VICTORIA

Auditor General
Victoria

Managing risk across the public sector

Ordered to be printed by Authority.
Government Printer for the State of Victoria

No. 6 - Session 2003

ISSN 1443 4911
ISBN 0 7311 5976 4

AUDITOR GENERAL
VICTORIA

The Hon. Monica Gould, MLC
President
Legislative Council
Parliament House
MELBOURNE

The Hon. Judy Maddigan, MP
Speaker
Legislative Assembly
Parliament House
MELBOURNE

Under the provisions of section 16 of the *Audit Act* 1994, I transmit my performance audit report on *Managing risk across the public sector.*

Yours faithfully

J.W. CAMERON
Auditor-General

18 March 2003

Contents

Foreword

The business of government is becoming increasingly more complex. In the context of this growing complexity, the significance of effective risk management becomes more and more integral to effective management. This is in terms of both threats to performance as well as opportunities to manage matters better through the adoption of pro-active risk identification, management and monitoring.

This report recognises the importance of effective risk management in the Victorian public sector. Its purpose is to provide a timely assessment about risk management practices at individual agency and whole-of-government or State-sector levels, and to make observations about the adequacy of these practices.

It is my expectation that this report will be responded to positively by the Government and its various agencies, since the application of risk management is designed to create the right information through the right processes so that better, more timely decisions can be made about factors that might affect the performance of an agency. In short, if risk management is done well, then business is more likely to run well.

J.W. CAMERON
Auditor-General

18 March 2003

Part 1

Executive summary

INTRODUCTION

1.1 Risk management has always been an implicit aspect of organisational endeavours in both the private and public sectors. In recent times, in recognition of the increasing complexity and demands on organisations, it has become an explicit tool for business, public sector organisations and regulators that enables the systematic identification, evaluation and management of both risk and opportunity.

1.2 As the use of risk management has increased, it has broadened in scope. Many of these developments followed the corporate collapses in the late 1980s and early 1990s, and led to a number of well known studies, such as the Cadbury report (UK)[1] and the Committee of Sponsoring Organizations report (COSO) (USA)[2]. These reports identified the need for organisational control frameworks and strong governance systems and emphasised the benefit of a robust and formal knowledge of an organisation's risks as a prerequisite for effective control and governance.

1.3 The Australia and New Zealand Standard, AS/NZS 4360:1999 *Risk management*, first established in 1995, encourages a formal and structured focus on risk across all industries and the integration of business risk with other more technical or financial risk assessment.

1.4 In the public sector, risk management is increasingly being applied across all parts of organisations, rather than being limited to financial risks, and is taking a more structured approach, though not necessarily that followed by the Standard. In Victoria, key drivers include the *Victorian Managed Insurance Authority Act* 1996, the *Financial Management Act* 1994, the Government's Management Reform Program and policies associated with private-public sector service and infrastructure delivery such as Partnerships Victoria.

AUDIT OBJECTIVE AND SCOPE

1.5 This audit assesses whether appropriate risk management frameworks have been developed and operate to effectively identify, analyse, evaluate, treat, manage and communicate key organisational or program risks, as an integral part of the corporate governance arrangements operating across the Victorian public sector.

1.6 Specifically, the audit assessed whether:

- public sector agencies have appropriate risk management strategies in place, which are effectively implemented and strategically managed;
- risk management is effectively integrated into the governance or management structures of government agencies; and

[1] The Committee on the Financial Aspects of Corporate Governance (UK), *The Financial Aspects of Corporate Governance*, Gee (a division of Professional Publishing Ltd), London, December 1992.

[2] The Committee of Sponsoring Organizations of the Treadway Commission (USA), *Internal Control-Integrated Framework,* American Institute of Certified Public Accountants, New York, 1992.

- risk management structures and processes have been established and operate, in a manner which would lead to the effective identification, management and reporting of key risks that should properly have been drawn to the attention of the Government.

1.7 The audit investigated risk management in the Victorian public sector by:

- examining risk management across a representative sample of 61 Victorian public sector organisations across a range of organisational and governance arrangements;
- investigating, in detail, risk management practices in a smaller number of selected agencies; and
- reviewing risk management structures and processes across the State-sector through research, interviews and examination of practices in selected departments, authorities and central agencies.

1.8 The audit included the Department of Treasury and Finance and the Department of Premier and Cabinet in their role as central agencies and the Victorian Managed Insurance Authority (VMIA) in its role as a risk manager and insurer of the Victorian Budget sector. Local government was excluded from the scope of this audit.

AUDIT CONCLUSIONS

Risk management in Victorian public sector organisations

1.9 At July 2002, most Victorian public sector organisations were addressing risk management, in some way. Most of this activity has taken place since the beginning of 2000, and addresses the main features of AS/NZS 4360:1999 *Risk management*. Organisations that manage risk formally are more likely to manage their risk strategies effectively, in a more co-ordinated and consistent manner, and to recognise a range of benefits broader than improved risk management.

1.10 However, risk management is not yet an established or mature business discipline. We are unable to conclude whether there is sufficient rigour being used to identify, assess and mitigate risks. Approximately one-third of all organisations do not explicitly identify and assess their key risks. Organisations do not always report risk information to their key internal or external stakeholders.

1.11 Many public sector organisations do not rigorously assess risk and evaluate risk controls. This has the potential to lead to inefficiencies in prioritising or allocating resources to manage risk at both organisational and State-sector levels. More thorough assessment and measurement of all risks, and risk treatments, is an area that requires guidance, including reference to best practice in other jurisdictions[3].

---

[3] See paragraphs 2.7 to 2.11 of this report.

1.12 Organisations generally review their risk strategies and risk assessments as a separate annual exercise, or through periodic Board presentations. To ensure that risk management is not an exercise that is undertaken on an annual or infrequent basis, but truly embedded into usual business processes, organisations need to ensure that review processes also monitor risk leadership, appetite and culture.

1.13 As part of this process, public sector organisations would benefit from:

- having access to demonstrated good practices in risk management in other public sector organisations;
- having up-to-date information on key success factors, or benchmarks, for public sector risk management; and
- systematic monitoring of risk management at the Board, CEO and senior management levels.

1.14 This is not to say that the level of leadership involvement in risk management is wanting in the Victorian public sector. Quite the opposite is the case, with direct leadership and involvement by the Board/CEO and executive management evident in over three-quarters of organisations.

1.15 One significant factor, which could be used to elevate the importance of risk management, is having the audit committee oversee risk management. This involvement inevitably means better governance and oversight of risk management at Board or executive management level.

1.16 The high level of contingency planning and investigation of reported incidents, evidenced through the audit, is reassuring. Recovery from key events/crisis is important in minimising damage to State services, finances and reputation. However, the low level of testing of contingency or disaster recovery plans (one-third of all organisations) is of concern. Contingency and disaster recovery planning appears to be taking place separately from the development or implementation of other business risk management strategies. Similarly, assurance by organisations that key contractors and service providers have suitable risk management practices also appears to be conducted separately from any structured approach to risk management.

State-sector risk management

1.17 We examined how risks that impact on the State as a whole were identified and managed. In this report, we refer to these as State-sector risks.

1.18 State-sector risk management and accountabilities rely on structures that are already in place, particularly mechanisms to report on finance and insurable risk, and the existing relationships between the central agencies and other public sector agencies.

1.19 While legislation exists to require most agencies to have a risk strategy, it is not supported by explicit definitions of State-sector risk or guidelines to ensure these risks are identified and managed across the State-sector through a consistent, quality risk management framework.

1.20 The capacity of Victorian public sector organisations to identify their key State-sector risks exposures needs development. Based on each entity's perceptions of their key State-sector risks, there is the possibility that organisations do not have a clear understanding of their risk exposures which may impact on the State or, particularly, on other agencies. Additionally, an organisation's specific risk may not be significant in its own right but, taken collectively with the same risk in other agencies, a large, misunderstood and under-managed State-sector risk exposure may exist.

1.21 There is a strong relationship framework in place between central agencies and other public sector agencies for monitoring State-sector risks. However, there is a lack of clarity around the responsibility for the escalation of these risks and a lack of a full understanding of State-sector risks within portfolios. Consequently, certain risk types could go undetected at a State-sector level and insufficient risk mitigation strategies could be implemented from a whole-of-State perspective. While there are more structured processes to assess and manage budgetary risks, organisations assess and manage broader policy and operational risk implicitly, through general reporting and other communications.

1.22 Because agencies rely significantly on governance models to ensure a "full portfolio" focus on risk management, a consistent approach to risk management could be driven through appropriately structured governance frameworks that incorporate the critical principles of effective risk management.

1.23 A central agency, with the appropriate jurisdiction and authority, should initiate these improvements and guide agencies on the key elements expected in risk management frameworks and practices. Such guidelines should cover:

- the importance of effective risk management;
- the context and structure of the existing State-sector risk management framework and appropriate escalation mechanisms;
- an outline of roles and responsibilities for risk management, emphasising the accountability of management within individual agencies; and
- the core elements in an agency risk management framework.

1.24 The VMIA's analysis of the RIMPAT[4] survey is a valuable source of information about risk management in the Victorian public sector agencies within its constituency. However, analysis of the RIMPAT data is currently limited when applied to the State-sector.

[4] Risk Management Performance Assessment Tool.

1.25 If central agencies shared information from the VMIA's "catastrophic risks register", and combined it with Department of Treasury and Finance risk analysis approaches, they would have a valuable perspective on the risks facing the State. Consolidating and sharing this information would improve analysis of the impact of risks on achieving policy objectives, and give central agencies a broader view of the risks to the State.

1.26 Sharing best practices in risk management, from within the State-sector and other jurisdictions, would improve less developed practices. The VMIA already shares risk management information within its client base, but there is no formal sharing process on a whole-of-State basis. This limits agencies from continuously improving their risk management.

