next year.	Event has been recorded within organisation as well as within the sector in the last 2 years.
Unlikely – 2	Very few recorded or known incidents reasonable opportunity to occur as has occurred within other organisations within sector.	The event may occur at some time, within the next 2 years.
Rare – 1	Event may occur in exceptional circumstances. No recorded incidents or little opportunity for occurrence.	No event recorded in the last 3 years.

Source: RMF (2007:30)

TABLE 2: IMPACT ASSESSMENT CRITERIA

Assessment of Impact / Severity				
	Financial	Reputation	Stakeholders	Customers
1	Event would have little financial impact on either income or budget	Contained within the individual service area. From a regulatory perspective minor fines or penalties may have been suffered.	Employees may have suffered minor first aid injuries. Event may have resulted in localized staff morale problems.	Customers may have been minimally impacted. Event may impact minimally on a performance target achievement.
2	Event would have moderate financial impact (> 2% on either income or budget).	Affects significant number of the service areas but with likely short-term impact on public memory. From a regulatory perspective fines or penalties > R50k may have been suffered. Customers may have been impacted so that complaints are the result with media coverage (suburban newspaper).	Employees may have suffered temporary disabling injuries. Event may have resulted in staff loss causing minor to moderate consequences.	Event may impact on a performance target achievement where a major milestone was missed by more than 1 month impacting on a client segment.
3	Event would have serious financial impact (> 4 -6% on either income or budget).	Regulator inquiry with medium term impact on public memory. From a regulatory perspective fines or penalties > R100k may have been suffered. Customers may have been impacted so that complaints are the result with media coverage (local newspaper not front page).	Employees may have suffered multiple temporary disabling injuries. Event may have resulted in staff loss causing serious consequences.	Event may impact on a performance target achievement where a major milestone was missed by more than 3 months and subsequent interruption over several days to customers.
4	Event would have very serious financial impact (> 8% on either income or budget).	Medium term public impact with minor political implications. From a regulatory perspective fines or penalties > R150k may have been suffered. Customers may have been impacted as such resulting in complaints with media coverage (national TV headlines) and loss of service >1 month.	Employees may have suffered multiple permanent disabling injuries. Event may have resulted in staff loss causing very serious consequences.	Event may impact on a performance target achievement where a major milestone was missed by more than 6 months, resulting in a major customer impact.
5	Event would have Catastrophic financial impact (> 15 to 25% on budget/income).	Long-term impact on public memory and major political implications. From a regulatory perspective fines or penalties > R500k may have been suffered. Customers may have been impacted as such resulting in complaints with media coverage (national TV headlines) and loss of service >6 month.	Employees may have suffered fatalities. Event may have resulted in staff loss causing catastrophic consequences.	Event may impact on a performance target achievement where a major milestone was missed by more than 8 months to over 1 year.

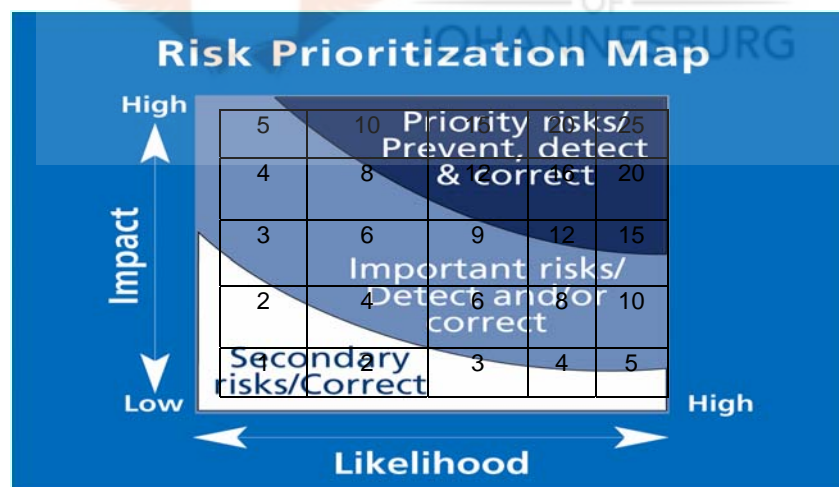
Source: RMF (2007:29)



The **second** stage of risk assessment involves the development of risk drivers. In terms of the RMF (2007:31), risk drivers are those elements which tend to be the cause of the risk occurring. The RMF notes that the formulation of the risk drivers is to assist with the understanding of the risk and in formulation of controls.

- Risk assessment matrix:** As noted above, the City uses a five-by-five risk assessment matrix. Accordingly, the risk score, being a product of likelihood and impact, can range from a minimum of 1 to a maximum of 25, as reflected in Figure 7. Once the risks have been assessed in terms of likelihood and impact, the risks are prioritised in accordance with the “heat map” as transposed on Figure 7 below. The risks that appear on the ‘priority zone’ of the heat map receive priority attention.

FIGURE 7: RISK MATRIX



Source: Adapted from RMF (2007:32)

- Risk treatment options:** Once the risks have been assessed and mapped on the risk assessment matrix, appropriate control measures are developed and implemented on risks which manifest themselves in the ‘priority risks zone’ (RMF, 2007:36). In terms of the RMF (2007:36), there are six available

risk treatment options that can be considered by managers, namely avoiding, retaining, reducing, transferring, exploiting, or integrating the risk.

- **Risk monitoring:** The changes in the risk profile are monitored through regular reporting to various role-players and stakeholders (RMF, 2007:36). The following risk reporting documentation should be in place to support the risk management process:
  - annual business plans to include status reports on implementation of the Framework;
  - quarterly corporate performance monitoring reports;
  - annual risk management report;
  - annual risk assessments / updates to mitigation and action plans;
  - annual statement on internal control;
  - monthly coordinating committee on risk management meetings;
  - monthly focused risk sub-committee meetings; and
  - quarterly GRMC meetings (RMF, 2007:36).
- **Embedding risk management:** The RMF (2007:37), notes that, amongst others, risk management training and risk reporting are critical elements of embedding the risk management process within the City.

### **3.3.3 Risk management integration**

Although the RMF does not detail the process of risk management integration, it notes that the business planning framework requires entities and departments to identify, record, evaluate and establish links between objectives and risks and to regularly monitor these.

## **3.4 CONCLUSION**

The City has made tremendous strides in developing and implementing the enterprise risk management policy and framework. The CRO has been appointed with the responsibility to provide overall leadership and direction with regards to

enterprise risk management throughout the City. Appropriate enterprise risk management oversight structures are in place to ensure that enterprise risk management receives the attention it deserves. As has been noted above, the RMF also defines the responsibility of management with regards to enterprise risk management, including that of the MOE Boards. The policy directive with regards to enterprise risk management are effected through the RMF, which clearly spells out the “what, how, and when” of enterprise risk management. The next chapter sets out the research methodology that was used in determining how the City can optimise enterprise risk management as a business enabler.



## **CHAPTER 4**

### **RESEARCH METHODOLOGY**

#### **4.1 INTRODUCTION**

Chapter 3 highlighted the developments in and implementation of enterprise risk management at the City over the past few years. Although Chapter 1 briefly introduced the research methodology, this chapter presents the research methodology employed in this study in detail. This chapter covers the nature of research, research design, sampling, research instruments, data collection and analysis, validity and reliability and the ethical considerations.

#### **4.2 NATURE OF RESEARCH**

Cooper & Schindler (2006:715) defines qualitative research as interpretive techniques that seek to describe, decode, translate, and otherwise come to terms with the meaning, not frequency of a certain phenomena. In contrast, Cooper & Schindler (2006:716) define quantitative research as the precise count of some behaviour, knowledge, opinion or attitude, which is frequency of a certain phenomena. Hair, Babin, Money & Samouel, (2003:74) state that in qualitative research, rather than collecting information by assigning numbers, the data is collected by recording words and sometimes pictures. Quantitative data are recorded directly with numbers and they are in a form that lends itself to statistical analysis (Hair *et al.*, 2003:74). In table 3 below, Hair *et al.* (2003:76) further present a comparison of qualitative and quantitative data.

