

A Case Study of Managing and Reporting Risks in a Multi-National Company

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Abstract

The practical implementation of the principles of risk management poses many challenges for many companies. This is especially so for multi-national companies with many operational sites.

This paper is based on a case study of the implementation of a business risk management framework within a leading mining company in Australia. It provides an overview of the framework and explains the practical challenges and solutions in its implementation. At the time of writing a pilot study had been completed at two sites and the implementation and refinement of the framework is ongoing.

For reporting and corporate governance purposes a distinction was made between significant risks and lower level risks. Lower level risks can be managed effectively at a site or project level. Significant risks require additional oversight and management compared to lower level risks. The framework implemented at the company aims to manage significant risks and have them reported to the next management level. Annual reviews aligned to annual budgeting processes are aimed to assist with effective resource allocation. The status of risk treatment action plans for significant risks are planned to be reviewed and reported on a more frequent basis.

1 Introduction

The principles of risk management are easily understood, however, the practical implementation of these principles poses many challenges. This paper is based on a pilot study of the implementation of a business risk management framework within a leading mining company in Australia and touches on how this framework flows up through to the parent company.

A guiding principle for the risk framework for this mining company was defined early in its development:

One of the most important benefits of adopting a risk management approach to business is that future activities should take place in a consistent, controlled and socially responsible manner with no surprises.

This can only be achieved if the communication process is structured in such a way that the significant risks faced at the various levels within the organisation are reported to relevant people at the next level. This reporting process allows executive management to understand the most significant risks to the business and their potential impact on business objectives. Likewise, key risks and critical risk controls can be communicated throughout the organisation. In turn, it allows risk targets to be set and resources to be allocated in the most effective manner to achieve those objectives - the basis of good risk management.

The framework adopted by the mining company is consistent with the processes described by AS/NZS 4360:2004 Risk Management Standard.

2 Background

Risk management principles have had a long history across the mining industry and the last ten years has seen a rapid growth in the use of risk assessment methodologies (Joy and Griffiths, 2005), particularly in relation to health and safety.

The company well recognised that risk management is an essential part of good business practice. It formed an integral part of its philosophy, practices and business plans, and is to provide benefits to its business

decisions. Many functions already practiced risk management, some more formally than others with the use of various tools and methods and with varying degrees of sophistication and success.

The executive committee had agreed to adopt a common framework for a more systematic and integrated approach to risk management. This is to better capitalise on the work that had already been done and to make the continuing processes more efficient and effective. Also, this was to form the blue print for the wider organisation. Further, the company agreed that a proactive, systematic risk management approach should have broad application across the whole business, have a primary business focus, but also address various legal compliance issues, including safety and environment.

2.1 General purpose of framework

Adopting a consistent, structured, systematic approach to risk management is to provide multiple benefits. In addition, the process change brought about by this framework should provide improved efficiency through the rationalisation of local processes at the company which, in the past, resulted in the duplication of risk management activity. It aims to truly embed risk management into the business processes.

In meeting these objectives, a staggered approach to the implementation of the risk management framework was adopted. This was so that the more obvious control improvements can be achieved at a higher level before the more resource intensive detailed control analysis is undertaken.

The framework was defined based on the current thinking on risk management at the time of its development and how it would work to meet the defined objectives. It is therefore expected to change as practical lessons are learned in practice. As such, the evolving risk management framework will require close consultation with all stakeholders.

Risk management is a rapidly developing discipline and there are many and varied views and descriptions of what risk management involves, and how it should be conducted as well as its purpose. The risk management framework at the company attempts to bring together a common understanding of:

- Objectives for risk management.
- The risk management terminology.
- The processes by which risk management will be carried out in the company.
- Organisational structure for risk management.

Importantly, it was recognised that risk has both an upside and a downside.

The monitoring process implemented as part of the risk management framework intended to provide information to enable various levels of stakeholder groups to be transparently aware of relevant issues.

2.2 Risk definition

The company defines risk as:

Any event that can prevent an entity (at the level being reviewed) from meeting its objectives. It is measured in terms of consequence and likelihood.