AUDIT FINDINGS

Risk management in Victorian public sector organisations

Appropriate risk management strategies

1.27 The audit found that, at July 2002, more than 90 per cent of the Victorian public sector organisations examined had applied risk management processes in some part of their business and services. Three-quarters of the organisations either identified their main risks or profiled their risk exposures. Just over half were working, in accord with the commonly accepted elements of formal risk management, to:

- establish a strategic context;
- identify, assess and treat risks; and
- monitor, review and communicate risks. ***(para. 3.7)***

1.28 However, only 39 per cent had appropriate risk management strategies in place. Organisations were mainly limited in meeting the audit criteria by:

- failing to have a risk management strategy and policy; or
- failing to identify and assess their main risks. ***(para. 3.9)***

1.29 One-quarter of the organisations examined did not have a documented risk management strategy and 18 per cent did not have any explicit risk management policy. One-quarter neither identified their main risks nor completed a risk assessment to identify and profile their risk exposures. ***(paras 3.8 and 3.11)***

Effectively implemented risk management

1.30 The audit found that only 28 per cent of the organisations were effectively implementing their risk management strategies. ***(para. 3.26)***

1.31 Organisations were mainly limited in meeting the audit criteria by:

- failing to apply risk management to the whole of the business; or
- failing to use rigorous quantitative and qualitative methods for risk analysis and controls. ***(para. 3.27)***

1.32 Risk analysis in the public sector has a sound foundation and many of the existing risk assessment processes and documentation are aligned with the expectations of AS/NZS 4360:1999 *Risk management*. However, better evaluation techniques and more robust and reliable risk analysis would enhance better decision-making, support issue resolution and improve risk mitigation. ***(para. 3.34)***

Integrating risk management into governance structures and strategic management processes

1.33 The audit found that two-thirds of public sector organisations include risk management explicitly in governance processes. Just over half incorporate risk management into business and strategic planning processes. ***(para. 3.37)***

1.34 Overwhelmingly, organisations with a formal approach to managing risk recognised other organisation wide benefits. ***(para. 3.47)***

1.35 The involvement of the audit committee would appear to be a critical factor, with an organisation's success in having appropriate risk management strategies in place increased by nearly 50 per cent where the audit committee was involved in a direct leadership role. ***(para. 3.51)***

1.36 Less than a quarter of organisations that assessed themselves as having a significant State-sector risk potential had appropriate strategies in place. Even fewer of those with a perceived medium to low State-sector risk potential had done so. This indicates that there may be an area of exposure to State-sector risks that is being covered by organisations with less explicit risk management capacity. ***(paras 3.58 and 3.59)***

State-sector risk management framework

1.37 The legislation under which the Victorian Government manages risk includes the *Financial Management Act* 1994 and the *Victorian Managed Insurance Authority Act* 1996. ***(para. 4.4)***

1.38 In excess of 300 departments, authorities and public bodies and associated entities are subject to the *Financial Management Act* 1994, which is administered by the Department of Treasury and Finance. ***(para. 4.6)***

1.39 The Department relies heavily, through its budget setting and monitoring processes, on either the agencies themselves or their own staff to identify and communicate risks that fall outside standard financial reporting guidelines. ***(para. 4.16)***

1.40 Under the *Victorian Managed Insurance Authority Act* 1996, the Victorian Managed Insurance Authority (VMIA) insures[5] more than 170 State-sector departments and participating bodies[6] against their identified insurable risks. The VMIA compiles and retains a "catastrophic risks register" that records potential insurable exposures and loss scenarios for the Victorian State-sector. As well, its RIMPAT self-assessment tool monitors the risk management practices of its client base and is a source of significant information on public sector risk management processes within Victoria. ***(paras 4.7 to 4.9)***

1.41 The VMIA reports quarterly to the Department of Treasury and Finance and the Minister for Finance, the report can include information on emerging risk issues and the uninsured exposures to the State. ***(para. 4.10)***

1.42 The Department of Premier and Cabinet monitors the management of State-sector risk as part of the daily business of government. Decisions about which risks to escalate and the required level of oversight are largely a question of judgement. This judgement is made by senior executives within the Department of Premier and Cabinet and individual agencies. In general, the focus is on higher financial or policy risk areas. ***(para. 4.18)***

1.43 The Department of Premier and Cabinet and the Department of Treasury and Finance communicate risk information to the Executive Government, whether it is broad-based policy risks or risk with the potential to impact on budget outcomes. ***(para. 4.12)***

Monitoring of State-sector risk information

1.44 There are no formal guidelines which direct all agencies to have a risk management framework, and no formal guidelines or governance principles which define the framework to manage State-sector risk. ***(para. 4.21)***

Agency level information on State-sector risks

1.45 The structure and responsibility for capturing, analysing and communicating State-sector risk information lies with departments and agencies as part of their overall risk management strategy. However, a department's risk strategy may not include all agencies that fall within its portfolios. This raises the question of whether certain State-sector risks may be undetected. ***(paras 4.22 to 4.24)***

Co-ordination of State-sector risk information

1.46 The State-sector information gathered by central agency representatives in their day-to-day liaison with agencies is not used to its capacity. Consolidating risk information also would allow central agencies to consider State-sector risk treatment plans. ***(para. 4.25)***

[5] The VMIA does not cover workers compensation or transport accident insurance.

[6] Agencies under the control of the State, or which receive more than 50 per cent of their funding from the State.

1.47 Escalation of State-sector risks depends on the judgement of individual agencies and staff within central agencies. Consequently, State-sector risks may go undetected because of a lack of clarity around:

- definition of State-sector risk;
- responsibility for the escalation of risks; and
- mechanisms for escalation. ***(para. 4.27)***

1.48 When organisations do advise the Government about State-sector risk, they generally use existing reporting mechanisms. ***(para. 4.26)***

State-sector risk management process

1.49 Most agencies have processes to identify, measure and analyse their risks. However, there is no explicit mechanism for them to consider and compare how State-sector risks may impact on other agencies or whether any occur consistently across agencies. No central agency has an explicit guide that assists agencies to assess or instigate appropriate risk mitigation strategies and control frameworks for these State-sector risks. ***(para. 4.31)***

1.50 Key risks may be overlooked or under-managed. While the Department of Treasury and Finance uses comprehensive budget and financial information to analyse risks to the State's budget outcomes, it does not link this to risk registers within each department, nor is the information shared outside the Department of Treasury and Finance's Budget Strategy Committee. ***(para. 4.32)***

1.51 There is no existing structure to share best practice in risk management across the State-sector. The VMIA's RIMPAT survey is the only mechanism to assess risk management practices across most State-sector agencies. However, whole-of-State information is not available to provide information on better practice to all State-sector agencies. ***(para. 4.34)***

RECOMMENDATIONS

Paragraph number	*Recommendation*
Risk management in Victorian public sector organisations	

3.73	We recommend that:
	• public sector organisations adopt formal risk management approaches that are appropriate to the organisation's level of risk;
	• the Victorian Government provide public sector organisations with clear risk management guidelines, processes and procedures, including requirements that:
	  • risk management key performance indicators be identified and included in the performance responsibilities of members of governing bodies and executive management;
	  • audit committees independently assess the appropriateness and effectiveness of risk identification and management within the organisation for the Board or executive management;
	  • certification to the appropriateness or effectiveness of their risk management be incorporated with other existing attestations to the Government, such as tax-related documents; and
	  • report on their risk management strategies in their Annual Reports, identifying and prioritising key risks and describing how they are assessed and managed;
	• public sector organisations rigorously evaluate risks and risk treatments, linking risk criteria to government policy, organisational objectives and stakeholder expectations and, where possible, use cost-benefit analysis; and
	• public sector organisations establish appropriate risk management strategies that identify and treat State-sector risks.

State-sector risk management framework	

4.47	We recommend that:
	• existing processes between Department of Treasury and Finance, the Department of Premier and Cabinet, the VMIA, and government departments that help identify, assess and manage State-sector risk be standardised, strengthened and co-ordinated through:
	  • the issue of guidelines, by a central agency, for the identification, assessment and management of State-sector risks;
	  • expanding focus, sharing information and improving co-ordination of current central agency risk collection and analysis to include consideration of specific State-sector risk tolerance issues;
	  • the explicit inclusion of risks to the achievement of objectives or outcomes in budget and cabinet submissions, together with the key risk management actions;
	  • the information from the VMIA catastrophic risks register and the results of its RIMPAT survey process being made available more broadly;
	  • development and sharing of information on best practice in risk management. For example, this could be achieved through establishing an interdepartmental liaison group, which has a successful precedent in the UK. The VMIA RIMPAT survey results could be one input to such a group; and
	• agencies report on their risk management framework in their Annual Report, identifying and prioritising key risks and setting out the means by which these are assessed and being managed.

***RESPONSE** provided by Department of Premier and Cabinet*

The Department of Premier and Cabinet acknowledges that there are areas of risk management within portfolios which may currently be underdeveloped. The Department of Premier and Cabinet is working with other departments and agencies to improve risk management frameworks through a number of initiatives, including:

- *ongoing examination of corporate governance issues;*
- *the development and reporting of risk management strategies as part of corporate reporting requirements; and*
- *the Department of Treasury and Finance's Financial Management Compliance Framework, which will be operational on 1 July 2003.*

In relation to the recommended guidelines, the Department of Treasury and Finance and the Department of Premier and Cabinet will jointly develop these further. The Department of Premier and Cabinet notes, however, that the sample for the audit was fairly small and as such may overstate certain risk related issues. The Department of Premier and Cabinet also believes that it is necessary to more specifically define the scope and content of the particular types of risks at the outset in order to provide greater rigour to the report.

***Further comment** by the Auditor-General*

The sample of 61 organisations ensures that the maximum margin of error associated with the reported survey estimates is ±9 per cent at the 90 per cent confidence level.

***RESPONSE** provided by Department of Human Services*

The report's recommendations are generally supported, particularly those that relate to better information exchange across the public sector and a co-ordinated approach to State-sector risks. The report proposes establishing an interdepartmental committee to oversee the development of a State-sector risk management framework. Such a committee could also function as the primary forum for information exchange on risk management best practice. While it would be appropriate for central agencies to take the lead in the work of the committee, care should be taken that the approach is collaborative, involving all departments equally.

Departments also need flexibility to address their particular circumstances, including the relative maturity of their risk management environments. Likewise, the relationship between audit and risk management should be a matter for each department to decide: there are different views in the literature and in various jurisdictions on this matter.

***RESPONSE** provided by Department of Sustainability and Environment*

The performance audit was a welcome examination of risk management practice as is, which will provide a particularly valuable input to informing our ongoing approach to continuously improving our risk management practice as it applies to our decision-making and daily operational activities. The recommendations provided at both the organisation and State-sector appear progressive and viable.

***RESPONSE** provided by Kangan Batman Institute of TAFE*

In respect to the rest of the report, the Institute will adopt the comments made in "areas for improvement" and once the report is released we will process the report through the Audit and Risk Sub-committee of Institute Council.

Part 2

Background

INTRODUCTION

2.1 Risk management has always been an implicit aspect of organisational endeavours, both within the private and public sector. In recognition of the increasing complexity and demands on organisations in recent times, it has become an explicit tool for business, public sector organisations and regulators that enables the systematic identification, evaluation and management of both risk and opportunity.

2.2 As the use of risk management has increased, it has broadened in scope to include system and games theory, disaster recovery planning, and a range of standards and controls. Many of these developments followed the corporate collapses in the late 1980s and early 1990s, and led to well known studies, such as the Cadbury report (UK)[1] and the Committee of Sponsoring Organizations report (COSO) (USA)[2]. These reports identified the need for organisational control frameworks and strong governance systems, and emphasised the benefit of a robust and formal knowledge of an organisation's risks as a prerequisite for effective control and governance.

Australian Standard

2.3 In response to these earlier studies and a perceived gap in the formal guidance available on risk management, the Standards Associations of Australia and New Zealand released a discussion paper on risk management in 1993, which was subsequently released as the joint Australian/New Zealand Standard, AS/NZS 4360:1995 *Risk management* in 1995. This Standard is widely quoted and adopted by organisations in Australia and New Zealand, as well as abroad in the UK and Canada. For example, the Canadian Treasury Board Secretariat used it as a basis for the development of its government-wide integrated risk management policy framework.

2.4 The Standard was updated in 1999 and re-released with an accompanying handbook, HB143:1999 *Guidelines for managing risk in the Australian and New Zealand public sector.* The Handbook forms the basis of risk management across many public sector entities in Australia. In conjunction with the Standard, it provides a step-by-step approach for organisations in developing their own risk management frameworks. Other Standards incorporate industry-specific aspects of risk management, for example, AS/NZS 4804:2001 *Occupational health and safety management systems*.