TABLE 3: A COMPARISON OF QUALITATIVE AND QUANTITATIVE DATA

Description	Quantitative data	Qualitative data
Purpose	<ul style="list-style-type: none"> <li>• More useful for testing.</li> <li>• Provides summary information on many characteristics.</li> <li>• Useful in tracking trends.</li> </ul>	<ul style="list-style-type: none"> <li>• More useful for discovering</li> <li>• Provides in-depth (deeper understanding) information on a few characteristics.</li> <li>• Discovering 'hidden' motivations and values.</li> </ul>
Properties	<ul style="list-style-type: none"> <li>• More structured collection technique and objective ratings.</li> <li>• High concern for representation.</li> <li>• Relatively short interviews (1 to 20 minutes).</li> <li>• Interviewer is passive.</li> <li>• Larger samples (over 50).</li> <li>• Results objective.</li> </ul>	<ul style="list-style-type: none"> <li>• More structured collection technique requiring a subjective interpretation.</li> <li>• Little concern for representative ness.</li> <li>• Relatively long interviews (1/2 to many hours).</li> <li>• Interview is active and should be highly skilled.</li> <li>• Small samples (1-50).</li> <li>• Results subjective.</li> </ul>

Source: Hair *et al* (2003:76)

The primary objective of this study was to investigate how the City can optimise enterprise risk management as a business enabler. The data was interpreted verbally not statistically. Accordingly, the study was qualitative in nature.

### 4.3 RESEARCH DESIGN

A research design is a master plan specifying the methods and procedures for collecting and analysing the needed information (Zikmund, 2003:65). Hair *et al.*, (2003:57) states that the researcher must choose a design that will provide relevant information on the research questions and will do the job most efficiently. The research design should demonstrate how the researcher will answer the research questions (Hussey & Hussey, 1997:132).

Hair *et al.*, (2003:57) further state that researchers generally choose from among an exploratory, descriptive or causal design. The authors (2003:57) note that an exploratory research project is useful when the research questions are vague or when there is little theory available to guide predictions. The authors (2003:57) are also of the opinion that descriptive research describes some situation. Causal research explains the relationships among variables, for example why the crime rate is higher at city A than in city B (Cooper & Schindler, 2006:141).

The research question of this study lent itself to an exploratory research design, as it:

- explores the City's definition of enterprise risk management;
- explores the City's objectives for enterprise risk management within the City;
- investigates whether the risk management process in place within the City is in support of its objectives; and
- investigates the governance (accountability and responsibility) for enterprise risk management in the City given various municipal Acts.

Accordingly, the research design was exploratory as there was very little information available on how the City can optimise enterprise risk management as a business enabler.

#### **4.4 SAMPLING**

The process of sampling involves any procedure using a small number of items or parts of the whole population to make conclusions regarding the whole population (Zikmund, 2003:369). Zikmund thus defines a sample as a subset or some part of a larger population. Hair *et al.* (2003:209) attest that representative samples are generally obtained by following a set of well-defined procedures and these include the following steps:

- defining the target population;
- choosing the sampling frame;
- selecting the sampling method (probability or non-probability);
- determining the sample size; and

- implementing the sampling plan.

The selection of a sampling method to use in a study is depended, amongst others, on the nature of the study, the objectives of the study, and the time and budget available (Hair *et al.*, 2003:211). Traditional sampling methods can be divided into two broad categories: probability and non-probability (Hair *et al.*, 2003:211). In probability sampling every element in the population has a known nonzero probability of selection (Zikmund, 2003:379). “In non-probability sampling, the probability of selecting population elements is unknown” (Cooper & Schindler, 2006:422). The researcher uses subjective methods such as personal experience, convenience, judgement, etc. to select the elements in the sample (Hair *et al.*, 2003:217). In this study, a non-probability sampling method was used. In order to ensure balanced response from the various elements of the sampling frame, the researcher used his judgement and criteria to select a sample. In this regard, the researcher used a purposive sampling technique. According to Cooper & Schindler (2003:424), purposive sampling is a non-probability sample that conforms to a certain criteria. The criteria for sample elements in this study were:

- membership of the Council or Board of the MOE;
- membership of the enterprise risk management oversight structures, e.g. GRMC or Audit Committee;
- employment with the City as a manager; and
- employment with the City as a Chief Risk Officer or equivalent.

The use of non-probability purposive sampling was ensure that only the respondents with accountability and responsibility for enterprise risk management within the City participated in this study.

Accordingly, the population elements from which the sample was selected included the members of the Council or boards of the MOEs, members of the governance structures with oversight responsibility for enterprise risk management, e.g. the GRMC or Audit Committee, management and risk officers.

For the purposes of this study, management was defined as the heads of departments, CEO/MD of the MOE, direct reports of the head of department or CEO/MD and their direct reports, i.e. levels 1 to 3 of management. Cooper & Schindler (2006:402) note that a list of all population elements from which the sample will be drawn from is called the sample frame.

#### **4.5 DATA COLLECTION AND RESEARCH INSTRUMENTS**

The primary data will be collected by means of a survey. According to Zikmund (2003:66), a survey is a research technique in which information is gathered from a sample of people using a questionnaire, interviews, observations, etc. Hussey & Hussey (1997:184) define a research instrument as an alternative term for certain methods of data collection, which usually refers to questionnaires which have been used and tested in a number of studies and can be adopted by any researcher. Hair *et al.* (2003:184) state that a questionnaire is a prepared set of questions (or measures) to which respondents or interviewers record the answers. Thus the authors state that before developing a questionnaire, the researcher must be clear as to exactly what is being studied and what is expected from the study. The researcher used a questionnaire as a research instrument in this study. The questionnaire was a two-part questionnaire comprising of fifteen (15) questions which were based on the secondary objectives of the study. Part I of the questionnaire comprised on open-ended questions and part II comprised of close-ended questions. The use of a two-part questionnaire with both open-ended and close-ended questions ensured that not only facts are established during the research, but that the opinions and views of the respondents are also solicited. This two-part questionnaire is included as annexure **A** and **B** respectively.

An open-ended question places no constraints on respondents who are free to answer in their own words (Hair *et al.*, 2003:190). In contrast, the authors (2003:190) note that with close-ended questions the respondent is given the option of choosing from a number of predetermined answers. The researcher



used open-ended questions to solicit as much information as is possible to determine whether those who have accountability and responsibility for enterprise risk management within the City shared a common understanding of enterprise risk management at the City. The close-ended questions were used to determine how the City has implemented enterprise risk management in comparison with the literature overview presented in Chapter 2.

Both parts of the questionnaire were self-administered. The questionnaire was sent to the respondents via electronic mail as an attachment. In order to ensure validity and reliability, part I of the questionnaire was sent out first and on receipt of the completed part I from the respondents, part II was sent to respondents also by electronic mail. The office of the CRO assisted in this regard. Respondents either utilised electronic mail or hand-delivered their completed questionnaire to the researcher or the office of the CRO.

#### **4.7 DATA ANALYSIS**

Hair *et al.*, (2003:252) are of the opinion that data becomes knowledge only after analysis has identified a set of descriptions, relationships and differences that are of use in decision making. In this regard, Zikmund (2003:73) defines analysis as the application of reasoning to understand and interpret the data that has been collected. On completion of the survey, the data was edited and coded. According to Cooper & Schindler (2003:441), editing detects errors and omissions, corrects them when possible, and certifies that maximum data quality standards are achieved. Coding involves assigning numbers or other symbols to answers so that responses can be grouped into limited number of categories (Cooper & Schindler, 2003:443). The authors (2003:443), also note that in coding, categories are the partitions of a data set of a given variable. In this study, data was analysed based on categories, groupings and units of coding in relation with the secondary objectives of the study as highlighted in Table 4 below.