A distinction is made between significant risks and lower level risks. Significant risks require a higher level of risk oversight and management. The lower level risks are recorded in the risk register, but are managed through local business and site processes.

In qualitative terms, significant risks are “the most significant areas of uncertainty or exposure at a whole of company level that could impact the achievement of organisational objectives. They present opportunities and threats for significant financial gain or loss” (Group of 100 Incorporated, 2003). The ASX Corporate Governance Council, 2003, states these risks should “include financial and non-financial matters”.

An important aspect of the framework is that it envisages the management of risk in its broadest form. For instance, when reviewing significant risks in the mining department at a mine site, the production, compliance, security, sustainability and social licence aspects of any risk are all considered in the single review.

2.3 Risk ownership

Like most businesses, mining companies face a multitude of risks. Most affect a number of areas of responsibility within the business, but each must have an owner. It is the owner that has the greatest opportunity to manage the risk.

The business has its foundation in the successful discovery, extraction and treatment of mineral resources. In this pilot study, the core business functions in a business unit are associated with the life cycle of these resources and include: Exploration; Acquisition; Project evaluation; Project development; Operations – mining; Operations - ore processing; Closure and divestment; and, Joint venture management.

Responsibility for the management of most risks rests with the core business functions, but input is required from the various support functions. They include such things as safety, environment, community/external relations, procurement, human resources, security, asset management and operation (including maintenance and technical operational support), records management, IT services, legal, accounting and strategic and support management.

Whilst support functions are critical to the management of risk, they are generally only responsible for those that may impact on their ability to deliver services to the business. Hence, support functions may have responsibility for some risk controls for the management of risks.

For example, the selection of the mining method is the responsibility of the core business function of mining. There are direct operational mining risks associated with this as well as potential impacts on (or from) safety, environment, human resources, procurement, asset management (maintenance), community, reputation and possibly security. Collective input from all of these areas is therefore required to successfully manage the risks and opportunities associated with this activity. The ownership remains within the mining function.

3 Managing significant risks

A significant risk is a risk currently assessed as extreme or high on the appropriate risk matrix (see Figure 1), or may reasonably be expected to escalate to those thresholds in the foreseeable future. The significant risk procedure was developed to describe how these risks are managed and monitored. A representation of the management of significant risks is shown in Table 1.

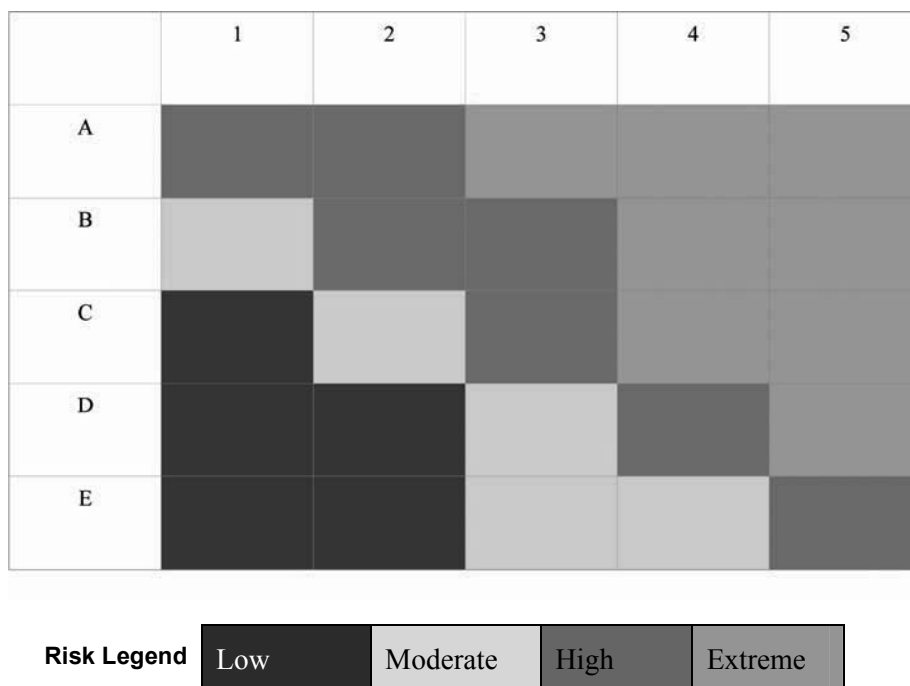


Figure 1 Risk matrix

The significant risk procedure is consistent with the AS/NZS 4360:2004 Risk Management Standard (Standards Australia, 2004), but each step incorporates guidance from the US and UK standards where appropriate and may vary depending on the area being reviewed. The essential steps in the risk management process are represented in Figure 2.

