KPMG

Limpopo Province Department of Public Works

Draft Project Management Operational Risk Assessment Report

7 December 2006

7 December 2006
This report contains 30 pages

Contents

1 Introduction

We were requested to facilitate a strategic and nine operational risk workshops for the Limpopo Province Department of Public Works (DPW). The first step in this process was to undertake a strategic risk assessment, with a view to best direct Executive Management's efforts towards the highest risks to which DPW is exposed. Accordingly, meetings were held with executive management to identify potential risk areas' threatening the achievement of DPW's strategic objectives prior to the strategic risk workshop which was facilitated by KPMG on 27 November 2006.

Subsequent to the strategic risk workshop an operational risk assessment workshop for Project Management was facilitated by KPMG on 28 November 2006 to identify potential risk areas' threatening the achievement of Project Managements operational objective.

The main purpose of this workshop was to involve and assist the General Manager: Project Management and Management from the programme in assessing and prioritising the risks that need to be managed in order to achieve the vision and vision of DPW as well as the operational objective of Project Management. The workshop was also designed to assist programme management in the establishment of the risk management process as required by the Public Finance Management Act (PFMA) and best practice corporate governance, as well as provide guidance to the internal audit function in the development of a risk based internal audit strategy and annual internal audit plan for DPW.

The participants included amongst others:

- General Manager: Project Management;
- Senior Managers; and
- Managers.

We are pleased to provide you with a summary of the results of the operational risk assessment. The risk assessment information incorporates the participants' perceptions, assumptions and judgments about Project Management's operational risks and related controls. **The report does not seek to identify all risks faced by Project Management. It focuses only on those operational risks that were highlighted during the workshop by the workshop participants.**

It is important to note that risk management is the responsibility of the General Manager: Project Management and Management of the programme. **KPMG's responsibilities are limited to the facilitation of the operational risk assessment (ranking of the identified operational risks).**

A final evaluation regarding the efficiency and effectiveness of the processes and controls in mitigating the identified risks will not be made until the internal audit function perform actual tests during internal audit fieldwork.

1.1 Restriction on distribution of this document

This document has been prepared for the sole and exclusive use of DPW and may not be made available to anyone other than authorised persons within DPW, nor relied upon by any third party without the prior written consent of KPMG.

2 Strategic overview

2.1 Background

The results of the operational risk assessment workshop reflect participants' views only. The facilitators did not attempt to influence the process or results in any way. Their role was merely to gather information in a structured manner and to record the views of the participants.

DPW's vision and mission and Project Managements operational objective are as follows:

2.2 Vision

The **vision** of DPW is:

"A leader in the provision and management of provincial government land and buildings"

2.3 Mission

The **mission** of DPW is:

"Optimal utilisation of resources in the provision and management of provincial land and buildings and the coordination of the implementation of the Expanded Public Work Programme."

2.4 Project Management operational objective

The **operational objective** of Project Management is:

"Successful execution of Capital Works Programme"

The risk assessment was performed taking the Project Management operational objective into account by consistently asking the question:

"What are the major threats that could prevent Project Management from achieving its operational objective?"

3 KPMG risk assessment approach

An overview of the risk assessment process followed is presented below:

3.1 Methodology

In order for any business to be effective, it must focus its attention and resources on the areas of most significant risk and concern to stakeholders. The risk assessment workshops are fundamental elements of the risk management process.

The principal aims of the operational risk workshop were to:

- Confirm DPW's vision and mission and operational objective of Project Management;
- Confirm the significant and major risks, identified by management threatening the achievement of these objectives;
- Analyse the risks (impact / potential loss, likelihood / probability); and
- Analyse the perceived control effectiveness.

During the workshop, participants were required to provide input based on their actual knowledge and experience of Project Management's operations and environment.

3.2 What is risk in a business environment

"Risk is inherent in business processes; it arises from actions taken in pursuit of objectives and changes in the external environment. Change in the ways companies do business, in technological developments, in the regulatory framework and the size of the business in terms of the strain such change places on its control mechanisms are all major sources of risk."

-Sir Roger Hurn (Chairman of Marconi plc)

3.2.1 Risk definition for the purpose of the workshop

For purposes of the workshop and implementing an effective risk management system at Project Management, a risk / threat was defined as follows:

"Uncertain future events, which could influence the achievement of the entity's objectives."
- King II

For each risk / threat identified the following was assessed:

3.2.1.1 The impact

This is the **potential magnitude of the impact** on Project Management's operations **should the risk / threat actually occur**. No account of existing controls is taken into consideration in assessing the impact of risks. The impact was categorised into 5 different levels, namely:

Catastrophic	Critical	Serious	Significant	Minor

For a detailed explanation of the different categories please refer to **Appendix A**.

3.2.1.2 The probability of occurrence

This is the likelihood that the identified risk / threat will occur within a specified period of time (between 1 and 3 years) on the basis that **management have no specific / focused controls in place to address the risk / threat.** The probability of occurrence was categorised into 5 different levels, namely:

Almost certain	Likely	Possible	Unlikely	Rare

For a detailed explanation of the different categories please refer to **Appendix A**.

3.2.2 Inherent risk

Inherent risk is the *product of the impact of a risk and the probability of that risk occurring before the implementation of any direct controls.* The score for inherent risk assists management and internal audit alike to establish relativity between all the risks / threats identified. Please note that at this stage no account is taken of existing controls implemented by management.

This indicator may be used to assign / measure the level of management effort / resources required to control the relevant risks and to determine the level of internal audit focus required.

3.2.3 Controls

Controls are the processes / functions / programmes that Management and the General Manager: Project Management have put in place, and rely upon, to manage the major and significant risks. At this operational risk assessment workshop we have limited ourselves to the ranking of the perceived effectiveness of these processes.