TABLE 4: THE STRUCTURE TO DETERMINE UNITS OF CODING

Issue	Question Focus	Purpose of Question(s)	
		Open-ended (Part I)	Closed-ended (Part II)
Definition of enterprise risk management at the City	To establish the definition of enterprise risk management within the City.	<ul style="list-style-type: none"> <li>To determine whether the respondent understands enterprise risk management.</li> <li>To determine whether the respondent knows how the City defines enterprise risk management.</li> </ul>	<ul style="list-style-type: none"> <li>To determine how the City defines risk and enterprise risk management.</li> <li>To determine whether there is a common understanding in terminology with regards to enterprise risk management throughout the City</li> </ul>
Objectives of enterprise risk management at the City	To determine the objectives for enterprise risk management within the City.	<ul style="list-style-type: none"> <li>To establish whether the respondent understands the objectives of enterprise risk management within the City.</li> <li>To determine whether the respondent is aware of how the City integrate its enterprise risk management objectives with its strategic planning process.</li> </ul>	<ul style="list-style-type: none"> <li>To establish the <b>overall</b> objective of enterprise risk management at the City.</li> <li>To establish whether enterprise risk management at the City forms part of the strategic planning and performance management.</li> <li>To establish whether the City has set out the acceptable level of variation relative to achievement of each service delivery objective.</li> </ul>
Achievement of enterprise risk management objectives	To determine whether the risk management process in place within the City is in support of its objectives.	<ul style="list-style-type: none"> <li>To establish whether there is a common understanding of the key risks facing the City and their likely implications on</li> </ul>	<ul style="list-style-type: none"> <li>To establish whether the City has and maintains a risk management process in support of its enterprise</li> </ul>

Issue	Question Focus	Purpose of Question(s)	
		Open-ended (Part I)	Closed-ended (Part II)
		<p>service delivery objectives amongst respondents.</p> <ul style="list-style-type: none"> <li>To determine whether the respondent knows how the City mitigates or exploits key risks.</li> <li>To establish whether the respondent knows how the City monitors the changes in key risks from one period to another.</li> </ul>	<p>risk management objectives.</p> <ul style="list-style-type: none"> <li>To determine whether the City's risk response strategies address both the downside and upside of risk.</li> <li>To determine whether the City monitors the changes in key risks.</li> </ul>
Enterprise risk management governance structures at the City	To establish the governance (accountability and responsibility) for enterprise risk management in the City given various municipal Acts.	<ul style="list-style-type: none"> <li>To solicit respondent's views on what structures should be in place to ensure effective enterprise risk management.</li> <li>To determine whether the respondent is aware of the structures that are in place and their functions with regards to enterprise risk management within the City.</li> </ul>	<ul style="list-style-type: none"> <li>To determine the role of the Chief Risk Officer at the City in the City on enterprise risk management.</li> <li>To determine who has oversight on enterprise risk management within the City.</li> <li>To establish who the CRO or equivalent reports to.</li> </ul>
About the respondent	To establish the role of the respondent's with regards to enterprise risk management at the City.	<ul style="list-style-type: none"> <li>To determine the respondent's role with regards to enterprise risk management.</li> <li>To determine the respondent's length of service with the City.</li> </ul>	<ul style="list-style-type: none"> <li>To determine the respondent's role with regards to enterprise risk management.</li> <li>To determine the respondent's length of service with the City.</li> </ul>

Source: Author derived (2008)

The data was interpreted verbally based on the codes of analysis noted above to get to the conclusions and recommendations made to the City on how it can optimise enterprise risk management as a business enabler. Zikmund (2003:491) notes that from a managerial perspective, the qualitative meaning of data and the managerial implications are important aspects of the interpretation.

#### **4.8 VALIDITY AND RELIABILITY**

Validity is the extent to which the research findings accurately represent what is really happening in the situation (Hussey & Hussey, 1997:57). Similarly, the authors note (1997:57) that reliability is concerned with the findings of the research. Both validity and reliability are important in this study. The researcher took all due cognisance to ensure both validity and reliability of the research findings of this study. With regards to reliability, the researcher used purposive non-probability sampling to ensure the selection of sample was representative. The researcher also ensured that the questions were clear, precise and linked to the objectives of the study. In interpreting and analysing the data, the researcher ensured appropriate categorisation and coding thereof in accordance with the study objectives. To ensure the validity, the two-part questionnaire was administered in separate stages, with open-ended part I being administered first. This ensured that the respondents would not use the alternatives in part II as responses to part I.

#### **4.9 ETHICAL CONSIDERATIONS**

The goal of ethics in research is to ensure that no one is harmed or suffers adverse consequences from the research activities (Cooper & Schindler, 2003:116). The researcher was well aware of the ethical obligations in terms of this study. In this regard, all the information that was made available to the researcher remained confidential and was utilised only for the purpose of this study. The researcher included a covering letter to the questionnaire that informed the respondents of the purpose of the research and confirmed the confidentiality of the information. The covering letter is herewith included as

annexure C. To protect the confidentiality of the respondents, only the titles of the respondents and their role were requested in the questionnaire. The researcher did not use any unethical means like a promise of money, in order to solicit responses from the respondents. However, the covering letter noted that the results of this study would be shared with the City and those respondents who participated in the study. The data collected from the respondents was not tampered with in any way other than for the purpose of analysing and interpreting it as discussed above.

#### **4.10 CONCLUSION**

The selection of the research methodology deployed in this study was influenced by the nature of the study and the research question. The research question was: “how can the City optimise enterprise risk management to be a business enabler” Accordingly, the nature of research was qualitative and exploratory in design. Based on the sample criteria, the selected sample, amongst others, included the members of Council, Boards of MOEs, enterprise risk management oversight structures and management at the City. Data was collected by means of a survey using a two-part questionnaire as a research instrument. The questionnaire comprised of open-ended and close-ended questionnaire, both of which were based on the objectives of the study. Data was analysed using the units of coding as indicated in Table 4. The researcher took due cognisance to ensure the validity and reliability of the research findings. The researcher also took due cognisance of the ethical considerations in conducting the research. The next chapter present the research results having used the research methodology outlined in this chapter.

## **CHAPTER 5**

### **PRESENTATION OF RESULTS**

#### **5.1 INTRODUCTION**

Chapter 4 outlined the research methodology that was used in conducting this research and particularly noted that the data was collected using a two-part questionnaire. Part I comprised of open-ended questions and part II comprised of closed-ended questions. This chapter presents the research findings that emanate from this questionnaire. In line with the questionnaire, the findings are presented separately under different sections.

Hussey & Hussey (1997:179) note that data collection methods generate a considerable amount of data and the researcher needs to find the methods by which to record the data. The findings of this research are presented on basis of the type of the questions, although both are presented in bar-chart format. Hair, Babin, Money & Samouel (2003:231) attest that, graphics and charts communicate complex issues more effectively and make the research reports more visually appealing. Responses from open-ended questions were transformed and summarised in common thrusts so that they could be presented in charts. Hair et al. (2003:231) define data transformation as a process of changing the original form of data to a new format. The authors (2003:231) also state that this is typically done to more easily understand the data or achieve the research objective.

#### **5.2 PRESENTATION OF RESULTS FROM CLOSE-ENDED QUESTIONS**

The findings from close-ended questions are presented in a bar-chart format, with brief narrative thereon. Nineteen (19) responses were received in respect of close-ended questions and none of the responses had missing data.

## Question 1

Figure 5.1: Definition of enterprise risk management



Source: Author derived (2008)

The majority of respondents (9/19) state that the City defines enterprise risk management as a process implemented by Council or the Board, management and staff to mitigate the threats to the City in achieving its service delivery objectives. A balanced number (5/19 on each account) state that the City defines enterprise risk management as a robust method of managing risks and opportunities and as an integral part of the strategic planning process.

## Question 2

Figure 5.2: Definition of risk



Source: Author derived (2008)

Of 19 respondents, 10 state that the City defines risk as an event that is negatively likely to affect its ability to achieve its service delivery objectives. A significant number of respondents (8) state that the City define risk as uncertainty of outcome, whether positive opportunity or negative threat. Only 1 respondent states that the City defines risk as uncertain future events.

### **Question 3**

Figure 5.3: Common understanding of terminology



Source: Author derived (2008)

The majority of respondents (13/19) agree that there is common understanding of terminology with regards to enterprise risk management throughout the City. Six out of nineteen (6/19) disagree that there is common terminology with regards to enterprise risk management throughout the City.



#### Question 4

Figure: 5.4. Overall objective of enterprise risk management



Source: Author derived (2008)

There is a fair amount of split amongst respondents between those who say that the **overall** objective of enterprise risk management at the City is to develop a common framework for risk that enables managers to identify and prioritise all risks within the City (9/19) and those who say the **overall** objective of enterprise risk management at the City is to assist the City in achieving its service delivery objectives (8/19). Two respondents believe that the **overall** objective of enterprise risk management at the City is to create awareness of enterprise risk management.