Table 1 Overview of processes for management of significant risks

Communicate	Identify & assess risks	Treat risks	Monitor and review
Stakeholder involvement in risk process	Annual risk review workshop	Budgeting and resource allocation based on: - critical risk controls	Quarterly review and reporting to executive management
Training and awareness of key risks and critical risk controls	Ongoing risk register updates through management of change, incident investigation, insurance reviews, and continuous improvement initiatives	- risk treatment action plans Tracking risk treatment action plans	Monitoring/audits of critical controls
Controls included in operations training			Risk owner responsibility

3.1 Risk management levels

Risk management processes needed to be suited to the organisational structure and the level of risk. In this study, significant risks are being managed and reported through the following management levels, as appropriate for the level of risk:

- Corporation level – corporation executive team level.
- Executive management team (Australia).
- Business unit level –
 - Operating mine site management team.
 - Corporate function (e.g. finance, M&A, legal etc).
 - Major project.
 - Greenfield's exploration.
- Operating site department level – core business function in each business unit:
 - Mining.
 - Ore processing.
 - Operations exploration.
 - Site controlled projects.

Each level has a set of objectives that generally complement those of the levels above. The risks that are managed at any particular level (whilst contributing to the ones above) will be different with a more detailed focus and therefore require a unique risk review process. The mining company's risk management framework there intends to use these risk management levels to increase awareness in the following ways.