3.2.4 Perceived control effectiveness

The participants **assessed the control effectiveness based on their understanding of the control environment currently in place at DPW**. This is a measure of how well management perceives the control processes to be working and effectively managing the risks. Processes / controls were categorised into 5 different levels of effectiveness, namely:

Very good	Good	Satisfactory	Weak	Unsatisfactory

For a detailed explanation of the different categories please refer to **Appendix A**.

3.2.5 Residual risk

This is the score of risk that Project Management is exposed to taking into account the potential impact of the risk, the probability of the risk occurring and the related control processes which are in place to manage that risk. *Residual risk / exposure is therefore the product of the inherent risk and the control effectiveness factor.*

This information will assist decision makers in assessing the acceptability of the residual risk / exposure and in deciding whether further management action is required to effectively control the risk.

3.2.6 Management actions

Based on the relative score of the residual risk / exposure, **management will need to decide whether or not they are willing to accept the identified level of residual risk / exposure.**

If the residual risk is considered to be too high, then an action plan will then need to be developed outlining the identified action/s to reduce the risk to a level that is more acceptable to management and other stakeholders.

Management actions may include the re-examination of the control design and / or the business / quality objective identified earlier in the risk management process.

The action plans must clearly identify:

- The required action;
- The person responsible for implementing the action; and
- The expected date of implementation.

4 Results

The workshop participants agreed and confirmed the vision and mission of DPW as well as the operational objective of Project Management. The risks identified by the workshop participants of Project Management were rated and the control effectiveness of the managing processes and / or persons currently responsible to mitigate or manage each of these risks was also assessed in terms of perceived control effectiveness.

Participation and discussion during the workshop was open and constructive. We were particularly impressed with the level of attendance of the participants.

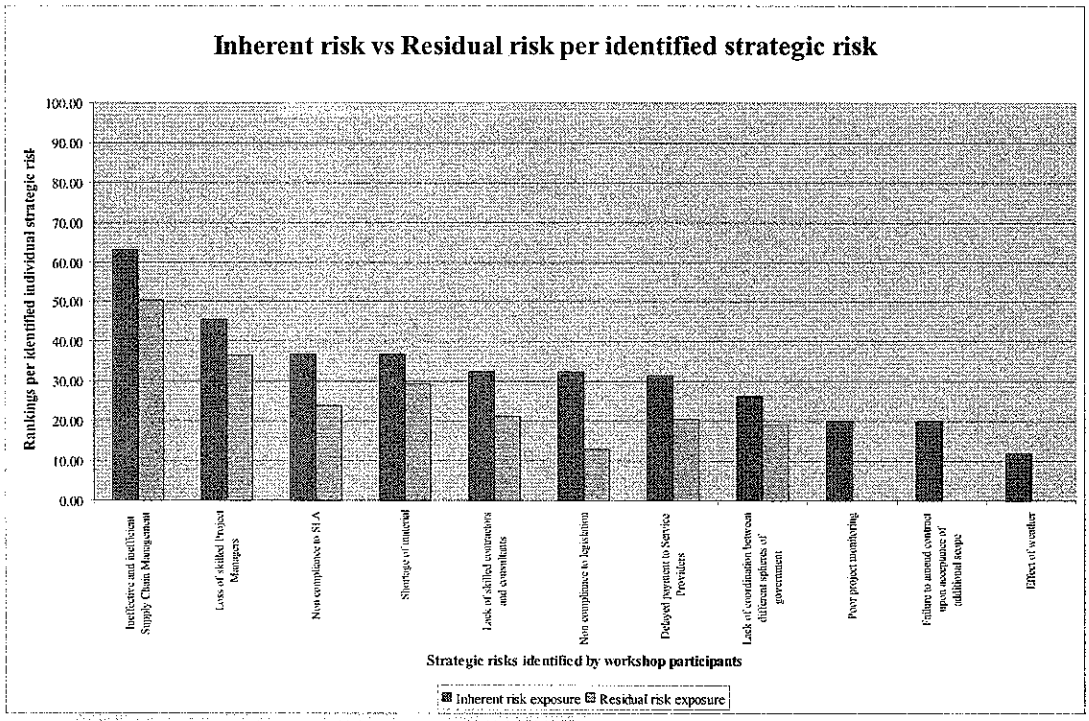
The results of the risk assessment workshop, from highest to lowest inherent risk, have been depicted graphically in **Paragraph 4.1**.

The major / significant risks currently faced by Project Management, as identified by the participants during the strategic risk workshop, are presented in **Paragraph 4.2** from highest to lowest inherent risk.

4.1 Graphical illustrations

4.1.1 General

The identified operational risks are depicted graphically below.



4.1.2 Risk graph

The relative size of operational risks threatening the achievements of DPW's vision and mission and operational objective of Project Management as well as the perceived control effectiveness for each of the risks, as identified by the workshop participants, are depicted graphically above from the highest to the lowest inherent risk.

The inherent nature of the risk is the assessment of the risk without specific, focused controls in place. The residual nature of the risk is the assessment of the risk taking into account the existing controls and their perceived effectiveness.

The larger the difference between the inherent and residual risk factors the more effective the controls in place are perceived to be.