#### Question 5

Figure 5.5: Enterprise risk management integration

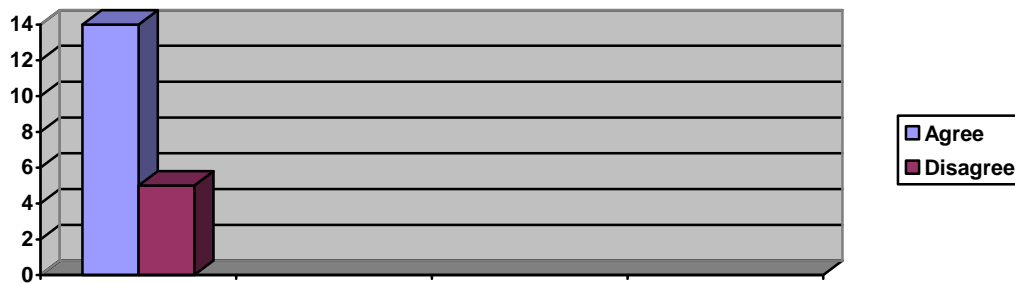


Source: Author derived (2008)

An overwhelming majority of respondents (16/19) agree that enterprise risk management at the City forms part of the strategic planning and performance management. However, 3 respondents disagree.

### Question 6

Figure 5.6: Risk tolerance in respect of service delivery

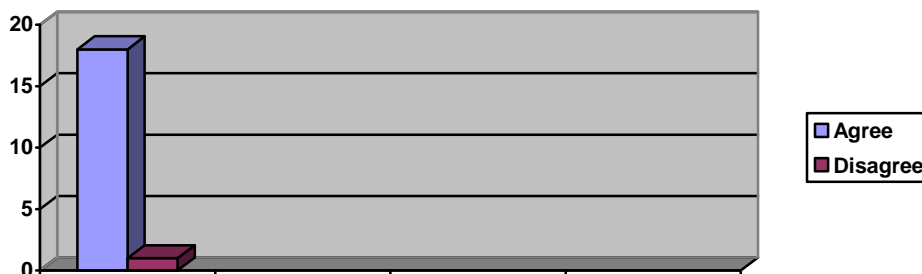


Source: Author derived (2008)

Although a significant majority of respondents (14/19) agree that as part of the performance management process, the City has set out the acceptable level of variation relative to achievement of each service delivery objective, five (5/19) disagree.

### Question 7

Figure 5.7: Risk management process

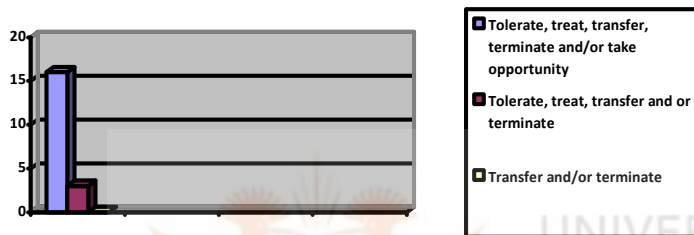


Source: Author derived (2008)

Almost all (18/19) agree that the key risks facing the City and their likely implications on service delivery are determined through a systematic application of management policies, procedures and practices to the tasks of communicating, establishing the context, identifying, analysing, evaluating, treating, monitoring and reviewing the risk. Only one (1) respondent disagrees.

### Question 8

Figure 5.8: Risk response strategies

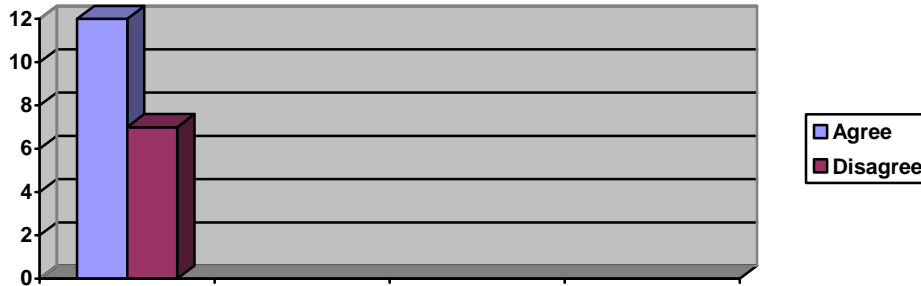


Source: Author derived (2008)

Significant majority of respondents (16/19) state that the City utilises one or combination of the following risk response strategies in respect of the key risk: tolerate, treat, transfer, terminate and/or take the opportunity. Three (3) respondents state that the City utilises one or combination of the following: tolerate, treat, transfer and/or terminate. None of the respondents state that the City utilises one or combination of transfer and/or terminate.

### **Question 9**

Figure 5.9: The City's monitoring of changes in key risks



Source: Author derived (2008)

The majority of respondents (12/19) agree that the City monitors the changes in key risks through a system of early warning indicators, i.e. predetermined trigger points in respect of key risk, on ongoing basis. A fair amount (7/19) of respondents disagrees.

### **Question 10**

Figure 5.10: The role of the Chief Risk Officer



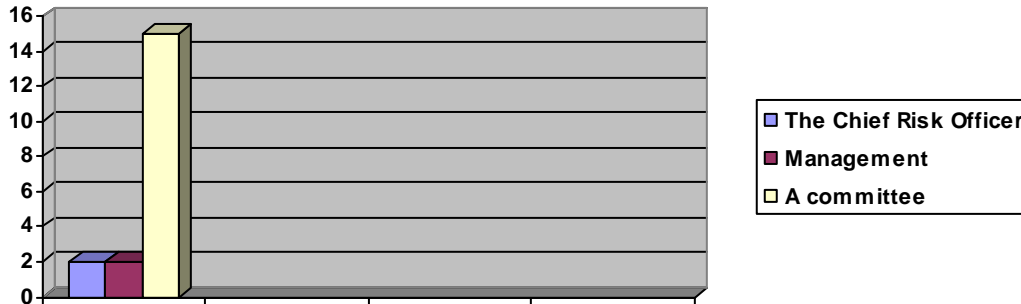
Source: Author derived (2008)

Barring only two (2) respondents, all respondents see the role of the Chief Risk Officer at the City as being to provide overall leadership, vision and direction for enterprise risk management throughout the City. Of the two (2) respondents, one

sees the role of the Chief Risk Officer as to conduct risk assessment throughout the City and the other as to educate employees in the City on enterprise risk management.

**Question 11**

Figure 5.11: Oversight on enterprise risk management



Source: Author derived (2008)

An overwhelming majority of respondents (15/19) highlight that a Committee established by the Council or the Board has oversight for enterprise risk management. An equal split of the remainder of the respondents (2 in each case) believes that the Chief Risk Officer has oversight and that management has oversight for enterprise risk management.

## **Question 12**

Figure 5.12: Chief Risk Officer or equivalent reporting



Source: Author derived (2008)

The majority of respondents (12/19) indicate that the Chief Risk Officer or equivalent reports to the Chief Executive Officer / Managing Director / City Manager. The balance of the respondents (7/19) indicates that the Chief Risk Officer or equivalent reports to other, which is specified as Executive Head: Risk and Audit Services. No respondent indicate that the Chief Risk Officer or equivalent reports to the Chief Financial Officer.

### **5.3 PRESENTATION OF RESULTS FROM OPEN-ENDED QUESTIONS**

Responses on open-ended questions were received from ten (10) respondents. These responses were reviewed for common thrusts amongst the respondents. Having developed the common thrusts on each question, the responses were then grouped in accordance with these common thrusts and were presented in a bar-chart. The researcher took due cognisance to ensure that the meanings of the responses were not lost and articulated in a different view.

### Question 1

Figure 5.13: Understanding of enterprise risk management

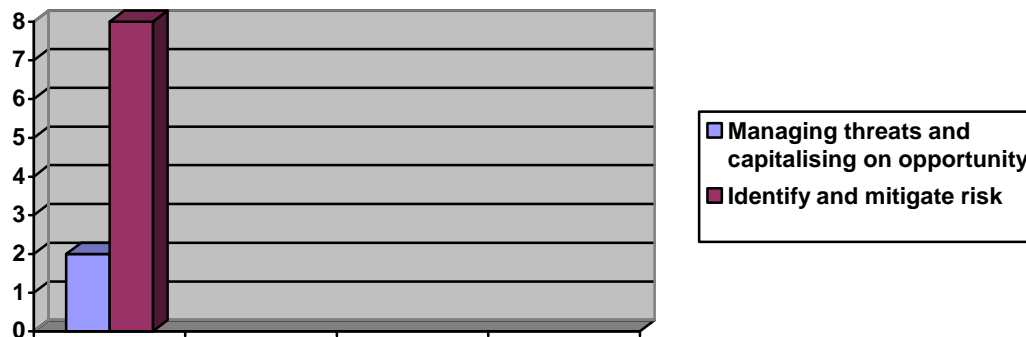


Source: Author derived (2008)

Eight respondents understand enterprise risk management as managing threats. An equal number (1 in each case) understands enterprise risk management as managing threats and seizing opportunities and a probability and consequence of an event.