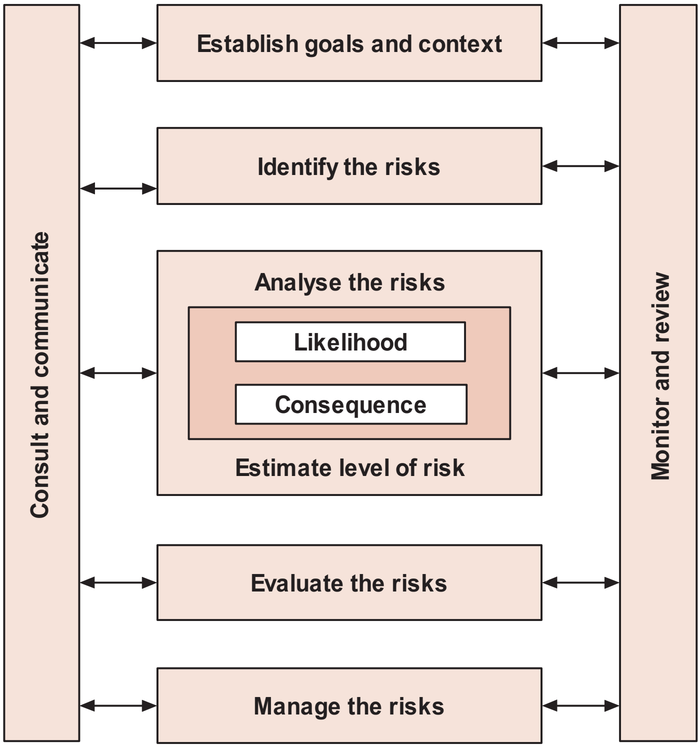
2.5 Chart 2A illustrates the widely accepted structure and processes for successful risk management.

---

[1] The Committee on the Financial Aspects of Corporate Governance (UK), *The Financial Aspects of Corporate Governance*, Gee (a division of Professional Publishing Ltd), London, December 1992.

[2] The Committee of Sponsoring Organizations of the Treadway Commission (USA), *Internal Control-Integrated Framework,* American Institute of Certified Public Accountants, New York, 1992.

CHART 2A
STANDARD RISK MANAGEMENT PROCESS



Source: Standards Australia, AS/NZS 4360:1999 *Risk management.*

Public sector risk management

2.6 The Standard encourages organisations in all industries to formally structure their risk management and to integrate business risk with other more technical or financial risk assessment. Although not all public sector organisations use the Standard's approach, risk management is expanding beyond a financial focus to encompass all parts of an organisation. The Commonwealth Government based its *Guidelines for Managing Risk in the Australian Public Service* on the Standard, and the Victorian Managed Insurance Authority endorses its use for managing business risk[3]. In 2001, the Commonwealth Government's insurance body, Comcover, released 10 key performance indicators (KPIs) of best practice to help Commonwealth agencies benchmark their performances[4]. Table 2B details these risk management KPIs.

[3] Commonwealth Government, *Guidelines for Managing Risk in the Australian Public Service*, MAB/MIAC Report No. 22, October 1996.

[4] Department of Finance and Administration, *Risk Management Performance Benchmarking*, Comcover, 2001.

TABLE 2B
KEY PERFORMANCE INDICATORS FOR BEST PRACTICE IN RISK MANAGEMENT

KPI 1 **Integrated risk management approach**	An integrated approach to risk management, in an organisation, requires that risk management is an integral facet of all of its business processes. Its application is critical to the achievement of organisational objectives and governance responsibilities. Such an organisation has policies, strategies, and a comprehensive system to maintain a risk management culture. An integrated approach is also forward looking, requiring a focus on identifying opportunities, as well as avoiding or mitigating losses.
KPI 2 **Committed and led**	The achievement of an integrated risk management approach and culture requires strong leadership and a commitment at the highest level/s within an organisation. There is an active and committed focus by all senior executives to “champion” the practice of risk management to achieve business success.
KPI 3 **Positive and pro-active focus**	The organisation maintains a proactive role in the identification, analysis and treatment of potential risks. It positively aims to provide optimum levels of protection, as well as optimising opportunities for the organisation at minimum cost.
KPI 4 **Process driven**	The organisation has a framework capable of implementing risk management processes. The organisation has a clearly defined and documented risk management process, which is seamlessly integrated into all other business processes.
KPI 5 **Planned for continuous improvement**	There is a continuous application of risk management practice with a clearly defined risk planning process. Continuous control, performance monitoring, review and improvement of planning and practices are inculcated into the organisation's culture.
KPI 6 **Audited and documented**	There are developed and applied mechanisms to ensure ongoing review of risks. The organisation has a well-developed audit, reporting and documentation system in place. It monitors and documents all levels within the risk management process.
KPI 7 **Active communication**	Active communication and consultation occurs with internal and external stakeholders (as appropriate) at each stage of the risk management process and concerning the process as a whole. A communication plan has been developed at the earliest stage in the risk management process, with the plan addressing issues relating to the risks themselves and the process to manage it. There is a staff position responsible for communicating risk management policies and the risk management program.
KPI 8 **Resourced**	The organisation has identified and committed adequate resources to support the full implementation of risk management practices and processes on a continuing basis. The business is adequately protected, financially, operationally and contractually, against the risk of losses. Accountability for the management of risks rests with each line manager or business unit, with each unit having adequate risk management resources.
KPI 9 **Trained and educated**	The organisation is committed to the training and the education of staff in risk management, and has an ongoing and funded training and education program.
KPI 10 **Value-based decisions**	The organisation's business decisions incorporate a full risk assessment, including cost-benefit analysis of the risks and business value, rather than on assessing the cost of risk alone. It links outcomes to the achievement of goals and objectives. Business decisions are value-based.

Source: Comcover, *Risk Management Key Performance Indicators,* Commonwealth Department of Finance and Administration, http://www.finance.gov.au/comcover/key_performance_indicators.html, 4 April, 2002.

2.7 In 2000, the UK National Audit Office released *Supporting Innovation: Managing Risk in Government Departments* in co-operation with PricewaterhouseCoopers, UK. It aims to help government departments improve their management of risk and to assist them in well considered risk taking. The report acknowledged that all departments had opportunities to deliver services in new ways, and that the Government was encouraging them to take managed risks if this was likely to sustainably improve service delivery. Managing such risk is important as it can lead to better service delivery, more efficient use of resources, help minimise waste, fraud and poor value for money, and promote innovation. Table 2C contains an excerpt from the report.

TABLE 2C
CONTRIBUTION OF RISK MANAGEMENT TO IMPROVED PUBLIC SECTOR PERFORMANCE

Area of activity	*How risk management can help*
Better service delivery There are a number of risks associated with delivering services to the public: services may be delayed, be of poor quality, unreliable or not be easily accessible; departments may not be able to respond to sudden increases in demand; or complementary services may not be joined up at the point of delivery.	Assessing the likely impact of risks can help departments ensure that the risks are avoided or at least that adequate arrangements are in place to deal with them.
Managing change Change is very much a normal feature of the environment in which departments operate - new social and economic problems may require Government action; rapid technological changes may require civil servants to develop new skills and new ways of delivering services in response to increases in the public's expectations for the standard of service they should receive.	Risk management can help Departments to assess the likelihood of major changes occurring which might impact on resource requirements and how they deliver services. By doing so, departments can develop contingency plans to maintain services if things go wrong, and consider ways of responding to the demand for services during periods of change through for example, good communication with citizens.
More efficient use of resources Effective risk management should identify the main risks to the achievement of program outputs and outcomes.	Prioritisation: departments can help to identify those areas that may be over-controlled or over-regulated so that resources can be released to address higher risk areas.
Better project management IT and construction projects pose the risk that they will be delivered late, over budget or will not meet operational and quality requirements.	Risk assessment at the feasibility and appraisal stage can help to develop forecasts; maximise the allocation of risk to the parties best able to manage them; and help clarify responsibilities for managing identified risks.
Minimising waste, fraud and poor value for money Departments need to assess regularly whether their internal management controls are reliable and sufficient to minimise the risk of fraud, impropriety and waste.	Effective risk management will include a regular assessment of the performance measures, processes and other systems supporting the department's objectives, program outputs and delivery of services. In doing so it can help assess their reliability and how they might need to be enhanced.

TABLE 2C
CONTRIBUTION OF RISK MANAGEMENT TO IMPROVED PUBLIC SECTOR PERFORMANCE - *continued*

Area of activity	*How risk management can help*
Innovation Failure to innovate can be a risk in itself if, for example, departments do not keep pace with developments in the use of information technology to the extent that they cannot realise the improvements in efficiency and service delivery which such technological developments make possible.	Risk management requires the assessment of a range of options in terms of the likely opportunities for improved service delivery and program outcomes, and what needs to be done to manage the risks associated with each option. In doing so it can provide a framework for adopting more innovative approaches and managing the risks associated with them.

Source: National Audit Office (UK), *Supporting innovation: Managing risk in government departments,* The Stationery Office, London, 2000.

2.8 Risk management is sufficiently established as a key component of the governance framework to become the focus of audit attention. The Victorian Auditor-General's Office uses a risk-based audit methodology to plan the annual financial audits of Victorian public sector agencies. The methodology provides for assessments of various areas of risk, such as the effectiveness of operational structures, and the potential for fraud, rather than the adequacy of risk management within agencies. These findings are reported to agency management.

2.9 For several years, the Australian National Audit Office has incorporated an assessment of risk management into its performance audits, and is currently undertaking a separate audit of risk management in Commonwealth Government agencies. Recent work by CPA Australia, the NSW Auditor-General and the Queensland Audit Office has also assessed the nature of risk management in the public sector across Australia, NSW and Queensland respectively.

2.10 The reviews in Australia and the UK found that the public sector is improving its understanding of the nature of risk and its management, although formal risk management programs remain inconsistent and inadequate. The sector has well-established, traditional approaches to risk transfer, such as insurance for physical losses, but is still applying structured approaches to the management of overall business risk.

2.11 Most of these reviews focus on risk management at a departmental or individual agency level. The distinguishing feature of this audit is the additional focus on whole-of-government or State-sector risk management.

Risk management in the Victorian public sector

2.12 Public sector risk management in Victoria has followed a similar path to the jurisdictions covered by the above reports. Key drivers include the *Victorian Managed Insurance Authority Act* 1996, the *Financial Management Act* 1994, the Government's Management Reform Program, and policies associated with private-public sector service and infrastructure delivery such as Partnerships Victoria.

2.13 Section 44B of the *Financial Management Act* 1994 requires a department or public body to maintain a register of assets, and to develop, implement and keep under review a risk management strategy. The same applies under section 23 of the *Victorian Managed Insurance Authority Act* 1996, for departments and participating bodies[5].

2.14 Aspects of risk management also are incorporated into the reporting arrangements established between the Department of Treasury and Finance and other departments as part of the quarterly monitoring process established under the *Financial Management Act* 1994.

2.15 We expect that the public sector will emphasise risk management as it increases its focus on governance structures and frameworks.