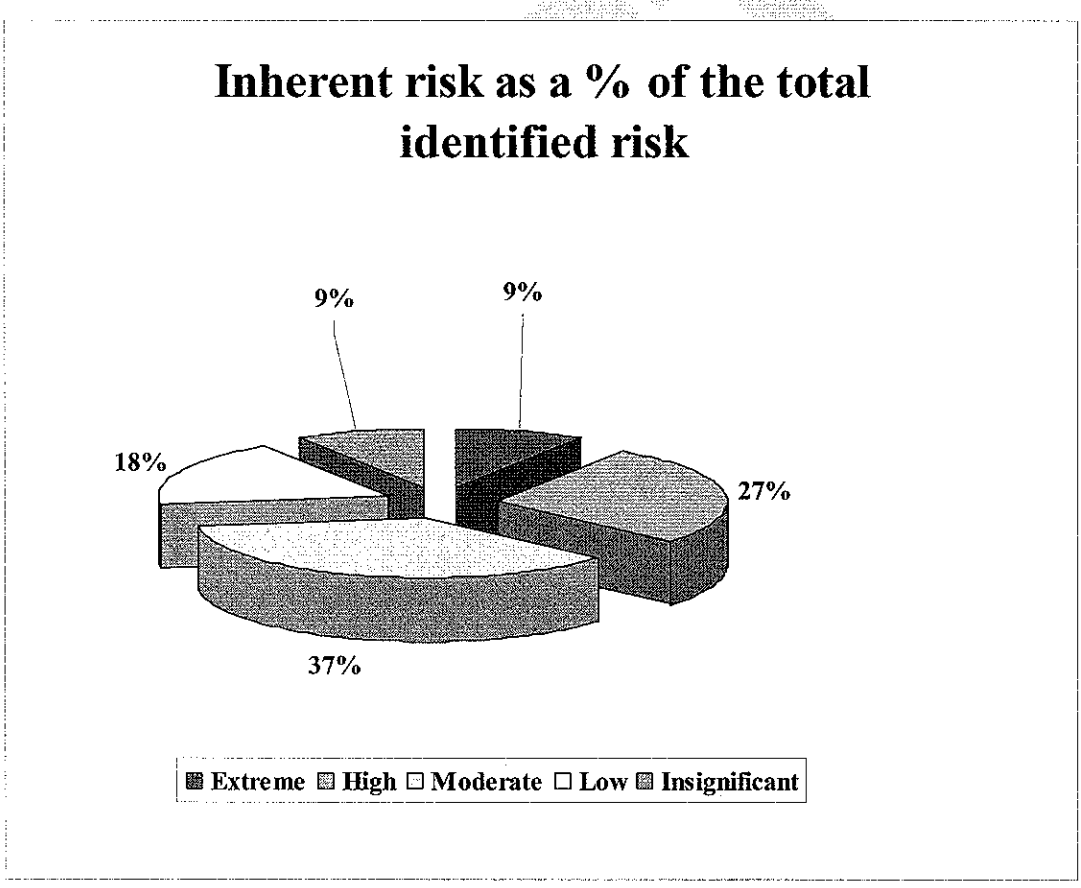
The smaller the difference between the inherent and residual risk factors, the more management actions and improved control effectiveness is needed to ensure that the risk is properly managed.

Management should take cognisance that the higher the inherent risk factor, the greater the need for control effectiveness and therefore the more management attention the item should attract in order to:

- Maintain the quality of control where control effectiveness is considered adequate; and
- Improve quality of control further where residual risk is considered to be too high.

4.1.3 Inherent risk

Of the 11 operational risks identified by Management of Project Management 1 (9%) was assessed as extreme by the participants attending the risk workshop.



Risks rated with extreme inherent risk ratings are as follows:

- Ineffective and inefficient Supply Chain Management (SCM).

Risks rated with high inherent risk ratings are as follows:

- Loss of skilled Project Managers;
- Non compliance to SLA; and
- Shortage of materials.

Risks rated with moderate inherent risk ratings are as follows:

- Lack of skilled contractors and consultants;
- Non compliance to legislation;
- Delayed payment to service providers; and
- Lack of coordination between different spheres of Government.

Risks rated with low inherent risk ratings are as follows:

- Poor project monitoring; and
- Failure to amend contract upon acceptance of additional scope.

Risks rated with insignificant inherent risk ratings are as follows:

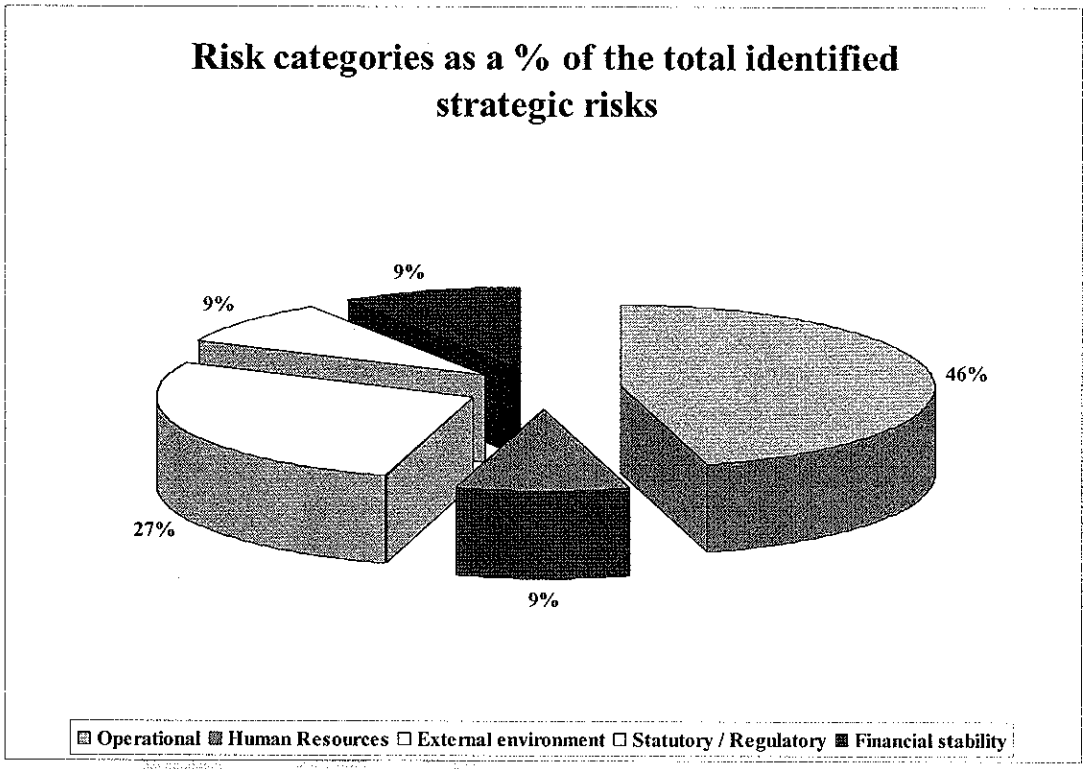
- Effect of weather.