### Question 2

Figure 5.14: Definition of enterprise risk management

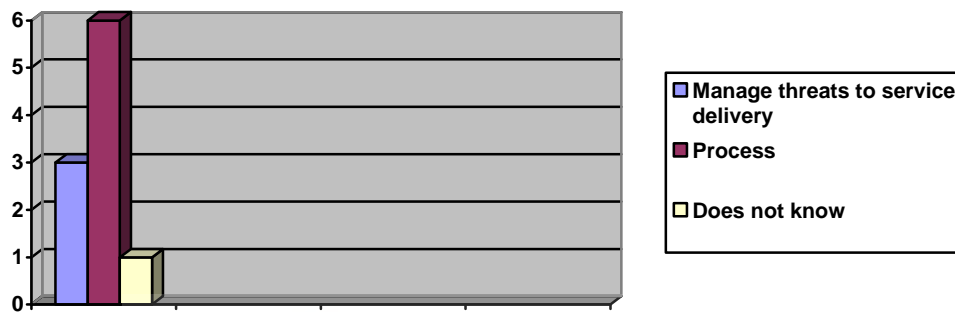


Source: Author derived (2008)

Eight respondents define enterprise risk management as identifying and mitigating risk. Only two respondents define enterprise risk management as managing threats and capitalising on opportunities.

### **Question 3**

Figure 5.15: City's definition of enterprise risk management



Source: Author derived (2008)

Six respondents state that the City defines enterprise risk management as a process. Three respondents state that the City defines enterprise risk management as managing threats to service delivery. One respondent does not know how the City defines enterprise risk management.



#### **Question 4**

Figure 5.16: Objectives of enterprise risk management

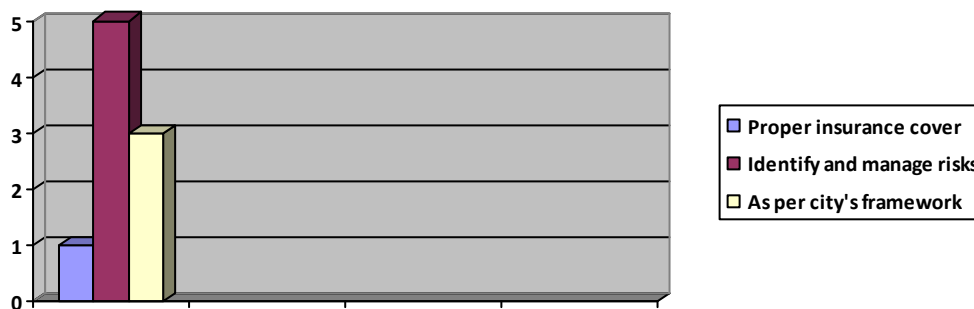


Source: Author derived (2008)

Four respondents state that the objective of enterprise risk management is to mitigate threats. Two say that the objective of enterprise risk management is to identify external threats and opportunities. Four respondents copied the objectives of enterprise risk management as stated in the City's Risk Management Framework ("RMF").

#### **Question 5**

Figure 5.17: Objectives of enterprise risk management at the City

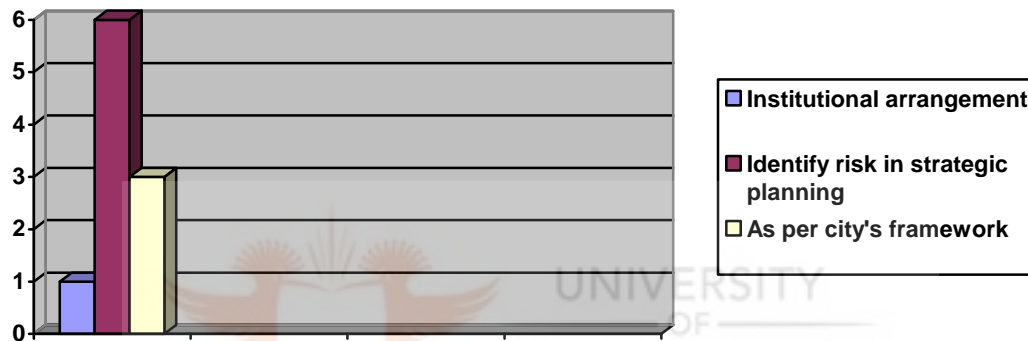


Source: Author derived (2008)

One respondent states that the objective of enterprise risk management at the City is to ensure proper insurance cover. Five respondents state that it is to identify and manage risks. Three respondents copied the objectives as stated in the RMF.

### Question 6

Figure 5.18: City's integration of enterprise risk management objectives with its strategic planning process

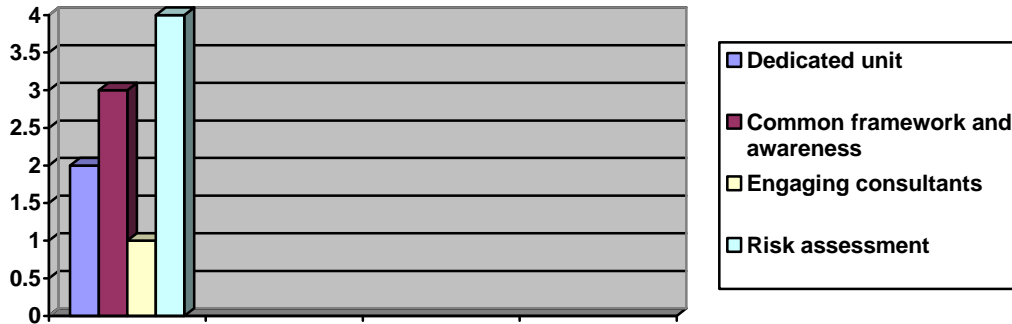


Source: Author derived (2008)

Six respondents state that the City integrates the objectives of its enterprise risk management and strategic planning process by identifying risks in strategic planning process. One respondent states that the integration is done through institutional arrangement. Similarly to the above responses, three respondents copied the contents of the RMF.

### Question 7

Figure 5.19: Understanding the key risks at the City

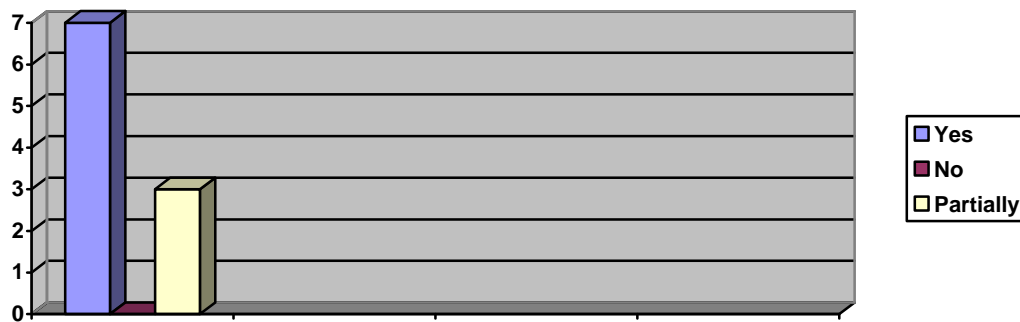


Source: Author derived (2008)

Four respondents believe that the City ensures good understanding of key risks by conducting risk assessment. Three believe that this is done through a common framework, whilst two and one believe that it is through a dedicated unit and engaging consultants respectively.

### Question 8

Figure 5.20: Development and implementation of mitigation measures on key risks at the City.

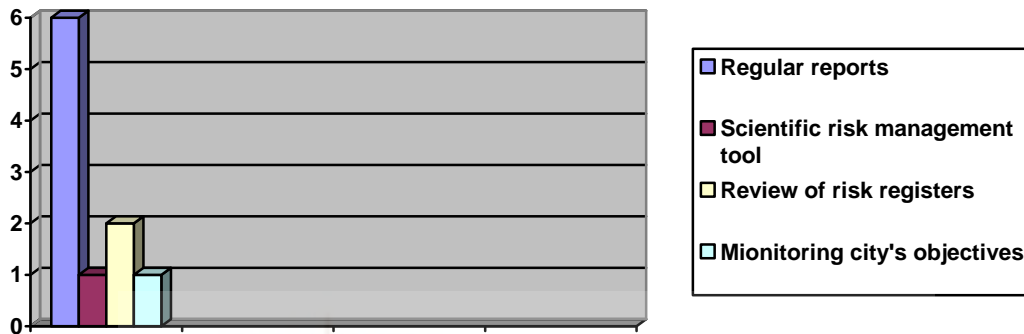


Source: Author derived (2008)

Seven respondents believe that the City has developed and implemented the mitigation plans in respective of the key risks facing the City. Three respondents partially agree and no respondent disagrees.