AUDIT PURPOSE

Objectives

2.16 The purpose of the audit was to assess whether appropriate risk management frameworks have been developed and operate to effectively identify, analyse, evaluate, treat, manage and communicate key organisational or program risks, as an integral part of the corporate governance arrangements operating across the Victorian public sector.

2.17 Specifically, the audit assessed whether:

- public sector agencies have appropriate risk management strategies in place, which are effectively implemented and strategically managed;
- risk management is effectively integrated into the governance or management structures of government agencies; and
- risk management structures and processes have been established and operate, in a manner which would lead to the effective identification, management and reporting of key risks that should properly have been drawn to the attention of the Government.

Scope

2.18 The audit covered selected agencies in the Victorian public sector, including the Department of Treasury and Finance and the Department of Premier and Cabinet in their role as central agencies and the Victorian Managed Insurance Authority (VMIA) in its role as a risk manager and insurer of the Victorian Budget sector. Local government was excluded from the scope of this audit.

[5] Participating body – a statutory authority or body corporate that has received more than 50 per cent of its funding from the Consolidated Fund or in which the State has a controlling interest.

Methodology

2.19 The audit investigated risk management in the Victorian public sector in 3 stages by:

- examining risk management across a representative sample of 61 Victorian public sector organisations with a range of organisational and governance arrangements;
- investigating in detail risk management practices in a smaller number of selected agencies; and
- reviewing risk management structures and processes across the State-sector through research, interviews and examination of practices in selected departments, authorities and the central agencies.

CONDUCT OF THE AUDIT

2.20 The audit complies with Australian Auditing Standards for performance audits, and includes the necessary tests and procedures.

2.21 The audit examined risk management in Victoria from July 2001 to June 2002.

2.22 The following companies provided specialist assistance to the audit team:

- Pinpoint Solutions, in developing the audit specification, criteria and diagnostic tool; in validating data; and advising us throughout the audit;
- PricewaterhouseCoopers, in examining the selected agencies in detail; and preparing the case studies; and
- KPMG, in reviewing Victorian State-sector risk management structures and processes.

2.23 Ongoing advice and participation in the Audit Steering Committee was also provided by Adam Awty, Public Sector Policy Advisor for CPA Australia; Gary Clark, Manager, Legal and Risk Management at SMEC Australia Pty Ltd; and Richard Rundle and Tracey Martin, from the Australian National Audit Office.

2.24 The Office appreciates the support and assistance of management and staff at the agencies and departments listed in Appendix A of this report.

Part 3

Risk management in Victorian public sector organisations

INTRODUCTION

3.1 In July and August 2002, 61 randomly selected Victorian public sector organisations were interviewed to determine the extent, appropriateness and effectiveness of their risk management activity. Appendix A lists these organisations.

3.2 The audit examined current risk management strategies, structures and processes, and also considered how organisations account for the impact of their main risks on other public bodies and the Government's policy objectives[1]. The audit then examined agency documents to validate the results of interviews.

3.3 The sampling methodology of 61 allows conclusions about the status of risk management in the Victorian public sector to be drawn from the results, to a degree of accuracy of 90 per cent.

APPROPRIATE RISK MANAGEMENT STRATEGIES

Audit criteria

3.4 We expected public sector organisations to have deliberate and evident management strategies and processes commensurate with the nature, scope, frequency and magnitude of risk to which they and the State may be exposed. These strategies and processes would be in line with a suitable risk management framework such as AS/NZS 4360:1999 *Risk management*, and enable organisations to:

- identify potential impacts on the organisation, Government and/or the community; and
- have reasonable and practical measures to address these impacts.

3.5 Appropriate risk management strategies would:

- identify foreseeable risks;
- recognise, understand and appreciate the nature and potential level of these risks:
    - *nature* - who and what could be impacted and how; and
    - *level* - the likelihood and consequences of the risk; and
- mitigate the full scope of risk exposures reasonably and practically:
    - *reasonable* - what organisations could expect, given the nature and level of risk and how the same type of business would address the risk; and
    - *practicable* - the extent of risk mitigation measures appropriate to the organisation's size and resources.

[1] State-sector risk is defined in paragraph 4.2 of this report.

3.6 To meet these criteria, an organisation needs to:

- have a framework and method for identifying and analysing risk;
- assign organisational risk management responsibility clearly;
- have an organisation-wide strategy and policy;
- identify and assess its main risks;
- apply risk management to its business and services; and
- have some form of risk treatment and contingency plans.

Audit findings

3.7 The audit found that, at July 2002, there was a high level of risk management activity taking place in the Victorian public sector. More than 90 per cent of the Victorian public sector organisations we examined applied risk management processes in some part of their business and services. Three-quarters of the organisations either identified their main risks or profiled their risk exposures. Just over half were working, in accord with the commonly accepted elements of formal risk management, to:

- establish a strategic context;
- identify, assess and treat risks; and
- monitor, review and communicate risks.

3.8 The audit found that:

- Almost all of the organisations examined had a context and method for analysing risk and a person, group or unit responsible for risk management;
- Three-quarters of the organisations either had, or were developing, a risk management strategy, although only half had an organisation-wide strategy;
- Just over half of the organisations had a separate, explicit risk management policy aligned with the risk strategy, or were developing one; 26 per cent defined risk management elsewhere;
- Sixty-two per cent of the organisations identified the main risks relating to their goals, objectives and planned outcomes. However, 25 per cent neither identified their main risks nor assessed risk to identify and profile their risk exposures;
- Most organisations applied risk management processes in some areas of their business and services; and
- Three-quarters had some form of risk treatment plan, and 80 per cent planned for contingency, disaster recovery or business continuity in some way. Just over one-third had tested these plans.

3.9 Although more than 90 per cent of the organisations were engaged in risk management processes, only 39 per cent had *appropriate* risk management strategies in place. Organisations were mainly limited in meeting the audit criteria by:

- failing to have a risk management strategy and policy; or
- failing to identify and assess their main risks.

3.10 Additional information on these 2 limitations is described below.

Risk management strategy and policy

3.11 Fifty per cent of the organisations examined had a documented risk management strategy as a specific part of their organisation's risk management. A further 7 per cent had one, but not as a product of a risk management methodology. Eighteen per cent of organisations were developing one. One-quarter did not have a specifically documented risk management strategy.

3.12 Similarly, 58 per cent of organisations had, or were developing, a formal policy, and 25 per cent defined risk management in other organisational documents. Eighteen per cent of the organisations examined did not have any explicit risk management policy.

3.13 Of those organisations that had a risk management policy:

- 86 per cent believed that executive management supported it;
- 71 per cent said that it was understood and implemented throughout their organisation;
- 66 per cent had reviewed and maintained the policy annually; and
- 69 per cent had explained the policy to all staff.

Case study

3.14 Where a comprehensive risk management program extends to all parts of an organisation, it can be hard to manage the accompanying, and sometimes overwhelming, documentation. Kangan Batman Institute of TAFE found a simple and effective way of addressing this issue.

ALIGNING STRATEGY WITH EXECUTION

A continuous pressure for agencies with public delivery obligations is the efficient delivery of strategy. At Kangan Batman Institute of TAFE, the leadership group saw the opportunity to manage the various and disparate plans and initiatives within the Institute more visibly and efficiently.

One of the key risks the Kangan Batman team saw was the potential for being overwhelmed with so many action plans and reports (including the separate risk management plan) attached to the strategic plan.

Rather than manage a plethora of initiatives and projects, with an equally challenging array of measures and outcomes, the Kangan Batman team has chosen to integrate all work in progress into one aligned master program: *less is better*.

This brings to life the constant need to test the alignment of the strategic intent and the execution of that intent. While acknowledging that no one system is the panacea to managing risk, one of the governance priorities across the Kangan Batman business – keeping a focus on one set of strategic goals – now has the attention of the leadership group.

Delivery against the underlying goals is the ultimate outcome, but by managing the risks of "going off at tangents" and keeping focused on what is important through integrated planning, the leadership group has reduced some of the uncertainty attached to delivering on organisational goals.

Kangan Batman TAFE students training in aircraft maintenance.
(Photo courtesy of Kangan Batman TAFE.)

Identifying and assessing risks

3.15 Risk identification is a critical first step in the risk management process, whether undertaken in a formal risk management framework or inherently, as part of overall business processes. It involves the identification of events that could affect achievement of business objectives, whether or not they are under the control of the organisation.

3.16 Sixty-two per cent of the organisations examined identified the main risks to achieving each of their goals, objectives and planned outcomes. A similar percentage had completed a risk assessment to identify and profile their key strategic and operational risk exposures.

3.17 One-quarter of the agencies neither identified their main risks nor assessed their risks to identify and profile their key exposures.

3.18 Most organisations identify risks through techniques such as brainstorming, or by engaging external consultants. Assessment techniques vary from focusing on all risks to the organisation to consideration of specific risk subjects. Dependant on the methods used for identifying risks, there may be a lack of attention to portfolio-wide risks, or strategic risks at a State or cross-agency level.

3.19 While many organisations involve senior managers and internal stakeholders in risk identification - 88 per cent and 74 per cent, respectively - they formally convey explicit risk management information to stakeholders in only 55 per cent of cases. One-quarter of organisations do not communicate their risk management strategy to stakeholders.

3.20 Thirty per cent of organisations communicate only high-level risks to staff or stakeholders who are directly affected by the risk.

Case study

3.21 While many public sector agencies identify and assess their risks, some focus more on completing the documentation rather than on using the opportunity to improve business capability. When State Trustees initiated an organisation-wide risk identification and assessment exercise, it used a highly consultative and educative process, which is outlined below.

IDENTIFYING AND ASSESSING RISK TO BUILD BUSINESS CAPABILITY

State Trustees is a State owned enterprise that provides financial and legal services to Victorians. In December 2001, initiated an organisation-wide risk identification and assessment exercise, facilitated by external consultants.

The first key steps in the process were:

- distributing a “Strategic Risk Assessment” questionnaire to the corporate leadership team, who identified the most significant risks in each business area and rated their likelihood and impact;
- collating the risk information before conducting a workshop with the corporate leadership team to further assess the risks, current controls and areas for improvement; and
- reporting the output to the Board.

The next steps were:

- a meeting with each divisional General Manager to introduce the developing risk management structure and to discuss how it would be applied and owned within the division;
- a workshop with 8-10 divisional representatives to identify and assess the key risks; and
- a second workshop to identify and assess key controls and to identify actions to improve controls, with relating accountabilities and time frames.

A comprehensive consultation process, if well run, identifies risks and improvement initiatives that might not otherwise have been captured and enables greater ownership of actions to be taken.

A focus on educating employees in the application of risk management enables individual employees to do their job more effectively.

EFFECTIVELY IMPLEMENTED RISK MANAGEMENT

Audit criteria

3.22 We expected that an organisation's risk management strategies and processes are operating *effectively* when they are in place, are being implemented as intended, and providing the value and outcomes required.

3.23 An organisation is implementing its risk management strategies effectively if:

- it understands its risks thoroughly;
- it applies all proposed risk management strategies and processes to the intended functions and activities, and at the desired levels of the organisation; and
- its tests, reviews and business improvements confirm that its risk management strategies are providing the projected value and outcomes.