The above analysis clearly illustrates the importance of focusing and actively managing the highest risk areas first and then gradually working down the list.

The higher the inherent risk value, the greater the need for good quality controls and control effectiveness and the more Management, General Manager: Project Management and Internal Audit attention the item should attract.

4.1.4 Identified risk categories

The 11 operational risks identified by management were categorised into 5 identified risks categories. This clearly indicates that risk from both an internal and external environment were identified. It also clearly indicates that risk from both core and support processes were identified.

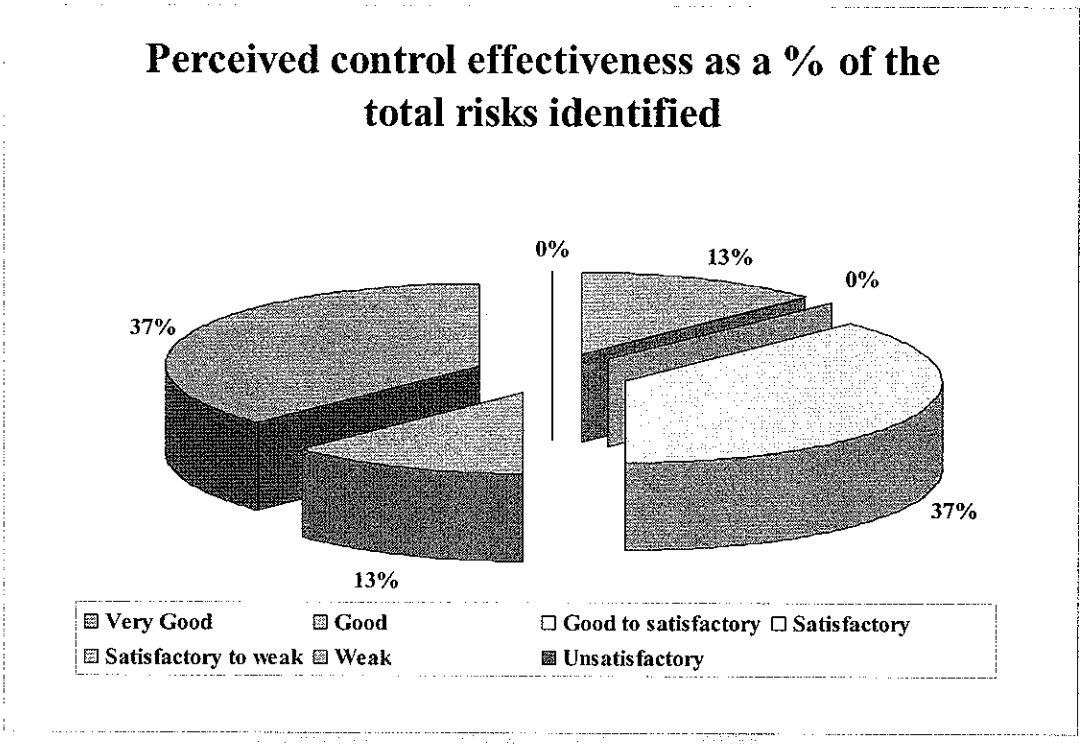


Once again Management should assess whether the assessments and this analysis is correct and take appropriate corrective action.

4.1.5 Perceived control effectiveness

As indicated above, 11 operational risks were identified by management. In terms of our methodology it was then necessary to evaluate the controls of the 8 identified operational risks.

Of the 8 operational risks identified by management 4 (50%) were evaluated as either weak or satisfactory to weak by the participants attending the workshop.