### **Question 9**

Figure 5.21: Mechanisms to monitor changes in key risks at the City

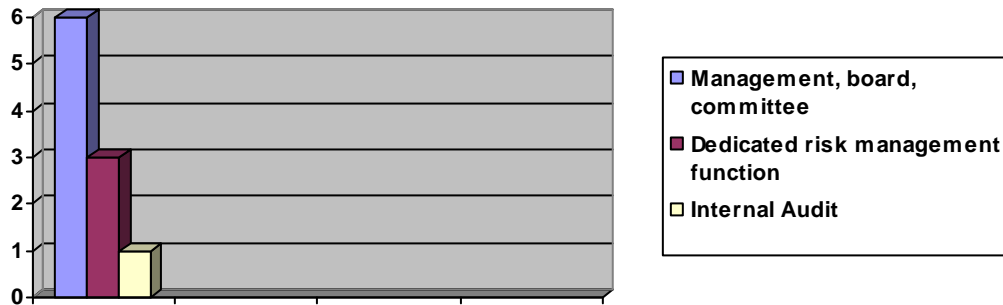


Source: Author derived (2008)

Six respondents state that the City use regular reports to monitor changes in key risks. Two respondents state that the City uses the review of the risk registers as a monitoring mechanism. A split of one each believes that the City uses a scientific risk management tool and monitoring strategic objectives as monitoring mechanism.

## Question 10

Figure 5.22: Structures to ensure effective enterprise risk management



Source: Author derived (2008)

Six respondents believe that for enterprise risk management to be effective, it must have support from the board, board committee and management. Three respondents believe that a dedicated risk management function ensures the effectiveness of the enterprise risk management. One respondent believes that internal audit would ensure effectiveness of enterprise risk management.

### **Question 11**

Figure 5.11: Structures in place at the City for effective enterprise risk management.



Source: Author derived (2008)

All the respondents know what structures are in place at the City for effective enterprise risk management. The structures in place are the GRMC, board Committees and dedicated risk management function.

### **Question 12**

Figure 5.12: Measures implemented within the City to evaluate the effectiveness of enterprise risk management.



Source: Author derived (2008)

Six respondents state the Committees evaluate the effective of enterprise risk management. Three respondents believe that the effectiveness of enterprise risk management is evaluated by the inclusion of risk management as a key performance area in the management's scorecard and one respondent believe that this is done through the consultants.

#### **5.4 CONCLUSION**

The research findings are presented in a bar-chart format, with brief discussion on each bar-chart for further clarity. With regards to close-ended questions pertaining to the definition of enterprise risk management, the findings reflect divergent views from the respondents. The same can be said of the responses with regards to the objectives of enterprise risk management. Generally, there is a consensus that the risk management process that is in place at the City supports the enterprise risk management objectives. However, there are divergent views on whether the City monitors the changes in key risks through a system of early warning indicators, i.e. predetermined trigger points, on ongoing basis. The role of the Chief Risk Officer is to provide overall leadership, vision and direction for enterprise risk management. There is also a significant consensus on who has oversight for enterprise risk management. In most instances, the respondents indicate that the CRO or the equivalent, reports to the Chief Executive Officer/ Managing Director /City Manager.

Similar with the responses on close-ended questions, there are divergent views from the respondents on the understanding and the definition of enterprise risk management, the objectives thereof, and how these objectives could be achieved. However, the respondents show a common understanding of what governance structures should be and are in place with regards to enterprise risk management. The next chapter presents a detailed analysis of and recommendations on these findings.

## **CHAPTER 6**

### **INTERPRETATION OF THE RESULTS AND RECOMMENDATIONS.**

#### **6.1 INTRODUCTION**

Chapter 5 records the research findings based on the self-administered questionnaire. The research findings are split between responses to close-ended questions and open-ended questions. The interpretation of the findings and recommendations in this chapter, are also split in terms of the responses on close-ended questions and the responses on open-ended questions. The interpretation and recommendations are organised in accordance with the research “**issue**” as discussed in Table 4 in Chapter 4. Table 4 highlights that the “**issue**” is linked to the secondary objectives of the study and these are to:

- establish the definition of enterprise risk management within the City;
- determine the objectives for enterprise risk management within the City;
- determine whether the risk management process in place within the City is in support of its objectives;
- establish the governance (accountability and responsibility) for enterprise risk management in the City given various municipal Acts; and
- recommend how the City can align enterprise risk management with the provisions of the MFMA and accepted enterprise risk management principles and standards.

Mouton (2005:108) notes that analysis involves “breaking up” the data into manageable themes, patterns, trends and relationships. The aim of analysis is to understand the various constitutive elements of the research data through an inspection of relationships between concepts, constructs or variables, and to see whether there are any patterns or trends that can be isolated, or to establish themes in the data (Mouton, 2005:108). The author (2005:109) also notes that interpretation involves the synthesis of research data into larger coherent wholes. Similarly, the author (2005:109) states that the researcher interprets (or explains)



observations or data by formulating hypothesis or theories that account for observed patterns and trends in the data. As highlighted above, the researcher creates “themes” around the secondary objectives of this study in interpreting the findings and making recommendations thereon.

## **6.2 INTERPRETATION OF RESULTS AND RECOMMENDATIONS BASED ON FINDINGS FROM CLOSE-ENDED QUESTIONS.**

### **6.2.1 Definition of enterprise risk management at the City**

Questions 1 and 2 establish how the City defines risk and enterprise risk management. Question 3 determines whether there is a common understanding of terminology with regards to enterprise risk management throughout the City.

On the City’s definition of enterprise risk management, 47% state that the City defines enterprise risk management as a process implemented by the Council or the Board, management and staff to mitigate threats to the City in achieving its service delivery objectives. An equal split in percentage (26% each), states that the City defines enterprise risk management as either a robust method of managing risks and opportunities or an integral part of the strategic planning process. Similarly, 53% state that the City defines risk as an event that will negatively affect its ability to achieve its service delivery objectives, whilst 42% state that the City defines risk as uncertainty of outcome, whether a positive opportunity or a negative threat. A small percentage (5%) state that the City defines risk as uncertain future events. Despite the aforementioned, 68% agree that there is common terminology with regards to enterprise risk management throughout the City.

#### **6.2.1.1 Conclusion**

The City has a Risk Management Policy (“RMP”) and a Risk Management Framework “RMF”). The RMF includes the definition of risk and enterprise risk management. However, the analysis indicates that:

- there is no common definition of risk and enterprise risk management;
- the City defines risk as threats (downside of risks); and
- there is no common understanding of terminology with regards to enterprise risk management throughout the City.

The definition of risk and enterprise risk management as managing threats invariably leads to missed opportunities in managing risk. The lack of common understanding of how the City defines risk and enterprise risk management also highlights that the communication regarding enterprise risk management is ineffective. In order to ensure focused and effective strategy implementation with regards to enterprise risk management, effective communication is critical.

#### 6.2.1.2 Recommendation(s)

The City should ensure that:

- there is a common understanding of how it defines **risk** and **enterprise risk management**. In this regard, the City should use memoranda, emails, bulletin board notices, webcasts, and video taped messages by the Mayor, Chairpersons of the MOE boards, the City Manager and the CEOs /MDs to communicate its definition of risk and enterprise risk management;
- the definition of risk should include and **prominently** espouse the upside of risk. Therefore, the City should define risk as **uncertainty of outcome, whether positive opportunity or negative threat**; and
- the definition of enterprise risk management must embrace managing opportunities in risk. Accordingly, the City should define enterprise risk management as **a robust method of managing risks and opportunities**.

#### 6.2.2 Objectives of enterprise risk management at the City

The **overall** objective of enterprise risk management at the City is established by question 4. Given the overall objective for enterprise risk management, question 5 solicits views on whether enterprise risk management is an integral part of strategic planning and performance management and question 6 determines whether as part of the performance management process, acceptable levels of

variation relative to the achievement of each service delivery objective have been set.