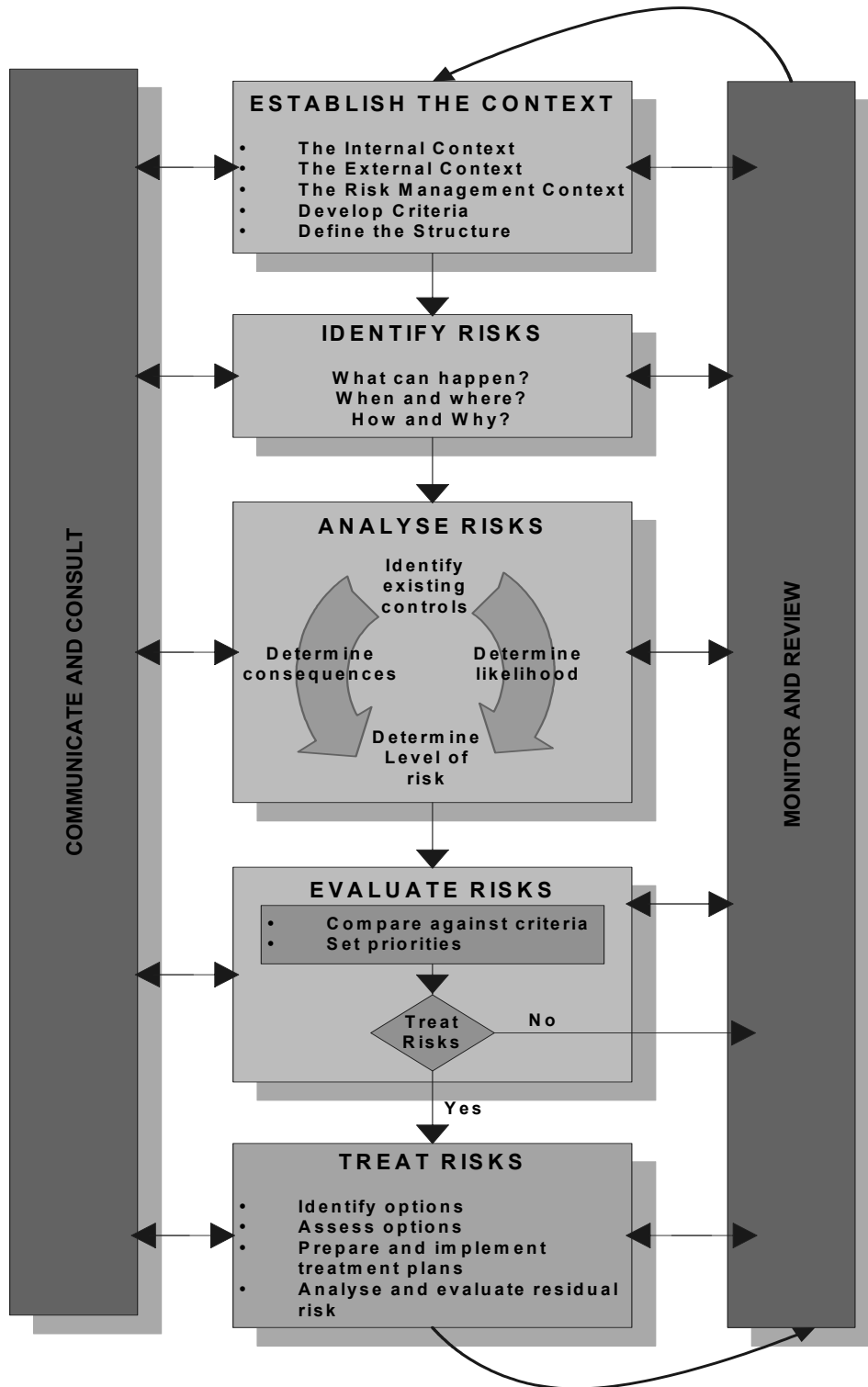


Figure 2 Generic risk management process (adapted from AS/NZS 4360, Standards Australia, 2006)

3.1.1 Corporation executive team level

The corporation management team would need to be aware and manage the most significant risks facing the organisation; the levels of risk awareness throughout the organisation; how the organisation will manage a crisis; the level of stakeholder confidence in the organisation; an assurance that the risk management process is working effectively.

3.1.2 Executive management team

The executive management team would need to be aware of the most significant risks facing the region; the levels of risk awareness throughout the region; and provide an assurance that the risk management process is working effectively.

3.1.3 Business units (sites and projects)

The business units will need to be aware of the most significant risks that exist in their area of responsibility, the possible impacts that these may have on other business areas and the impacts other areas may have on them. Also, they would need to report on performance indicators which allow them to monitor the key business and financial activities, progress towards objectives and identify developments which require intervention. Systematic and prompt reporting will be necessary to senior management on any perceived new risks or failures of existing control measures.

3.1.4 Individuals

Individuals would need to be aware of the individual risks for which they are accountable; understanding that risk management and risk awareness are a key part of the organisation's culture; understand the requirement for them to provide systematic and prompt reports to senior management on any perceived new risks or failures of existing control measures and any opportunities.

This risk management framework focuses on risk, but acknowledges that there are strong inter-relationships with other strategic processes within the company, such as opportunity management and continuous improvement.

3.2 Risk reporting criteria

A risk filter is applied so that risks that are reported on and reviewed at a particular level consists of those risks that are the direct responsibility of that level of management, plus any risks that are of such significance (ranked as extreme) that are reported up from the lower level.

The consequence table used for conducting the risk analysis is reviewed and the financial scales modified so that they best represent the significance for that level under review. For example, a financial impact of a risk event on a small project or site may be catastrophic to that project or site. The same financial impact on a large project or site may only translate to a temporary loss of performance.

Adopting this approach allows the extreme risks at a lower level to be filtered out at the next review level if they do not meet the consequence criteria of the next upper level for them to remain extreme. This process also provides a tool for the upper level to analyse and rank risks presented from different "size" lower level assessment groups.

4 The process

4.1 Identify and assess risks

As part of the risk management process the company intends to identify and assess significant risks through a team-based initial risk review workshop. This is planned to be conducted for new sites, new projects, mergers/acquisitions, and significant organisational changes. The outcomes of this process will produce a set of Risk Records that contain a summary of the risk assessment and the risk treatment action plans.