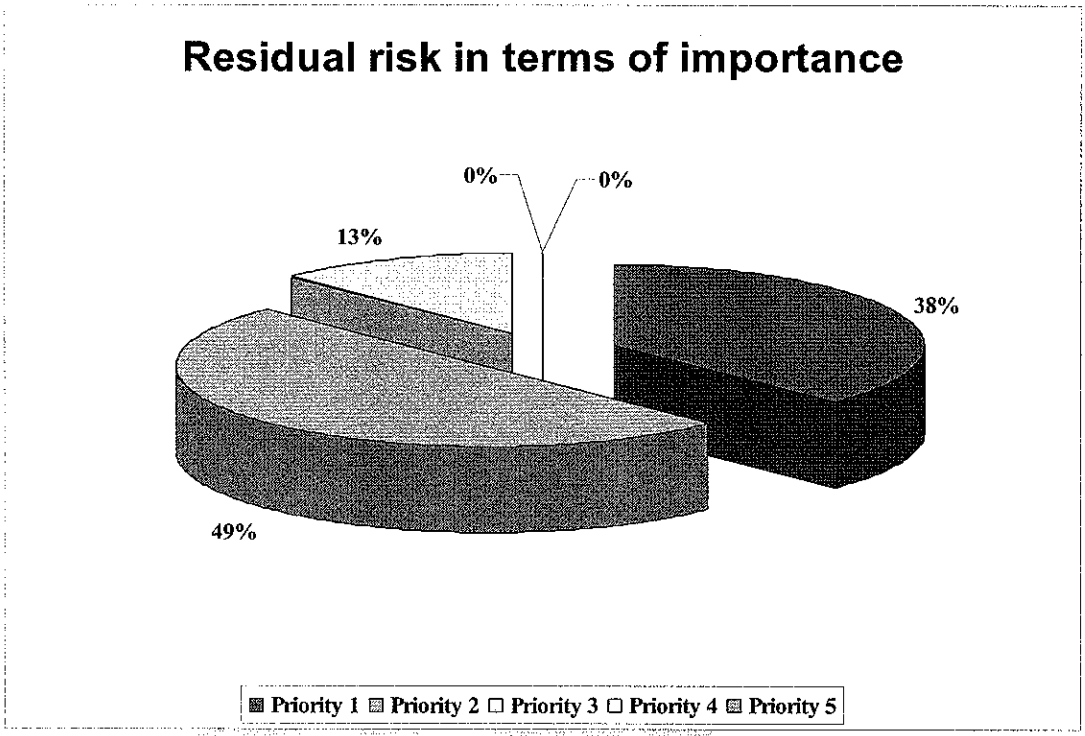


50% of controls managing the operational risks are perceived to be either satisfactory or good. Management should assess whether the assessments and this analysis is correct and take appropriate corrective action.

4.1.6 Residual risk

The residual graph represents the highest assessed risks faced by Project Management after taking into account the existing controls and their perceived control effectiveness. The higher the residual risk, the greater Project Management's exposure to loss or loss of opportunities. These areas should be a guide as to the priority for management effort and the allocation of resources to improve the design / quality of control and control effectiveness.

The graph below indicates the residual risk in terms of importance / priorities.



The KPMG Risk Methodology classifies and defines residual risk as the following priorities:

Priority 1: The risk is intolerable and requires action to further mitigate the exposure;

Priority 2: The risk is intolerable and requires management intervention to further mitigate the exposure;

Priority 3: This risk exposure exceeds the current risk appetite and should be monitored to ensure prompt intervention if so required;

Priority 4: The risk exposure is tolerable; and

Priority 5: Risk may be over controlled.

As indicated in the graph above, all of the identified and assessed risks in terms of residual risk are assessed as requiring management intervention.

*Strategic risks rated as **Priority 1** risks are as follows:*

- Ineffective and inefficient Supply Chain Management (SCM);
- Loss of skilled Project Managers; and
- Shortage of materials.

*Strategic risks rated as **Priority 2** risks are as follows:*

- Non compliance to SLA;
- Lack of skilled contractors and consultants;
- Delayed payment to service providers; and
- Lack of coordination between different spheres of Government.

*Strategic risks rated as **Priority 3** risks are as follows:*

- Non compliance to legislation.

*Strategic risks rated as **Priority 4** risks are as follows:*

- None identified by workshop participants.

*Strategic risks rated as **Priority 5** risks are as follows:*

- None identified by workshop participants.

4.2 Summary of operational risks confirmed during the workshop

Strategic risk number	Risk description	Consequence of risk	Link to strategic focus area	Risk categories	Link to dependency profile	Risk owner	Impact	Likelihood	Inherent risk exposure	Current controls	Perceived control effectiveness	Additional Actions	Residual risk exposure
1	**Ineffective and inefficient Supply Chain Management (SCM)**	Cost inefficiencies Poor service delivery Harm to reputation Inability to meet targets	1	Operational	Key assets	General Manager: Project Management and Senior Manager: Infrastructure Support	70.00	0.90		Approved and implemented Provincial Supply Chain Management policy Implemented Supply Chain Management Unit Use of register within Project Management for request of advertisement (pre-numbered) Approved implementation plan based on client business plan Chronological contract numbers for filing and tracking purposes Bi-weekly status reports to the General Manager: Project Management and Senior Manager: Supply Chain Management	0.80	Develop and propose service delivery standards **Deadline date: end January 2006** **Responsible Official: General Manager: Project Management and Senior Manager: Infrastructure Support**	

Strategic risk number	Risk description	Consequence of risk	Link to strategic focus area	Risk categories	Link to dependency profile	Risk owner	Impact	Likelihood	Inherent risk exposure	Current controls	Perceived control effectiveness	Additional Actions	Residual risk exposure
2	**Loss of skilled Project Managers** - Lack of capacity - Institutional memory loss	Inability to meet targets Cost inefficiencies Poor quality of service delivery Institutional memory loss Lack of continuity	1	Human Resources	Key assets	Nyiko Mchavi	70.00	0.65	45.50	Approved organogram Monthly reporting to the GM: Project Management on employment statistics Use of exit interviews Approved and implemented HR policies and procedures Implemented Performance Management System with training needs identification Implemented annual skills work place plan Use of service excellence awards Recommend counter offers to Human Resources to retain skilled Project Managers Informal hand-over of projects	0.80	Formalise and implement the hand-over process when key project managers resign **Deadline date: 31 March 2007** **Responsible Official: General Manager: Project Management** Implement a social committee within Project Management **Deadline date: 31 January 2007** **Responsible Official: SPM** Investigate the possibility of allowing remunerative work outside public sector **Deadline date: 28 February 2007** **Responsible official: SM (TM)**	
3	**Non compliance to SLA** - Late submission of business plan by clients	Inability to meet targets Harm to reputation	1	Operational	Alliances Key assets	Charles Mabona	70.00	0.53	36.75	All business plan to be submitted to DPW by 30 June of current financial year All defaulters are reported at cluster meetings	0.65	Non identified	23.89