The majority (47%) state that the overall objective of enterprise risk management is to develop a common framework that enables managers to identify and prioritise risks. About 42% state that the overall objective of enterprise risk management at the City is to assist the City in achieving its service delivery objectives. The balance (11%) believes that the overall objective of enterprise risk management is to create awareness of enterprise risk management. There is overwhelming (84%) agreement that enterprise risk management is an integral part of the strategic planning and performance management. Similarly, 74% agree that the City has set out the acceptable level of variation relative to the achievement of each service delivery objective as part of its performance management process.

#### **6.2.2.1 Conclusion**

Enterprise risk management is an integral part of the strategic planning and performance management processes. However:

- the City does not have an **overall** objective for enterprise risk management;
- the majority are unable to distinguish between the processes aimed at creating an enabling environment for enterprise risk management and its **overall** objective; and
- enterprise risk management is not optimised as a business enabler in achieving service delivery objectives.

The lack of clarity on the **overall** objective for enterprise risk management indicates that the context for enterprise risk management is not established. This would, amongst others, include the City's external and internal environment and the purpose of enterprise risk management. In this regard, enterprise risk management is taking place out of context with the goals and objectives of the City and for this reason it is ineffective as it is not being optimised as a business enabler. This results in inefficient utilisation of resources.

### 6.2.2.2 Recommendation(s)

The City exists to fulfil its Constitutional mandate, which, amongst others, is to ensure the provision of the services to communities in a sustainable manner and therefore, the City must:

- establish the context for enterprise risk management, which includes its external and internal environment and the purpose of enterprise risk management; and
- state that the **overall** objective for enterprise risk management at the City is **to assist the City in achieving service delivery objectives**, thus positioning enterprise risk management as a business enabler.

### 6.2.3 Achievement of enterprise risk management objectives at the City

Questions 7, 8 and 9 determine whether the risk management process in place at the City supports the achievement of enterprise risk management objectives.

Almost 95% agree that the key risks facing the City and their likely impact on service delivery are determined through a systematic application of management policies, procedures and practices to the tasks of communicating, establishing the context, identifying, analysing, evaluating, treating, monitoring and reviewing risks. Similarly, 84% state that the City utilises one or a combination of the following risk response strategies in respect of the key risk: tolerate, treat, transfer, terminate and/or take the opportunity. However, only 63% agree that the City monitors the changes in the key risks through a system of early warning indicators, i.e. predetermined trigger points in respect of key risks, on an ongoing basis.

#### 6.2.3.1 Conclusion

The risk management process in place at the City is in support of the achievement of enterprise risk management objectives. However, the drastic decline in percentage amongst those who agree that the City monitors the changes in key risks through a system of early warning system on an ongoing

basis indicates that there is no follow through in the process. This indicates that the process is not fully embedded and is in its early stages of maturity

#### **6.2.3.2 Recommendation(s)**

In order to fully embed and improve the maturity level of the risk management process, the City should:

- Articulate the desired state of risk management capability maturity continuum; and
- develop and implement appropriate strategies to achieve the desired state of the risk management capability.

#### **6.2.4 Enterprise risk management governance structures at the City**

The role of the Chief Risk Officer (“CRO”) is determined by question 10. Questions 11 and 12 establish oversight for enterprise risk management and the reporting responsibilities of the CRO or equivalent respectively.

There is overwhelming consensus (89%) that the CRO provides the overall leadership, vision and direction for enterprise risk management. Accordingly, 63% state that the CRO or equivalent reports to the Chief Executive Officer / Managing Director or City Manager. According to 79%, a Committee established by the Council or Board has oversight on enterprise risk management.

##### **6.2.4.1 Conclusion**

The City has appropriate governance (accountability and responsibility) structures for enterprise risk management. Although this is commendable, the disparities in the reporting responsibilities of the CRO or equivalent, especially given the role of the CRO are undesirable.

##### **6.2.4.2 Recommendation(s)**

In order to raise the profile of and establish the necessary authority for enterprise risk management, the CRO should report directly to the City Manager.

## **6.3 INTERPRETATION OF RESULTS AND RECOMMENDATIONS BASED ON FINDINGS FROM OPEN-ENDED QUESTIONS**

### **6.3.1 Understanding and definition of enterprise risk management.**

Questions 1 to 3 determine what the respondents' understanding of enterprise risk management and what is their definition of enterprise risk management *vis a vis* the definition of the City.

Almost 80% understand enterprise risk management as managing the threats, with only 10% understanding enterprise risk management as managing threats and exploiting the opportunities. The remainder 10% understand enterprise risk management as the probability and likelihood of an event happening. Similarly 80% define enterprise risk as identifying and mitigating risks. However, 20% define enterprise risk as managing threats and capitalising on opportunities. With regards to how the City defines enterprise risk management, 10% do not know, 30% state that the City defines enterprise risk management as a process and 60% as managing threats to service delivery.

#### **6.3.1.1 Conclusion**

The analysis above indicates that:

- enterprise risk management is seen as managing threats; and
- there is a poor understanding of enterprise risk management as a business enabler.

Such lack of understanding results in a distorted flow of information and miscommunication and renders enterprise risk management ineffective. It also highlights lack of dialogue amongst the various stakeholders on enterprise risk management.

### **6.3.1.2 Recommendation(s)**

To improve the understanding on enterprise risk management, the City should launch a focused awareness and training programme, especially amongst those who are accountable and responsible for enterprise risk management. The programme should amongst others, address the risk strategy, what are the risk priorities, and how the individual responsibilities in the City fit into the enterprise risk management.

### **6.3.2 Objectives of enterprise risk management.**

The respondents' views on the objectives of enterprise risk management and their understanding of the same at the City are determined by questions 1 and 2. Question 3 solicits the respondents' understanding of how the City integrates enterprise risk management and strategic planning process.

An equal split (40% each) states that the objective of enterprise risk management is to identify external threats and opportunities and to mitigate threats. The remainder of 20%, who seem to have access to the City's Risk Management Framework ("Framework"), copied the contents thereof in their responses. A similar pattern of responses emerges on the objectives of enterprise risk management, with 50% stating that it is to identify and manage risks, 10% stating that it is to ensure proper insurance cover and 40% copying the contents of the Framework in their responses. About 60% state that integration of enterprise risk management objectives and the strategic planning process is through risk identification during strategic planning, 30% copied the contents of the Framework in their responses and 10% state that it is through institutional arrangements.

### **6.3.2.1 Conclusion**

The analysis indicates that:

- there is limited understanding of the objectives of and for enterprise risk management;

- there is no common understanding of enterprise risk management;
- the contents of the Framework as to the objectives for enterprise risk management are not understood; and
- enterprise risk management is seen as managing threats.

Given the divergent understanding of the objectives of and for enterprise risk management, it is impossible to work towards a common goal on enterprise risk management. It is also worth noting that in these circumstances, management activities take place in a “vacuum” and are not informed and focused.

### **6.3.2.2 Recommendation(s)**

The City should articulate the objective for enterprise risk management and in so doing, it must engage the various stakeholders in order to ensure that they understand and support of the process.

### **6.3.3 Achievement of enterprise risk management objectives at the City.**

Questions 7, 8 and 9 establish whether there is a common understanding of key risks and their likely impact on service delivery and how these key risks are mitigated or exploited.

Mechanisms that are used to ensure understanding of key risks are noted as conducting risk assessments (40%), maintaining common framework and awareness (30%), establishing a dedicated enterprise risk management unit (20%) and engaging consultants (10%). With regards to developing and implementing response strategies on key risks, 70% agree that the City develops and implements response strategies, 30% partially agree and 10% do not know. The majority (60%) state that the City monitors changes in key risks through regular reporting. Other mechanisms include reviewing risk registers (20%), monitoring the City’s objectives (10%), and use of scientific risk management tools (10%).



#### **6.3.3.1 Conclusion**

There are no processes that ensure a good understanding of the key risks and their impact on service delivery objectives. The changes in key risks are not monitored through pre-determined risk indicators. In the absence of pre-determined indicators, it is difficult to imagine how the City monitors changes in its risk profile. Failure to monitor changes in the risk profile could lead to instances where key risks having an adverse impact on service delivery are realised only once they have materialised or opportunities have been missed.

#### **6.3.3.2 Recommendation(s)**

The City should:

- develop an early warning system with pre-determined indicators for the key risks; and
- communicate the early warning system to the risk-owners who should also be empowered to take appropriate action on key risks as and when required.

#### **6.3.4 Enterprise risk management governance structures at the City**

The latter part of the open-ended questionnaire solicits respondents' views on what structures should be and are in place at the City in order to ensure effective enterprise risk management and how these evaluate the effectiveness of enterprise risk management. This is achieved through questions 10, 11 and 12.