3.24 To meet this criteria, an organisation needs to:

- identify major internal and external risks, at least annually;
- have a risk management co-ordinator, committee or unit;
- have methods to identify and evaluate risk controls;
- apply risk management to most parts of its business and services, including ensuring contractors have appropriate risk management practices;
- report and record incidents and take remedial actions;
- have methods to communicate risk management practices;
- train staff in risk management, at least annually;
- improve business processes as a result of its risk management strategies; and
- meet the criteria for having appropriate risk management strategies in place, as set out in paragraphs 3.4 to 3.6 of this report.

Audit findings

3.25 The audit found that:

- of the 61 per cent of the organisations that had identified their major internal and external risks, most identified them at least annually;
- three-quarters had a risk management co-ordinator, committee or unit;
- half of the organisations had methods to identify and evaluate risk controls;
- one-third had applied risk to the whole of their business and services;
- three-quarters ensured that key contractors and service providers had suitable risk management practices in place;
- 95 per cent kept incident reports and records, and took remedial action;

- three-quarters communicated their risk management strategies to stakeholders, although sometimes not all risks were communicated;
- three-quarters had provided staff with some form of training in risk management in the last year; and
- 69 per cent recognised improvements to their organisation resulting from risk management strategies.

3.26 The audit found that only 28 per cent of the organisations were *effectively* implementing their risk management strategies. While this is low, it comprises two-thirds of those we found to have appropriate risk management strategies.

3.27 Organisations were mainly limited in meeting the audit criteria by:

- failing to apply risk management to the whole of the business; or
- failing to use rigorous quantitative and qualitative methods for risk analysis and controls.

3.28 Additional information on these 2 limitations is described below.

Applying risk to the whole of the business

3.29 Forty-six per cent of the organisations applied risk management in several areas of their business and services. However, only one-third applied risk management across the whole of their business and services. The rest focused on particular, high-risk exposures.

Case study

3.30 The following case study from Western Metropolitan Health Service demonstrates the successful application of risk management in clinical care, noting that other issues may arise when this skill in risk management is not applied across the whole organisation.

APPLYING RISK MANAGEMENT ACROSS THE BUSINESS

Implementing the clinical risk strategy at Western Metropolitan Health Service involves combining both the formal and informal elements of managing risk. Human life and wellbeing are given real priority, and the obligations these priorities create supercede economic priorities. Leadership in this model is critical - driving the program and not leaving it to chance or for passive consideration.

The model adopted is clear and simple, despite the complexity of clinical risk. Structural clarity is critical, in terms of policy setting and governance, delivery and assurance, and dealing with incidents.

Risk management techniques and processes use quantitative methods and encourage reporting of matters, rather than their concealment. Everyone knows who does what and when. Outcomes are more transparent and key performance indicators are tracked to measure and monitor systemic outcomes for overall patient care. A “no blame” culture allows risk-based examination of achievements and exceptions from a systemic perspective.

We expect health care providers to give clinical risk a high priority. However, what happens when – in the same setting for example – contractual risk, potentially of equal economic value, is not given the same attention? The lesson across the government sector is that delivery of successful risk management outcomes takes a number of factors to coincide, and to remove one may jeopardise these outcomes. It is possible that because of inherent familiarity with particular aspects of risk, in this case clinical risk, other forms of risk may not get the same level of attention nor attract the same commitment.

Rigour in risk analysis and controls

3.31 Two of the commonly accepted elements of risk management are given less attention than others by the organisations we examined. These elements are the use of rigourous methods to analyse and measure risk; and the identification and evaluation of risk mitigation strategies.

3.32 Two-thirds of organisations formally analyse risk, yet only 50 per cent of them use defined risk criteria tailored to their particular circumstances. Forty per cent analyse their risks using a mixture of qualitative and quantitative methods.

3.33 Similarly, of the 50 per cent of organisations that have methods to identify and evaluate risk control processes, 40 per cent use formal methods such as effectiveness instruments, costs, and reference to compliance requirements. Twenty-two per cent use cost-benefit analysis. About a quarter of the organisations consulted stakeholders extensively when identifying and evaluating risk management control processes.

Approaches to risk analysis

3.34 Risk analysis in the public sector has a sound foundation and many of the existing risk assessment processes and documentation are aligned with the expectations of AS/NZS 4360:1999 *Risk management*. However, better evaluation techniques and more robust and reliable risk analysis would enhance better decision-making, support issue resolution and improve risk mitigation. Below are 6 key areas that may improve risk analysis techniques.

APPROACHES TO RISK ANALYSIS

More structured risk identification and categorisation

Organisations could improve their risk analysis techniques by structuring the analysis or risk profile along key categorisation lines to ensure an enterprise perspective rather than a narrow or singular focus. This could involve explicitly relating the identified risks to specific objectives or goals within the business plans and/or the use of broad categories, such as:

- strategic risks associated with organisational direction, external environment, and of plans failing;
- commercial risks associated with commercial relationships, e.g. failed contractual relationships;
- operational risks associated with core business activities, e.g. human resources risks;
- technical risks associated with asset management;
- financial and systems risks associated with financial controls and systems; and
- compliance risks associated with meeting regulatory obligations.

Consistent description of the risk

In some cases we found risks defined as a lack of risk mitigation, such as inadequate business continuity planning rather than business interruption. In inappropriately identifying the event or uncertainty, an organisation may not properly consider the underlying causes and, therefore, make inappropriate assumptions about the risk and its analysis.

Consideration of cause and effect

A more disciplined approach to differentiating between the cause and effect of risks can result in more efficiently allocated resources and better targeted analysis.

APPROACHES TO RISK ANALYSIS – *continued*

Beyond single point or worst case risk assessments

Because risk is usually better represented as distributed, rather than a point on a matrix, semi-quantitative or quantitative techniques are better tools to analyse or estimate expected and worst-case scenarios. Organisations also could develop enhanced risk scaling techniques to examine both economic (e.g. Net Present Value) and non-economic (e.g. reputation) outcomes, rather than rely on the purely qualitative high, medium and low outcomes.

Correlation of risks

Within an agency's risk profile, there will often be risks that significantly influence other risks. For example, the risk of insufficient staff skills or low morale could influence the risk of losing key customers. Closer examination of these links when developing risk mitigation measures – such as training and motivating staff – can lead to a better focus on the risks that have the greatest impact on an agency's overall risk profile.

Specific and measurable risk mitigation enables real improvement

In some cases, we found that general risk mitigation strategies and controls were difficult to measure and monitor. Organisations could improve these strategies and controls by:

- setting business outcomes and specific key performance indicators alongside risk management actions;
- setting time frames to review risk management practices and accountabilities; and
- reflecting accountabilities in performance agreements.

Case study

3.35 The following case study outlines how State Trustees approaches evaluating and managing risk in the development of new services and projects.

EVALUATING AND MANAGING PROJECT RISK

Most public sector agencies have multiple projects to manage. Project managers and stakeholders need the capacity to assess how a project can achieve its objectives, how the benefits will exceed the cost, and how they can manage it to secure its objectives.

State Trustees has developed a project evaluation and management framework that considers evaluation of risk and ongoing risk management as key ingredients of success. Through the corporate planning process, a number of possible projects are identified as specific initiatives to assist in achieving their strategic goals and objectives.

Before deciding to proceed with any project, a "concept paper" is developed that identifies and costs key project risks on best/medium/worst-case scenarios. If a project's risk/reward profile is not considered adequate, the corporate leadership team may choose not to proceed with the project.

In considering the best/medium/worst-case budget scenarios, the corporate leadership team is forced to focus on, and understand, which risks have the most potential to affect the budget, or other corporate objectives.

Evaluating a project's risk/reward profile is fundamental to good investment decisions. Ongoing evaluation and active mitigation of project risks help managers achieve project objectives.

INTEGRATING RISK MANAGEMENT INTO GOVERNANCE STRUCTURES AND STRATEGIC MANAGEMENT PROCESSES

Audit criteria

3.36 To *effectively integrate* risk management into governance and management structures, and operating strategically, an organisation needs to:

- apply risk management as a clear part of its strategic and business-planning considerations, and at all critical levels of the organisation;
- explicitly incorporate indicators of risk and risk management into its governance and management structures;
- ensure its Board and/or executive management:
  - are properly informed of the organisation's risk exposures;
  - confirm that suitable risk management strategies are in place and working effectively;
  - are fully and directly involved in setting and reviewing the organisation's risk management strategies; and
- have methods to:
  - set out the objectives and processes to manage its risks and the desired outcomes; and
  - allocate suitable and sufficient resources risk management, taking into account the nature and level of the identified risks and the size of the organisation.

Audit findings

3.37 The audit found that:

- forty-one per cent of organisations approach risk management formally, from a perspective defined by, and linked to, government policy, organisational goals and stakeholder expectations;
- two-thirds include risk management explicitly in corporate governance processes. Just over half incorporate risk management into business and strategic planning processes;
- eighty-two per cent of organisations brief the Board and senior executive group about key risk exposures and 60 per cent have the Board and senior executive group confirm the risk management framework and strategies;
- the CEO, executive or Board lead risk management in three-quarters of the organisations examined, and senior management help identify risk in 90 per cent;

- fifty-nine per cent have a formal risk review process; and
- forty per cent of organisations incorporate risk management into their budgeting processes, and almost all of these have a specific budget item for self-retained losses and risk exposures.

3.38 Organisations were mainly limited in meeting the audit criteria by:

- failing to implement a review process; or
- failing to approach risk management from a perspective defined by, and linked to, government policy, organisational goals and stakeholder expectations.

3.39 Success in meeting these criteria was more likely where:

- direct leadership and strategic management were provided by the Board, CEO and audit committees; and
- the organisation had an appreciation of State-sector risks.

3.40 Additional information on these limitations, and success factors, is described below.

Risk review

3.41 Eighty-six per cent of the organisations with a risk management strategy had a process to review it, usually annually. Similar numbers had a process to assess and review their key strategic and operational risk exposures.

3.42 However, only one-third of organisations had reviewed their strategy in the last 12 months, and less than one fifth reviewed their risk profile in the same period. One reason for this is that most of these organisations only established their risk management frameworks in the last 18 months.

3.43 Most organisations examined had prepared contingency plans, and 95 per cent advised that they formally investigated reported incidents and implemented remedial actions. Just over 33 per cent had tested their contingency or disaster recovery plans.

Approaches to managing risk

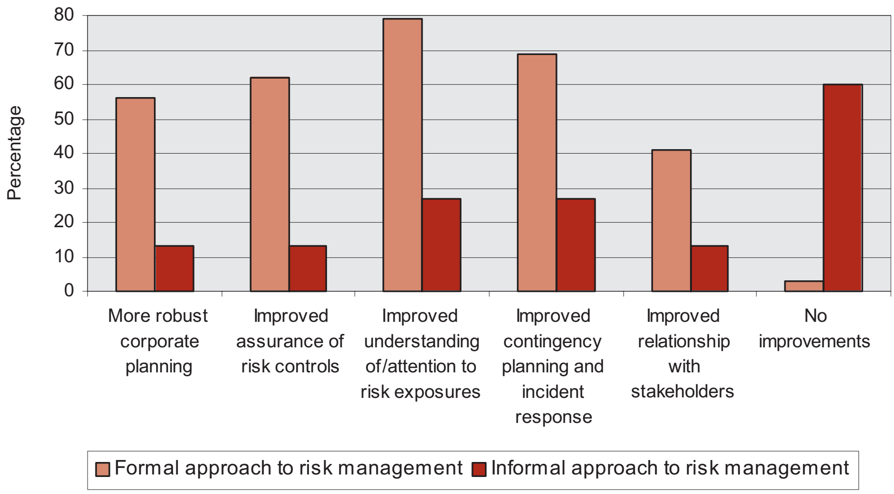
3.44 At the time of the audit, 70 per cent of organisations used a formal approach to managing risk, and the remainder had an informal approach, largely as an inherent part of their overall business processes. However, as stated above, only 41 per cent of all organisations had a formal approach that was defined and linked to government policy, organisational goals and to stakeholders.