Strategic risk number	Risk description	Consequence of risk	Link to strategic focus area	Risk categories	Link to dependency profile	Risk owner	Impact	Likelihood	Inherent risk exposure	Current controls	Perceived control effectiveness	Additional Actions	Residual risk exposure
										Single point of accountability for communication with clients Monthly meeting between client department and DPW to discuss progress on projects etc Issuance of reminders two months prior deadline date Client departments sign for reminders Reporting to defaulters to HOD Forum Defaulters are reported to the EXCO			
4	**Shortage of material**	Inability to meet targets Cost inefficiencies Poor quality of service delivery Harm to reputation	1	External environment	Alliances External forces and agents	General Manager: Project Management	70.00	0.53	36.75	None identified as external to Project Management	0.80	Proposal to meet with the suppliers regarding shortage of material and a possible way forward **Deadline date: 31 December 2006** **Responsible Official: Charles Mabona** Investigate the possibility of identifying and formalising the use of alternative building material **Deadline date: 28 February 2007** **Responsible Official:**	

Strategic risk number	Risk description	Consequence of risk	Link to strategic focus area	Risk categories	Link to dependency profile	Risk owner	Impact	Likelihood	Inherent risk exposure	Current controls	Perceived control effectiveness	Additional Actions	Residual risk exposure
												Chris Masha	
5	**Lack of skilled contractors and consultants** - Sacrificing for poor workmanship	Inability to meet targets Cost inefficiencies Poor quality of service delivery Harm to reputation	1	External environment	Alliances External forces and agents	General Manager: Project Management	50.00	0.65	32.50	Implemented Supply Chain Management process Signed contract with each contractor with penalty clauses Use of CIDB grading system Retention of performance guarantees on big projects Monthly site meeting with the contractors with reporting Monthly site inspection meeting with the use of a attendance register Appointment of consultants for design and supervision of large projects Use of project close-out report and completion certificates Consultants required to provide professional indemnity Implemented program for contractor development Termination of non performing contractors and consultants	0.65	Investigate a possibility of coming up with an alternative incentive scheme for performing contractors and consultants **Deadline date: 28 February 2007** **Responsible Official: Patrick Makape** Develop and implement a register for non performance contractors and consultants **Deadline date: 28 February 2007** **Responsible Official: Thomas Maswanganyi** Improve supervision through steering committees and project management on project sites **Deadline date: Immediate** **Responsible Official: Individual project managers**	21.13

Strategic risk number	Risk description	Consequence of risk	Link to strategic focus area	Risk categories	Link to dependency profile	Risk owner	Impact	Likelihood	Inherent risk exposure	Current controls	Perceived control effectiveness	Additional Actions	Residual risk exposure
6	**Non compliance to legislation**	Possible prosecution Financial loss Negative publicity and harm to reputation	1	Statutory	Key assets External forces and agents	Individual project managers	50.00	0.65	32.50	Approved and implemented Project Management manual Approved performance contract with all employees Signed contract with the contractors makes reference to compliance to legislation Use of a compliance checklist before final closure of individual project files Use of checklist for legislative compliance during the site hand-over	0.40	Subscribe to the relevant professional bodies in the built environment **Deadline date: 28 February 2007** **Responsible official: Augustine Kekana**	13.00
7	**Delayed payment to Service Providers** - Inability of clients to pay on time	Harm to reputation	1	Financial stability	Markets	Building Support: Charles Mabona	60.00	0.53	31.50	Adherence to Project Management Service Standards Payment certificates that go out to clients are registered at Building Support and sent to project managers for checking and approval Project Managers review and sign payments certificates to confirm that work has been done	0.65	Implement register to record movement of payment certificates **Deadline date: 28 February 2007** **Responsible Official: Charles Mabona** Develop and implement register for internal projects for payment certificates **Deadline date: 28 February 2007** **Responsible Official: Charles Mabona**	20.48

Strategic risk number	Risk description	Consequence of risk	Link to strategic focus area	Risk categories	Link to dependency profile	Risk owner	Impact	Likelihood	Inherent risk exposure	Current controls	Perceived control effectiveness	Additional Actions	Residual risk exposure
										Quantity Survey review payment certificates for accuracy Receipt of payment certificate recorded at Infrastructure Support External payment certificates recorded in LOF-book Payment norms for certificates per Service Level Agreement Internal payment certificates registered with Strategic Finance		Through DPW, engage with the client departments to identify the dedicated officials to track payments **Deadline date: 28 February 2007** **Responsible Official: Charles Mabona** Engage with the client departments to improve efficiency of payments **Deadline date: 31 March 2007** **Responsible Official: Charles Mabona**	
8	**Lack of coordination between different spheres of government** - Lack of integrated planning	Inability to meet targets Harm to reputation	1	Operational	Alliances Key assets	Building Support: Charles Mabona	50.00	0.53	26.25	Approved annual business plans from client departments Monthly meetings with client departments Attendance of monthly DPW programme manager meetings	0.73	Revisit Social Facilitation prior to submission of client business plans **Deadline date: 31 March 2007** **Responsible Official: Charles Mabona**	19.03

5 The way forward

Having completed the Project Management risk assessment (a key step in the overall risk management process), management now needs to focus on ensuring it understands the risk universe within which it operates. Achieving the operational intent within the risk universe involves identifying what has to be managed and ensuring that such management and control actually takes place timeously and effectively.

The operational level risk assessment workshop has provided a basis for commencing the implementation of a formal risk management framework at Project Management.

The next challenge is to develop and implement a structured plan for implementing effective and ongoing risk management at Project Management.