The majority (60%) state that the Board, a Board committee and management should be in place, whilst 30% and 10% respectively state that there should a dedicated risk management unit and an internal audit function. All (100%) state that the City has a Group Risk Management Committee ("GRMC"), Board committees and a dedicated risk management unit. However, there is no consensus on how these structures evaluate the effectiveness of enterprise risk management, with 60% stating that it is through reports, 30% stating that it is through inclusion of risk management in scorecards and 10% stating that it is through the use of consultants.

#### **6.3.4.1 Conclusion**

Although there is consensus on what structures should be and are in place with regards to enterprise risk management:

- there are different opinions on how these structures evaluate the effectiveness of enterprise risk management; and
- these structures have not developed and communicated the mechanisms that are used to evaluate the effectiveness of enterprise risk management.

Failure to evaluate the effectiveness of enterprise risk management, such being a key responsibility of the oversight structures, indicates that these structures are ineffective in their oversight responsibility for enterprise risk management.

#### **6.3.4.2 Recommendation(s)**

In order to improve the effectiveness of the oversight structures and as such discharge their responsibility for the total process of risk management and as well as forming their opinion on the effectiveness thereof, they should:

- develop and articulate mechanisms that they will use to evaluate the effectiveness of enterprise risk management;
- define the reporting information that they require from management which will indicate that management has designed, implemented and integrate enterprise risk management into the day-to-day activities; and
- evaluate the effectiveness of enterprise risk management by the extent to which the City achieves its service delivery objectives.

### **6.4 AREAS FOR FURTHER RESEARCH**

The City has implemented enterprise risk management in all areas of operation. However, this research study indicates that:

- the City defines risk as a threat and enterprise risk management as managing threats to service delivery;
- there is no **overall** objective for enterprise risk management;

- the risk management process supports the objectives of enterprise risk management, however such process is not fully embedded and is in its early stages of maturity;
- the key risks and opportunities facing the City are not monitored through an early warning system of pre-determined trigger points;
- appropriate governance (accountability and responsibility) structures that ensure effective enterprise risk management are in place, but these structures are ineffective in evaluating the effectiveness of enterprise risk management; and
- the reporting responsibility of the CRO could potentially hamper the profile and authority associated with enterprise risk management.

The above findings pertaining to enterprise risk management are by and large similar to those related to individuals who have the accountability and responsibility for enterprise risk management at the City. These are summarised as follows:

- there is a limited understanding of risk and enterprise risk management;
- enterprise risk management is considered as managing threats to service delivery;
- there is a limited understanding of the key risks facing the City and how the changes thereto are monitored; and
- they are not executing their accountability and responsibility for enterprise risk management effectively.

The unique structure of the City in a local government context was noted in Chapter 1 as probably presenting challenges with regards to effecting service delivery. These amongst others were noted as the coordination of activities for effective and efficient utilisation of the resources. The findings of this study support this sentiment. However, the uniqueness of the City's structure presents an opportunity for further research in defining the early warning system of pre-determined trigger points that the City can utilise to monitor changes in key risks

within the different parts of its operation. Such a study would greatly enhance the City's ability to manage risks and opportunities at appropriate levels of operation.



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## ANNEXURE A

### PART I of II

1. What is your understanding of enterprise risk management

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2. How would you define enterprise risk management

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The logo of the University of Johannesburg is visible as a watermark in the background. It features two stylized figures holding hands, with a sunburst above them, and the text 'UNIVERSITY OF JOHANNESBURG' to the right.

3. How does the City define enterprise risk management

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4. What do you consider to be the objectives of enterprise risk management

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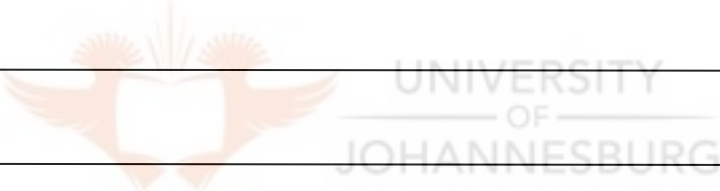
5. What are the objectives of enterprise risk management at the City

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6. How does the City integrate its enterprise risk management objectives and its strategic planning process



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7. How does the City ensure a good understanding of the key risks facing it and their likely implications on its service delivery objectives

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8. Do you believe that the City has developed and implemented the mitigation plans in respect of these key risks Please elaborate on your response.

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9. How does the City monitor the changes in these key risks from one period to another

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10. What structures do you believe should be in place to ensure effective enterprise risk management

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11. What structures are in place in the City to ensure effective enterprise risk management

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12. What measures have been implemented within the City to enable these structures to periodically evaluate the effectiveness of enterprise risk management

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13. What is your job title

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14. What is your role in enterprise risk management within the City

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15. How many years have you been in the employ of the City

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THE END

THANK YOU FOR TAKING PART IN THIS QUESTIONNAIRE

## ANNEXURE B

### PART II of II

#### [PLEASE TICK ONE ANSWER]

1. The City defines enterprise risk management as:
  - A process implemented by the Council or the Board, management and staff to mitigate the threats to the City on the achievement of its service delivery objectives.
  - A robust method of managing risks and opportunities.
  - An integral part of the strategic planning process.
  
2. The City defines risk as:
  - An event that will negatively affect its ability to achieve its service delivery objectives.
  - Uncertainty of outcome, whether positive opportunity or negative threat.
  - Uncertain future events.
  
3. There is a common understanding of terminology in with regards to enterprise risk management throughout the City.
  - Agree
  - Disagree
  
4. The **overall** objective of enterprise risk management at the City is to:
  - Create awareness of enterprise risk management.
  - Develop a common framework for risk that enables managers to identify and prioritise all the risks within the City.
  - Assist the City in achieving its service delivery objectives.

5 Enterprise risk management at the City forms part of the strategic planning and performance management.

Agree

Disagree

6 As part of the performance management process, the City has set out the acceptable level of variation relative to achievement of each service delivery objective.

Agree

Disagree

7 The key risks facing the City and their likely implications on service delivery are determined through a systematic application of management policies, procedures and practices to the tasks of communicating, establishing the context, identifying, analysing, evaluating, treating, monitoring and reviewing the risk.

Agree

Disagree

8 The City utilises one or a combination of the following risk response strategies in respect of the key risks:

Tolerate, treat, transfer, terminate, and/or take the opportunity.

Tolerate, treat, transfer, and/or terminate.

Transfer and/or terminate.

9 The City monitors the changes in key risks through a system of early warning indicators, i.e. predetermined trigger points in respect of each key risk, on ongoing basis.

Agree

Disagree

10 The role of the Chief Risk Officer at the City is to:

Provide overall leadership, vision and direction for enterprise risk management throughout the City.

Conduct risk assessment throughout the City.

Educate the employees in the City on enterprise risk management.

11 Who has oversight on enterprise risk management within the City

The Chief Risk Officer

Management

A Committee established by the Council or the Board, e.g. Audit Committee

12 Who does the Chief Risk Officer or equivalent reports to:

Chief Executive Officer / Managing Director / City Manager

Chief Financial Officer

Other, please specify: \_\_\_\_\_

13 What is your job title

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14 What is your role in enterprise risk management within the City

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15 How many years have you been in the employ of the City

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THE END

THANK YOU FOR TAKING PART IN THIS QUESTIONNAIRE



## ANNEXURE C

### Dear Participant

The primary purpose of this research is to investigate how the City can optimise enterprise risk management as a business enabler in discharging its service delivery objectives. For the purpose of this study, the City refers to the core administration, 7 decentralised regions and 14 wholly owned Municipal entities (“MOEs”).

The purpose of this questionnaire is to gather information, which will later be analysed to determine how the City can optimise its enterprise risk management to be a business enabler. In this regard, your participation in this questionnaire is highly appreciated. The researcher will share the findings of this study with all the respondents to this questionnaire.

The researcher (***Master in Commerce: M.Com student***) is aware that the information obtained through this questionnaire cannot be used beyond the scope of University of Johannesburg. Please note that this information will be used strictly for academic purposes.

Kindly return the completed questionnaire to me to any of the following contacts:

email 1: [josephmakoro@flysaa.com](mailto:josephmakoro@flysaa.com)

email 2: [ljmakoro@telkomsa.net](mailto:ljmakoro@telkomsa.net)

fax2email: 086 695 3735

Thank you for taking time to participate on this questionnaire.

Lekhahla Joseph Makoro

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