- Risk review workshops will subsequently be held annually to review the risk records against business objectives and re-prioritise risk treatment action plans. The annual review will be managed in sequence with annual business planning and budgeting because the risk register provides a basis for allocation of resources (including capital expenditure and operating expenditure).
- Significant risks may also be identified or affected at other times through normal business processes. Changes to significant risk registers may also be initiated by the following: management of change system, incident investigation, continuous improvement, capital works, mergers/acquisitions, completion of actions in the risk treatment action plans, other risk assessments.

Risks are assessed qualitatively using the appropriate risk matrix. Where risks are ranked as high or extreme, a separate formal review is initially conducted to determine adequacy of risk controls using appropriate tools such as cause/consequence analysis, otherwise known as 'bow tie' analysis.

Bow tie analysis has been found to be an excellent method of communicating the key risks and critical controls to management and workers alike. A representation of a bow tie diagram is shown in Figure 3. The benefit of the bow tie diagram is that it shows how a range of risk controls may eliminate or minimise the likelihood of specific initiating events that may lead to a risk event (e.g. mill failure). It also highlights controls that may reduce the consequence of an incident once an event has occurred (e.g. spares holdings for mill). Bow tie diagrams originated as a technique for analysing safety incidents, but they have proven to be useful in analysing other types of complex risks as well. Given the time and effort required to undertake such an analysis the need for its use should be assessed on a case by case basis. For risks where the causation and risk controls are relatively obvious the bow tie analysis may add little value and may not warrant the time and effort required.

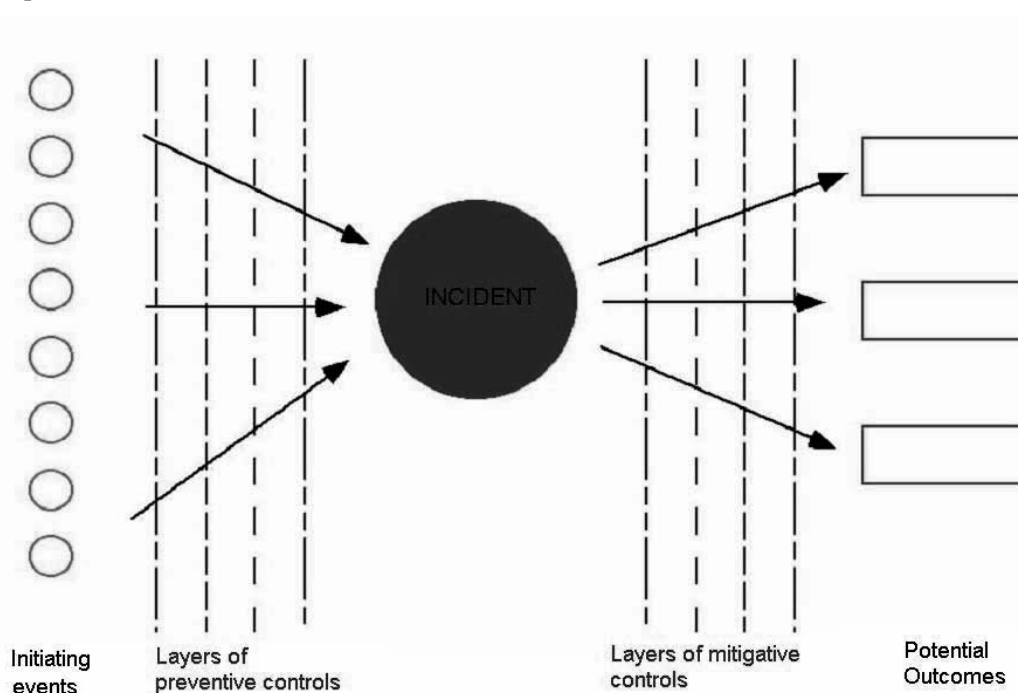


Figure 3 Representation of a bow tie diagram

In addition, extreme risks are also assessed using a financial measure of risk, namely foreseeable annual loss (FAL). This provides a better indication of the relative potential impact on the business and an improved method of ranking and summing risks.