3.45 We undertook further analysis to establish the degree to which organisations were actively using the commonly accepted elements of risk management. A key source of information for this analysis was AS/NZS 4360:1999 *Risk management,* although other approaches to risk management, such as project management standards, also were considered. We found that 50 per cent of all organisations actively used all of the commonly accepted elements of risk management - identification, analysis, evaluation, treatment, review and communication.

3.46 In contrast, of the 30 per cent of organisations with an informal approach to risk management, one-third had identified their main risks, one-third had put in place some of the commonly accepted elements of risk management, and one-third (or 10 per cent of all organisations examined) failed to systematically manage risk.

3.47 Overwhelmingly, organisations with a formal approach to managing risk recognised other organisation wide benefits. Chart 3A illustrates that formal risk management generated significant additional benefits, and that 60 per cent of organisations with an informal approach to risk management perceived no improvements.

CHART 3A
PERCEIVED CORPORATE BENEFITS TO RISK MANAGEMENT, BY PERCENTAGE OF ORGANISATIONS



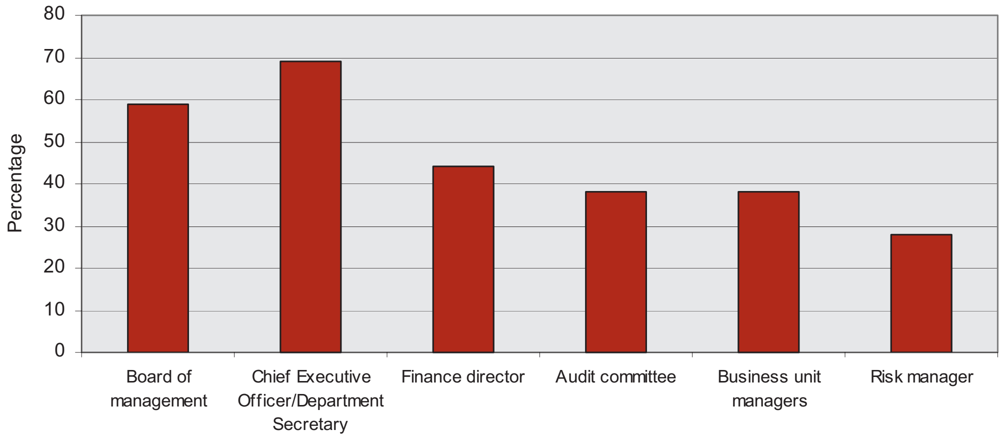
Source: Victorian Auditor-General's Office, based on data provided by public sector organisations.

Risk management leadership

3.48 Successful risk management depends on strong leadership. Active engagement in risk management by the Board or executive management usually means that risk management is part of the corporate and strategic direction of the organisation, and successfully integrated into the governance and management structures of organisations. Similar leadership by business unit managers also can be an indicator of a risk management culture.

3.49 The audit identified several organisational roles that directly lead and strategically manage risk. Chart 3B shows the percentage of organisations where particular roles actively lead risk management. In many cases, more than one role provided this leadership.

CHART 3B
ROLES THAT DIRECTLY LEAD AND MANAGE STRATEGIC RISK MANAGEMENT, BY PERCENTAGE OF ORGANISATIONS



Source: Victorian Auditor-General's Office, based on data from Victorian public sector organisations.

3.50 Three-quarters of the organisations had either the Board or Chief Executive Officer leading and strategically managing risk, with both roles involved in just over half of the organisations. Risk information was reported to Boards or executive groups in 69 per cent of organisations, and Boards and Chief Executive Officers confirmed key risks and risk strategies in 60 per cent of organisations.

Role of the audit committee

3.51 Thirty-three per cent of organisations where the Board and Chief Executive Officer directly lead the strategic management of risk, had appropriate risk management strategies in place. However, where the audit committee joined the Board and Chief Executive Officer in leadership, 81 per cent met this audit objective. An organisation's success in having appropriate risk management strategies in place increased by nearly 50 per cent where the audit committee was involved in a direct leadership role.

3.52 This finding confirms the guidance provided by the 1999 Turnbull Report[2] and other subsequent publications on the role of audit committees.

[2] The Turnbull Report: *Internal Control: Guidance for Directors on the Combined Code,* Institute of Chartered Accountants in England and Wales, London, 1999.

Impact on the State-sector

3.53 An organisation needs to understand the risks that impact on the State of Victoria if it is to effectively integrate risk management into its governance and/or management structures. This impact - on the State or on other public sector organisations – can take on more significance as joined-up-government services and policy outcomes are implemented, and the identification and management of State-sector risks[3] between co-operating agencies requires greater attention.

3.54 While this audit did not test the quality of an organisation's State-sector risk identification and assessment, we asked organisations if their main risks had the potential to impact on the business of other agencies and/or on the whole of Victoria.

3.55 We then classified those organisations according to their own perception of their State-sector risk impact:

- **high State-sector risk impact**: the potential to impact on the whole of Victoria and possibly on the business of other public sector organisations;
- **significant State-sector risk impact**: the potential to impact on the business of other public sector organisations in Victoria only; or
- **medium to low State-sector risk impact**: no discernable impact on either.

3.56 Table 3C shows how organisations perceived their State-sector risk potential.

TABLE 3C
PERCEIVED STATE-SECTOR RISK POTENTIAL BY ORGANISATIONS
(per cent)

Perceptions of State-sector risk potential	*Organisations*
High State-sector risk	31
Significant State-sector risk	39
Medium to low State-sector risk	30

Source: Victorian Auditor-General's Office, based on data from Victorian public sector organisations.

3.57 Generally, the risk management performance was more robust in organisations that indicated they had a high State-sector risk impact. More than half of these organisations had appropriate risk management strategies in place.

3.58 On the other hand, less than one quarter of those organisations that assessed themselves as having a significant State-sector risk potential, and even fewer of those with a perceived medium to low State-sector risk potential, had appropriate strategies in place.

3.59 This indicates that there may be an area of exposure to State-sector risks that is being covered by organisations with less explicit risk management capacity.

[3] State-sector risk is defined in paragraph 4.2 of this report.

AUDIT CONCLUSION

3.60 Our examination of 61 randomly selected Victorian public sector organisations allow us to conclude - with a 90 per cent level of accuracy - that there is a high level of risk management activity taking place in the Victorian public sector. In July 2002, 93 per cent of all Victorian public sector organisations were addressing risk management, in some way, as part of their organisational activity, with about three-quarters actively engaged in maintaining or establishing effective risk management strategies.

3.61 Most of this activity has taken place since the beginning of 2000, and is formal in nature, for the most part addressing the elements set out in AS/NZS 4360:1999 *Risk management*. This basic approach should enable a better understanding of risk within government entities than they could achieve from an inherent or intuitive approach. Furthermore, organisations that manage risk formally are more likely to manage their risk strategies effectively, in a more co-ordinated and consistent manner, and to recognise a range of corporate benefits broader than improved risk management.

3.62 However, risk management is not yet an established or mature business discipline across the government sector. Only 50 per cent of public sector agencies are working against all of the commonly accepted elements for risk management, and this effort is yet to be applied across the whole of their business and services.

3.63 Measured against the audit criteria, less than 40 per cent of organisations had appropriate risk management strategies and only 28 per cent had strategies that were effectively implemented, strategically managed, and integrated with governance and management structures. While this number is low, it is more than two-thirds of those organisations with appropriate risk management strategies.

3.64 Consequently, public sector stakeholders should not place too great a reliance on the risk management processes adopted so far. Over one-third of all organisations do not explicitly identify and assess their key risks and there is still uncertainty around the rigour and reliability of specific outputs and outcomes achieved from adopting formal risk management processes and structures. As well, organisations do not always report explicit risk information to their key internal or external stakeholders. This may be because some material is sensitive, but the result is that there may not be a complete and free flow of risk information within or across government entities.

3.65 Overall, organisations do not rigorously assess risks and evaluate risk controls. A majority of organisations (78 per cent) do not explicitly analyse the cost-benefit of risk management strategies and controls. This has the potential to lead to inefficiencies in prioritising or allocating resources to manage risk at both organisational and State-sector levels. More thorough assessment and measurement of all risks, and risk treatments, is an area that may require guidance, including reference to best practice in other jurisdictions[4].

[4] See paragraphs 2.7 to 2.11 of this report.

3.66 Organisations generally review their risk strategies and risk assessments as a separate annual exercise, or through periodic Board presentations. Currently, less than 30 per cent of agencies have had frameworks in place long enough to comment on these reviews. To ensure that risk management is not an exercise that is undertaken on an annual or infrequent basis, but truly embedded into usual business processes, organisations need to ensure that review processes also monitor risk leadership, appetite and culture.

3.67 As part of these processes, public sector organisations would benefit from:

- having access to demonstrated good practices in risk management in other public sector organisations;
- having up-to-date information on key success factors, or benchmarks, for public sector risk management; and
- systematic monitoring of risk management at the Board, CEO and senior management levels.

3.68 This is not to say that the level of leadership involvement in risk management is wanting in the Victorian public sector. Quite the opposite is the case, with direct leadership and involvement by the Board/CEO and executive management evident in over three-quarters of organisations. This high level of involvement should result in proper consideration by government agencies of what risks and opportunities should and shouldn't be accepted. It should also ensure that the appropriate level of executive seniority is involved to enable timely decisions on how risks (and opportunities) should be prioritised, managed and aligned with business goals, and that action to manage risks better is taken by those with the most appropriate skills and resources.

3.69 One significant success factor identified in the audit is having the audit committee oversee risk management. This involvement inevitably means better governance and oversight of risk management at Board or executive management level as well. Audit committees actively take a risk management leadership role in about 40 per cent of organisations, and this level needs to increase.

3.70 Two-thirds of organisations currently link risk management to business planning or objective setting. However, only 41 per cent strengthen their organisation by extending these links to government policy and stakeholder expectations. Organisations that are yet to develop, or to complete, their risk management strategies would benefit from aligning their key risks with organisational goals, government policy and stakeholder interests. This should result in policy and strategic obligations being reinforced and tested because actions to manage and monitor risk are more likely to be aligned with business strategies and measures. Also, consideration of risks and an organisation's capability to manage risks, can help it decide if its objectives are realistic and appropriate.

3.71 The high level of contingency planning and investigation of reported incidents, evidenced through the audit, is reassuring. Recovery from key events/crisis is important in minimising damage to the State's services, finances and reputation. However, the low level of testing of contingency or disaster recovery plans (one-third of all organisations) is of concern. It also would appear from the results that contingency and disaster recovery planning is taking place separately from the development or implementation of other business risk management strategies. Similarly, assurance by organisations that key contractors and service providers have suitable risk management practices also appears to be conducted separately from any structured approach to risk management.