This should include the following key phases and steps, amongst others:

5.1.1.1 Project planning

Develop a detailed project plan to implement Enterprise-wide Risk Management at Project Management, meeting the key requirements of:

- The Public Finance Management Act;
- the King Report on Corporate Governance (King 2); and
- the Standards of the Institute of Risk Managers of South Africa.

5.1.1.2 Risk awareness and strategy

- Develop and rollout an ongoing risk management awareness and training programme for all levels of management – to build upon the current level of understanding and knowledge.
- Establish ownership and accountability for risk management within Project Management - Incorporate risk responsibilities in key management mandates, charters, performance contracts, job descriptions, etc.
- Include risk management as a key agenda item on key meetings, e.g. Executive Management.
- Gradually formalise and approve a risk strategy that is aligned with and supports the achievement of Project Management's operational direction.

5.1.1.3 Risk management structures and culture

- Ensure an independent committee is formally charged with overseeing the risk management process – this may form part of the Executive Committee mandate or may be allocated to a separate body that reports back at Executive Committee meetings.
- Appoint / identify a dedicated "Chief Risk Officer" responsible for coordinating and analysing Project Management's risk management and assurance efforts on an ongoing basis, and reporting to key stakeholders.
- Establish a team of "Risk Champions" who will work closely with the "Chief Risk Officer" and will drive the risk management initiatives within their respective directorates.

5.1.1.4 Integrated risk assessments and risk management activities

- Maintain the Operastional Risk Register current and up to date – including a formal risk identification and assessment process conducted at least annually.
- Incorporate the identified operational risks into both the operational plan for 2007 / 2009 and the annual plans.
- Allocate responsibility for each individual major risk to a senior (and accountable) member of management (risk owner) – including the implementation of management action plans to improve levels of control where required.
- Regular management / monitoring of the identified exposures through:
  - Further development of specific action plans to address individual exposures;
  - Allocation of individual officials responsible for action plans;
  - Setting of due dates / implementation of time frames;
  - Development of key performance indicators by which the success of the improved controls can be measured; and
  - Facilitation of sub-process level risk workshops.

  Sub-process level risk workshops should be conducted to reach consensus regarding:

  - Related sub-process level objectives and risks;
  - The alignment of the above with operational focus areas as well as the risks identified in this report;
  - Controls which management relies upon to manage those risks;
  - Perceived and desired effectiveness of those controls; and
  - Areas considered to be lacking in control, which would require further management action.

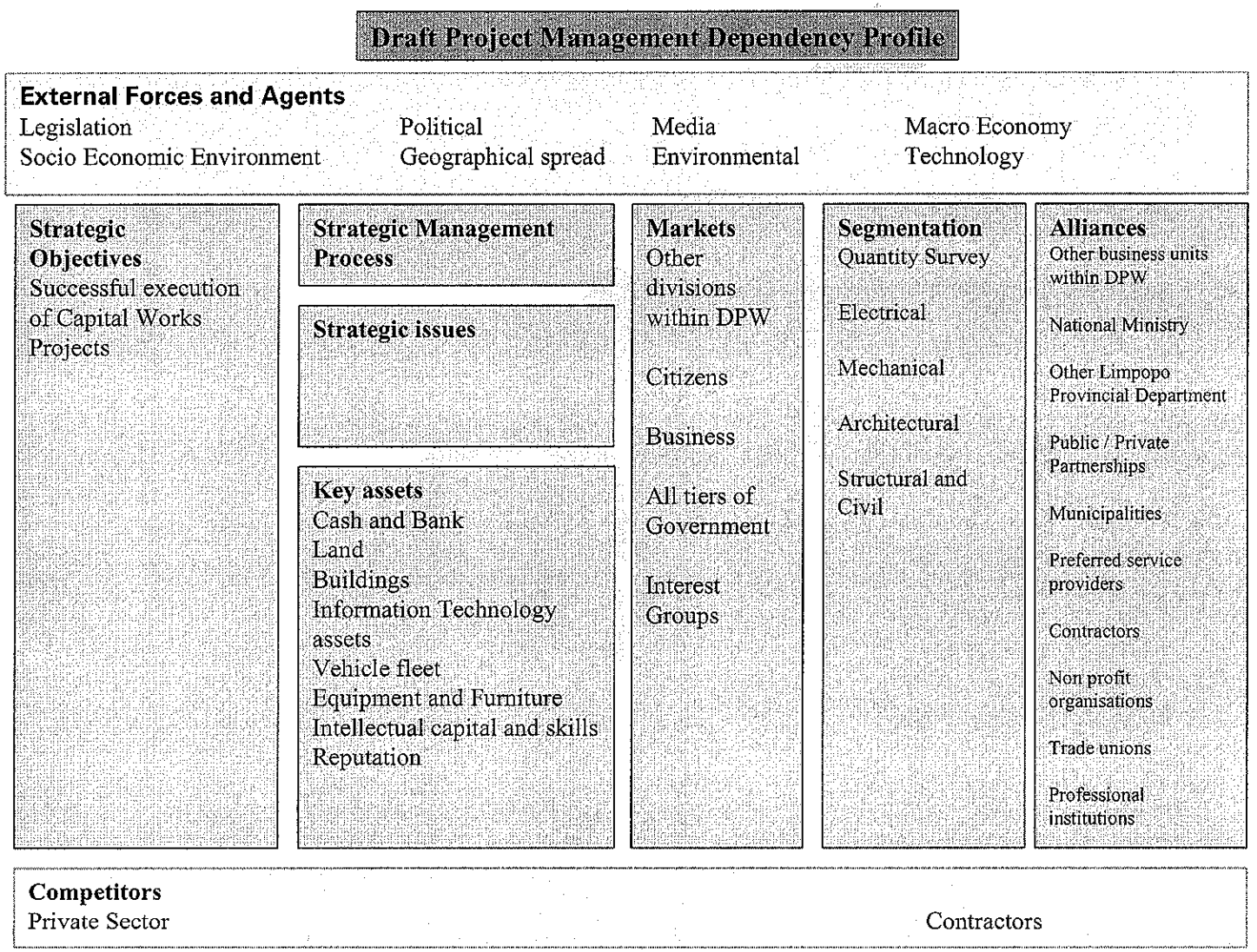
- Integrate the active monitoring of identified risks and related controls (including the allocation of individual "risk owners") into the ongoing activities of the Directorates, Management, General Manager: Project Management and the Risk Committee;
- Ensure there is regular report-back by the "risk owners" on the status of the risks and related internal controls – This should be performed as part of the normal management activities, e.g. monitoring performance against "risk based" business plans and budgets.