This process offers a great advantage for site managers and project managers as attention is drawn easily to the significant risks and critical risk controls. A traditional risk register may contain a large number of risks by the end of a project or for an operational site. Differentiating the significant risks ensures that the most critical items are emphasised at project handover or for monitoring of ongoing operations.

4.2 Risks treatment

Risk treatment is the process of selecting and implementing measures to modify the likelihood or consequence of each risk. Treatment plans are prioritised in terms of their potential benefit to the organisation, however, non-compliance with laws and regulations is not an option.

Annual budgeting and planning processes must be planned to align with and refer to risk treatment action plans contained within registers of significant risks. This will ensure that significant risks are managed and that resources are used most effectively.

As a minimum the system of risk treatment should provide:

- Effective and efficient operations.
- Effective internal controls.
- Compliance with laws and regulations.

In determining what changes should be made to the systems of control, the proposed changes need to be measured in terms of potential economic benefit if no action is taken compared to the cost of the proposed actions. Where personal safety is an issue, the economic benefit criterion is not applied.

Tolerance of a risk at a certain level is acceptable and encouraged, provided the full analysis has been undertaken and there is a conscious decision that the cost to implement further controls is not justified by the potential benefits to be achieved.

The action items to make changes in the treatment of any risks can become part of an individual's objectives to help ensure they are managed to completion.

4.3 Monitoring of risks

Monitoring and review is an essential and integral part of the risk management process and in many respects it provides a window into the health of the process and the progress being made.

Specific mechanisms for monitoring and ensuring appropriate risk oversight of significant risks include reviewing on a quarterly basis significant risks and risk treatment action plans by local management, and the provision of a status report to the next level of management. The quarterly review also provides an opportunity for management to review and sign-off any new risks identified or updates to previous risk records.

Also, monitoring and auditing of critical controls identified in the risk assessment process is to be undertaken. Internal audit and regional support groups should fulfil this role. The risk register would provide the opportunity for auditing specific risks rather than just against generic standards. This would help focus resources where the risk is greatest. The release of the handbook "Delivering assurance based on AS/NZS 4360: 2004 Risk Management" is welcome guidance in this area (Standards Australia, 2006). It should help legitimise and reinforce the risk-based role of internal auditors. It should also help encourage the use of the risk framework.

Each risk is assigned a risk owner who is responsible for ensuring the risk is reduced as low as reasonably practicable. This includes ongoing monitoring of the risk controls and risk treatment action plans. Future directions include the use of key performance indicators to monitor on a more regular basis that the risk management process is working efficiently and key risks and critical controls are in place and working effectively. Ideally leading indicators would be used here.

In the case study, internal auditing against company standards occurs regularly. However, the risk framework would see this role to be focused on areas where exposure and risk is greatest.

5 Recording the risk management process

Each part of the risk management and action plan process needs to be recorded appropriately. In this framework the basic risk record forms the primary documentation for any risk. In addition the risk register is an integral part of the requirements for each of the levels of risk review.

Detailed control analysis processes require other forms of documentation, to provide assurance that the process has been conducted as well as evidence of the quality of the process. Further, they provide the basis for review revisions when they are undertaken as part of the monitoring and reporting regime.

It is intended that risk assessments and risk treatment action plans are documented in either the business unit (site/ project etc. and site dept. etc.) or executive level (Australia) significant risk registers. Tracking of action plans are to be administered through existing processes.

A risk register custodian has been assigned for each site/project to control the risk register, updating any interim changes and coordinating and reporting the annual and quarterly reviews.

6 Conclusion

As with all risk management, this is a continuing journey with significant challenges – not the least of which is the time required for workshop activity, even though detailed control analysis is a last resort. During early implementation the process has already assisted in raising the profile of key risks and expediting risk treatments. In some cases, it has also assisted with clarifying risk ownership. As the first steps in a longer process it has begun to reinforce a risk based culture. Only practical experience, consultation and time will show how this process can be improved.

References

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