3.72 The capacity of Victorian public sector organisations to identify their key State-sector risks exposures cannot be concluded upon. Based on each entity's perceptions of their key State-sector risks, there is the possibility that organisations do not have a clear understanding of their risk exposures that may impact on the State or, particularly, on other agencies. There also may be areas of exposure to State-sector risks that are being covered by organisations with less explicit risk management capacity. Additionally, an organisation's specific market risk may not be significant in its own right but, taken collectively with the same risk in other agencies, a large, misunderstood and under-managed risk exposure may exist.

Case study

TURNING RISK INTO OPPORTUNITY

It is frequently the business of government to manage opportunities that benefit the public and increase the common good. Western Metropolitan Health Services, provider of a range of health services to Melbourne's western region, has explored ways of managing opportunity using a risk management approach.

The Service is addressing some perennial risk exposures in unusual and innovative ways. By encouraging staff to think with less constraint, and tapping into their intellectual capital, it solved 2 problems of risk exposure:

- The Service developed a unique funding structure to solve a long-term capital constraint on critical diagnostic equipment. This innovation has had spin-off benefits as the best equipment has been sourced and the Service now attracts better specialists. This increases the Service's capacity to provide greater revenue streams and superior patient outcomes; and
- The Service has had chronic limits on ambulance by-pass, a critical measure of hospital performance. By using a different risk technique - a decision-tree method -the working group applied a *zero* tolerance scenario to overcome this exposure. It modified the patient assessment process and created a rapid assessment unit that has minimised the risk of ambulance by-pass.

Innovation involves taking certain forms of risk. If an organisation does not understand the risks of innovating, its risk profile will alter considerably. Timely and accurate risk analysis may lead to innovative solutions to support the business process.

Recommendations

3.73 We recommend that:

- public sector organisations adopt formal risk management approaches that are appropriate to the organisation's level of risk;
- the Victorian Government provide public sector organisations with clear risk management guidelines, processes and procedures, including requirements that:
  - risk management key performance indicators be identified and included in the performance responsibilities of members of governing bodies and executive management;
  - audit committees independently assess the appropriateness and effectiveness of risk identification and management within the organisation for the Board or executive management;
  - certification to the appropriateness or effectiveness of their risk management be incorporated with other existing attestations to the Government, such as tax-related documents; and
  - report on their risk management strategies in their Annual Reports, identifying and prioritising key risks and describing how they are assessed and managed;
- public sector organisations rigorously evaluate risks and risk treatments, linking risk criteria to government policy, organisational objectives and stakeholder expectations and, where possible, use cost-benefit analysis; and
- public sector organisations establish appropriate risk management strategies that identify and treat State-sector risks.

State Trustees staff member providing assistance.
(Photo courtesy of State Trustees.)

Part 4

State-sector risk management framework

INTRODUCTION

4.1 The audit examined risk management structures and processes throughout the public sector in order to assess whether they had been established and were operating in a manner which would lead to the effective identification, management and reporting of key risks that should properly have been drawn to the attention of Government.

4.2 We distinguished and defined 3 levels of State-sector risk, along with management responses required for each level:

- **Agency level risks** can become State-sector risks because of their significance, the potential impact of risk treatment strategies or poor management within particular agencies. Effective departmental or agency risk management is required, and may need central agency input for financial risks;
- **Inter-agency risks** are those where departments and agencies need to co-operate in managing risks associated with shared policy objectives. Different departments and agencies need to understand each other's risk management approach, and communicate effectively to jointly manage the potential aggregate risks or missed opportunities; and
- **Statewide risks** require a co-ordinated response. Generally, a central agency needs to understand existing and emerging Statewide risks in order to analyse the potential impacts and to develop and implement a co-ordinated response.

Audit criteria

4.3 Risk management structures and processes that were operating in a manner which would lead to the effective identification, management and reporting of key risks that should properly have been drawn to the attention of Government, would include:

- a strategy to associate and manage State-sector risks, based on the Government's objectives and strategies, including:
  - ministerial/senior executive commitment and involvement;
  - guiding policies and procedures; and
  - minimum guidelines and objectives;
- a structure to support and embed the risk strategy and accountabilities by:
  - defining structure and responsibilities;
  - managing communication and reporting;
  - defining State-sector risk and providing a common language; and
  - ensuring skilled staff, trained in risk management;
- measurement criteria and a process to continuously measure and improve performance, to enable:
  - risk monitoring;
  - incident monitoring and reporting;

    - a framework for review and assurance; and
    - a record of risks; and
- a process for:
    - identifying, measuring and analysing State-sector risks;
    - considering appropriate management, treatment and control frameworks; and
    - developing risk management and mitigation plans.

STATE-SECTOR RISK MANAGEMENT STRUCTURE

Legislative framework

4.4 The legislation under which the Victorian Government manages risk includes the *Financial Management Act* 1994 and the *Victorian Managed Insurance Authority Act* 1996.

Financial Management Act

4.5 Under the Financial Management Act, the Government must manage the State's financial risks prudently, with regard to economic circumstances[1]. The Act requires that all departments and public bodies maintain a register of their assets and develop, implement and keep under review a risk management strategy[2].

4.6 In excess of 300 departments, authorities, and public bodies and associated entities operate under the Act.

Victorian Managed Insurance Authority Act

4.7 Under the Victorian Managed Insurance Authority Act, the Victorian Managed Insurance Authority (VMIA) insures[3] more than 170 State-sector departments and participating bodies[4] against their identified insurable risks. While the VMIA focuses on the State's insurable risks, it also advises and trains agencies in managing risk. Its services include client liaison, seminars, and print and internet publications.

4.8 The VMIA biannually compiles and retains a "catastrophic risks register" that records potential insurable exposures and loss scenarios for the Victorian State-sector. The register primarily analyses insurance cover, and the Department of Treasury and Finance receives an extract of major exposures as part of the Authority's *Annual Risk Management Report*. The VMIA Chairman separately notifies the Minister for Finance of material uninsured exposures.

---

[1] (s. 23D (1)(a)).

[2] (s. 44B (1)(a) and (b)).

[3] The VMIA does not cover workers compensation or transport accident insurance.

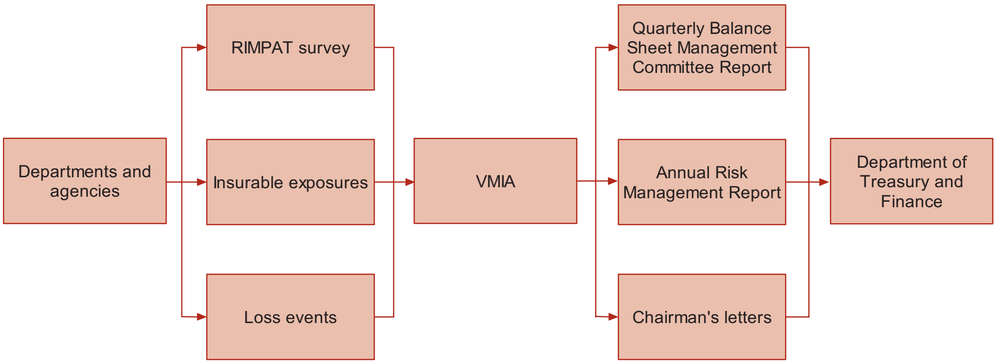
[4] Agencies under the control of the State, or which receive more than 50 per cent of their funding from the State.

4.9 Through the RIMPAT[5], the VMIA provides agencies with a means of self-assessing their risk management practices against the AS/NZS 4360:1999 *Risk management*. RIMPAT monitors the risk management practices of its client base and is a source of significant information on public sector risk management processes within Victoria.

4.10 The VMIA also reports quarterly to the Department of Treasury and Finance and the Minister for Finance, the report can include information on emerging risk issues and the uninsured exposures to the State.

4.11 Chart 4A illustrates the primary information flows and reporting by the VMIA to central agencies.

CHART 4A
VICTORIAN MANAGED INSURANCE AUTHORITY
RISK INFORMATION AND REPORTING STRUCTURE



Source: Information provided by the VMIA.

Central agencies

4.12 Both the Department of Premier and Cabinet and the Department of Treasury and Finance play crucial roles in Victoria's State-sector risk management. The Department of Premier and Cabinet captures, analyses and communicates information on strategic, operational and policy implementation matters from all departments. The Department of Treasury and Finance captures, analyses and communicates mainly financial information. Each Department communicates risk information to the Executive Government, whether it is broad-based, policy or budgetary risks.

[5] Risk Management Performance Assessment Tool.

Department of Treasury and Finance

4.13 The Department of Treasury and Finance administers the Financial Management Act, focusing on the State's finances and risks to the budget. The Department focuses on State-sector risk through:

- the Budget Strategy Committee, which monitors large cross-government financial risks; and
- the Balance Sheet Management Committee, which monitors financial statements and other financial data in the budget sector and public financial institutions sector.

4.14 The Budget Strategy Committee collects and analyses each agency's risk information, including the category, probability and likely financial impact of these risks. The Committee analyses:

- the probability, and the possible time, that emerging risks will occur;
- risk categories, such as unfunded policy decisions, forthcoming policy bids, policy reviews, wage cost pressures and other cost revenue pressures;
- accounting classifications that distinguish between operating and balance sheet impacts;
- the financial impact on the operating statement for the current budget year and each forward estimate period; and
- the impact on budget sector cash flow.

4.15 The Balance Sheet Management Committee critically reviews the monthly financial statements of agencies in the General Government sector, and the quarterly prudential reports of public financial corporations. The Committee focuses primarily on the General Government sector's inherent financial exposures. It also considers key operational risks if these are raised.

4.16 These Committees rely heavily on either the agencies themselves or the relevant Department of Treasury and Finance representatives to identify and communicate risks that fall outside standard financial reporting guidelines.

Department of Premier and Cabinet

4.17 The Department of Premier and Cabinet also supports the Premier and the Cabinet in administering the State and in reaching the Government's policy and budgetary outcomes. The Department oversees all Cabinet submissions, and has a comprehensive relationship with each department that monitors each portfolio's policy progress and seeks to understand what issues and risks may hinder achievement of policy objectives.

4.18 In this role, the Department also monitors the management of State-sector risk. This function is not formally documented. Decisions about what risks to escalate and the required level of oversight is largely a question of judgement. This judgement is made by senior executives within the Department of Premier and Cabinet and individual agencies. In general, the focus is on higher financial or policy risk areas.

4.19 Agency staff can decide to bring issues to the attention of the Department outside the relationship model, but no formal framework currently defines what issues and risks need to be escalated. Therefore, agencies are reliant on their own judgement in deciding whether certain issues warrant escalation.

4.20 The Department is currently undertaking work related to corporate governance in Victorian public sector agencies that is likely to include risk management as a key component of any governance framework.

Monitoring of State-sector risk information

4.21 While the Financial Management Act requires that Departments and public bodies develop, implement and review a risk management strategy, and the VMIA monitors risk management practices and advises agencies, there are no formal guidelines which direct all agencies to have a risk management framework, and no formal guidelines or governance principles which define the framework to manage State-sector risk.