A Project Management specific risk management framework developed through this process will not only ensure that best practice corporate governance requirements are adhered to but will also improve the effectiveness of management in discharging their own management and governance responsibilities.

6 Acknowledgements

We would like to thank the General Manager: Project Management and all workshop participants of Project Management for their cooperation and participation in the workshop.

Appendix A – Dependency Profile



Appendix B – List of risks partially assessed

Listed below are the risks that were identified during the risk identification phase of the workshop which were partially assessed. The participants view was that these risks are inherently less important and as such need not to be analysed any further for strategic purposes.

Strategic risk number	Risk description	Consequence of risk	Link to strategic objectives	Risk categories	Link to dependency profile	Risk owner	Impact	Likelihood	Inherent risk exposure
9	**Poor project monitoring** - Lack of performance monitoring - Project overruns - Project closing	Inability to meet targets Cost inefficiencies Poor quality of service delivery Financial loss as a result of litigation	1	Operational	Key assets Segmentation	General Manager: Project Management	50.00	0.40	20.00
10	**Failure to amend contract upon acceptance of additional scope**	Cost inefficiencies Financial loss	1	Operational	Key assets	Senior Manager: Project Management	50.00	0.40	20.00
11	**Effect of weather**	Inability to meet targets Cost inefficiencies Financial loss	1	External environment	External forces and agents	External to Project Management	30.00	0.40	12.00

Appendix C - Assessment tables

Below are the tables used to size the risks according to the potential impact of the risk, the likelihood that the risk will occur, as well as the effectiveness of existing controls. The following three tables provide the legends for the respective decisions required during the workshop.

Qualitative assessment of impact

The table below was used to assist management in quantifying the impact of a specific risk occurring.

Impact	Continuity of Supply	Safety & Environmental	Technical Complexity	Financial
Catastrophic 100	Risk event will result in widespread and lengthy reduction in continuity of supply to customers of greater than 48 hours	Major environmental damage Serious injury (permanent disability) or death of personnel or members of the public Major negative media coverage	Use of unproven technology for critical system / project components High level of technical interdependencies between system / project components	Significant cost overruns of >20% over budget Affect on revenue / asset base of >10%
Critical 70	Reduction in supply or disruption for a period ranging between 24 & 48 hours over a significant area	Significant injury of personnel or public Significant environmental damage Significant negative media coverage	Use of new technology not previously utilised by the entity for critical systems / project components	Major cost overruns of between 10 % & 20 % over budget Affect on revenue / asset base of between 5% & 10%
Serious 50	Reduction in supply or disruption for a period between 8 & 24 hours over a regional area	Lower level environmental, safety or health impacts Negative media coverage	Use of unproven or emerging technology for critical systems / project components	Moderate impact on revenue and assets base
Significant 30	Brief local inconvenience (work around possible) Loss of an asset with minor impact on operations	Little environmental, safety or health impacts Limited negative media coverage	Use of unproven or emerging technology for systems / project components	Minor impact on revenue and assets base
Minor 10	No impact on business or core systems	No environmental, safety or health impacts and/or negative media coverage	Use of unproven or emerging technology for non-critical systems / project components	Insignificant financial loss

Qualitative assessment of probability of likelihood

The table below was used to assist management in quantifying the likelihood of a specific risk occurring.

Likelihood Factor	Qualification Criteria	Rating
Almost Certain	The risk is almost certain to occur in the current circumstances	**0.90**
Likely	More than an even chance of occurring	**0.65**
Possible	Could occur quite often	**0.40**
Unlikely	Small likelihood but could happen	**0.20**
Rare	Not expected to happen - Event would be a surprise	**0.10**

Qualitative assessment of perceived control effectiveness

The table below was used to assist management in quantifying the perceived effectiveness of controls to mitigate or reduce the impact of specific risks.

Effectiveness Factor	Qualification Criteria	Rating
Very Good	Risk exposure is effectively controlled and managed	**0.20**
Good	Majority of risk exposure is effectively controlled and managed	**0.40**
Satisfactory	There is room for some improvement	**0.65**
Weak	Some of the risk exposure appears to be controlled, but there are major deficiencies	**0.80**
Unsatisfactory	Control measures are ineffective	**0.90**

Inherent Risk

The table below was used to categorise the inherent risk exposure of the identified risks into the 5 different categories.

Inherent Risk	Rating
Extreme	≥ 50
High	≥ 35 < 50
Moderate	≥ 25 < 35
Low	≥ 15 < 25
Insignificant	< 15

Residual Risk

The table below was used to categorise the residual risk exposure into the 5 different categories.

Residual Risk	Rating
Priority 1	≥ 25
Priority 2	≥ 17.5 < 25
Priority 3	≥ 12.5 < 17.5
Priority 4	≥ 7.5 < 12.5
Priority 5	< 7.5