Agency level information on State-sector risks

4.22 The structure and responsibility for capturing, analysing and communicating State-sector risk information lies with departments and agencies, as part of their overall risk management strategy. The departments and agencies we examined in this part of the audit had identified State-sector risks, but there was no whole-of-portfolio overview of risks. Consequently, there is no assurance that all State-sector risks in a portfolio have been identified, nor is there a common understanding within a portfolio of State-sector risk.

4.23 A department's risk management strategy may not include all agencies that fall within a portfolio. Consequently, the department relies heavily on these agencies to have an effective governance model that ensures their risk management frameworks are in place, with risks identified and strategically managed.

4.24 The lack of a more holistic State-sector view of risk within departments raises the question of whether certain State-sector risks may be undetected. The State-sector risks most likely to be overlooked appear to be "inter-agency" risks, as their potential impact on other agencies may not be recognised.

Co-ordination of State-sector risk information

4.25 The State-sector information gathered by central agency representatives in their day-to-day liaison with agencies is not used to its capacity. They do not share it outside their own functional divisions or use it to inform departments and portfolio agencies of any State-sector risks. This would enable more comprehensive, vertically integrated linkages from each agency within a portfolio, through to departments, to central agencies and the Government. Consolidating risk information also would allow central agencies to consider State-sector risk treatment plans.

4.26 Where organisations do advise central agencies and the Government about State-sector risk, they generally use existing reporting mechanisms such as budget setting processes, periodic reports, Cabinet briefing papers, and the comprehensive relationship structures that allow central agencies to monitor how each department achieves the Government's objectives.

4.27 Escalation of State-sector risks depends on the judgement of individual agencies and staff within central agencies. Consequently, State-sector risks may go undetected because of a lack of clarity around:

- the definition of State-sector risk;
- responsibility for the escalation of risks; and
- mechanisms for escalation.

Communication to the Government

4.28 A key Cabinet Committee for State-sector risk is the Expenditure Review Committee. It examines emerging risks to the Government's budget or policy outcomes. As part of the budget setting and monitoring process, departments report, quarterly, on:

- financial performance, output delivery and asset investment project performance; and
- emerging issues, with a specific focus on potential budget impact.

4.29 In addition, departments and Ministers may raise other issues for the Expenditure Review Committee to consider, if there is a budgetary impact. The Expenditure Review Committee also can access risk information when it assesses policy submissions from other Cabinet committees.

4.30 The Major Incidents Committee of Cabinet co-ordinates the State-sector response to extreme events. Information to the Committee is co-ordinated through its Central Government Response Committee, made up of executive representatives of all departments, of Victoria Police and of the Emergency Services Commissioner.

State-sector risk management processes

Measuring, monitoring and analysis

4.31 Most agencies have processes to identify, measure and analyse their risks. However, the audit found that there is no explicit mechanism to consider and compare how any State-sector risks may impact on other agencies or whether any occur consistently across agencies. No central agency has an explicit guide that assists agencies to assess or instigate appropriate risk mitigation strategies and control frameworks for these State-sector risks.

4.32 Key risks may be overlooked or under-managed. While the Department of Treasury and Finance uses comprehensive budget and financial information to analyse risks to the State's budget outcomes, it does not link this to risk registers within each department, nor is the information shared outside the Department of Treasury and Finance's Budget Strategy Committee.

4.33 If the Department of Treasury and Finance considered its existing information against source information in individual agencies, fuller information could then be gathered. This could occur through relationship officers in the Department of Treasury and Finance and the Department of Premier and Cabinet, and also through current performance reporting processes, such as quarterly reporting to the Government.

4.34 There is no existing structure to share best practice in risk management across the State-sector. While the VMIA maintains a "catastrophic risks register" that records potential exposures and loss scenarios for the Victorian State-sector, the register is used primarily to analyse whether current insurance policies would cover potential loss events. The VMIA includes an extract about these major exposures, together with the RIMPAT profile, in its *Annual Risk Management Report* to the Minister for Finance.

4.35 The VMIA's RIMPAT survey is the only mechanism to assess risk management practices across most State-sector agencies. The VMIA uses it to assess its clients' compliance obligations under the VMIA Act, and to assist in directing resources to improve individual client risk management performance. It also aggregates this information in its *Annual Risk Management Report*. However, whole-of-State information is not available to provide information on better practice to all State-sector agencies. Nor is the RIMPAT information used to understand, advise on and influence the quality of whole-of-State-sector risk management.

Case study

4.36 The case study below is one example of how such analysis, understanding, advice and influence could assist the management of State-sector risk.

VICTORIAN GOVERNMENT AGENCIES DOING BUSINESS IN FOREIGN COUNTRIES

An increasing number of agencies now do business in foreign countries. This creates a challenging risk profile to manage, both at a portfolio or whole-of-government level and at the service delivery level where an agency is pursuing growth in various marketplaces.

Attracting students from China and placing teaching staff in Indonesia are 2 of the overseas ventures that Kangan Batman Institute of TAFE is pursuing or securing. While these activities create opportunity and diversify revenue streams for Kangan Batman, they also create new forms of risk. The Institute has applied due diligence when developing business cases for such ventures, such as consulting with the Department of Foreign Affairs and Trade. However, it may not have fully considered the full risk-growth-returns profile, for both the State and for TAFE, of doing business in foreign jurisdictions with foreign counterparties.

Kangan Batman and the State may need to assess and manage the risk exposures such as:

- the appropriate risk premium for the foreign territory, and the returns that would justify the risk;
- the reliability, credit worthiness and commercial standing of foreign counterparties;
- employment practices risks, including the occupational health exposures of working in foreign countries with standards that may be below our own;
- foreign exchange exposures, both transaction and translation risks;
- visa and customs risks for employment or contracts in foreign countries;
- repatriation and emergency departure;
- delivery risk and contract frustration/risk allocation matters in foreign jurisdictions, including choice of law issues in settling disputes;
- kidnap and ransom exposures and insurable interests for foreign travellers/residents; and
- remote supervision of staff and students.

Both the State and individual entities need to take into account the level of sovereign or foreign political risk they each are assuming - if only to develop a framework for government entities to adopt in determining the level of risk, and reward, they take on in growing or maintaining revenue streams.

CONCLUSION

4.37 State-sector risk management and accountabilities rely on existing structures, particularly mechanisms to report on finance and insurable risk, and the existing relationships between the central agencies and other public sector agencies.

4.38 While legislation exists to require most agencies to have a risk strategy, it is not supported by explicit definitions of State-sector risk and guidelines to ensure these risks are identified and managed across the State-sector through a consistent, quality risk management framework.

4.39 There is a strong relationship framework in place between central agencies and other public sector agencies for monitoring State-sector risks, however, a lack of clarity around the responsibility for the escalation of risks and the lack of a full understanding of State-sector risks within each portfolio could lead to certain risk types going undetected at a State-sector level.

4.40 Individual departments do not currently provide a whole-of-portfolio view of risks and no one agency or individual within an agency fully understands State-sector risk mechanisms and how they actually operate. Consequently, certain risk types could go undetected at a State-sector level and insufficient risk mitigation strategies could be implemented from a whole-of-State perspective.

4.41 Outside the processes for reporting risks to the Executive Government, there is no clear mechanism for escalation of all State-sector risks. Nor is there a single, explicit mechanism to collect and analyse significant risks to the State, or to assess whether certain risks arise consistently across agencies. While there are more structured processes to assess and manage budgetary risks, organisations assess and manage broader policy and operational risk implicitly, through general reporting and other communications.

4.42 A consistent and comprehensive approach to identifying, measuring and analysing risk would improve State-sector risk management by identifying State-sector risks that need particular attention. It also would enable comparison of better practice management of these potentially shared risks across the broader public sector. Because agencies rely significantly on governance models to ensure a "full portfolio" focus on risk management, a consistent approach to risk management could be driven through appropriately structured governance frameworks that incorporate the critical principles of effective risk management.

4.43 A central agency, with the appropriate jurisdiction and authority, should initiate these improvements and also guide agencies on the key elements expected in risk management frameworks and practices. Such guidelines should cover:

- the importance of effective risk management;
- the context and structure of the existing State-sector risk management framework and appropriate escalation mechanisms;
- an outline of roles and responsibilities for risk management, emphasising the accountability of management within individual agencies; and
- the core elements in an agency risk management framework.

4.44 The VMIA's analysis of the RIMPAT survey is a valuable source of information about risk management in the Victorian public sector agencies within its mandate. However, analysis of the RIMPAT data is currently limited when applied to the State-sector.

4.45 If central agencies shared information from the VMIA's "catastrophic risks register", and combined it with Department of Treasury and Finance risk analysis approaches, they would have a valuable perspective on the risks facing the State. Consolidating and sharing this information would improve analysis of the impact of risks on achieving policy objectives, and give central agencies a broader view of the risks to the State.

4.46 Sharing best practices in risk management, from within the State-sector and other jurisdictions, would improve less developed practices. The VMIA already shares risk management information within its client base, but there is no formal sharing process on a whole-of-State basis. This limits agencies from continuously improving their risk management.

Recommendations

4.47 We recommend that:

- existing processes between Department of Treasury and Finance, Department of Premier and Cabinet, VMIA and government departments, that help identify, access and manage State-sector risk, be standardised, strengthened and co-ordinated through:
  - the issue of guidelines, by a central agency, for the identification, assessment and management of State-sector risks;
  - expanding focus, sharing information and improving co-ordination of current central agency risk collection and analysis to include consideration of specific State-sector risk tolerance issues;
  - the explicit inclusion of risks to the achievement of objectives or outcomes in budget and cabinet submissions, together with the key risk management actions;
  - the information from the VMIA catastrophic risks register, and the results of its RIMPAT survey process, being made available more broadly;
  - development and sharing of information on best practice in risk management. For example, this could be achieved through establishing an interdepartmental liaison group, which has a successful precedent in the UK. The VMIA RIMPAT survey results could be one input to such a group; and
- agencies report on their risk management framework in their Annual Report, identifying and prioritising key risks and setting out the means by which these are assessed and being managed.

Part 5

Risk management in selected agencies: Case studies

INTRODUCTION

5.1 As part of the audit, selected organisations – State Trustees, Kangan Batman Institute of TAFE, Western Metropolitan Health Service and several agencies with responsibility for the quality of Victoria's drinking water – were examined and used to gain further insight into current risk management practices applied across the Victorian public sector.

5.2 The audit reviewed both the achievements and areas for possible improvement in:

- risk management strategy and policy;
- risk management structures;
- risk management processes and techniques; and
- risk management outputs/outcomes, which are evidence of integration.

5.3 Findings in the case studies are indicative of circumstances at the time of the audit, rather than conclusive. No conclusions or verification have been made of the effectiveness of strategies and controls in managing specific risks identified by agencies during this process.

5.4 These case studies are provided to illustrate how quite different public sector organisations manage risk.

STATE TRUSTEES

Context

5.5 State Trustees provides financial and legal services to the Victorian community. Its key areas of business are Estate Planning Solutions and Personal Financial Solutions. Estate Planning Solutions involves estate management, developing and administering wills, and enduring powers of attorney. Personal Financial Solutions focuses on assisting clients with disabilities by managing financial and legal affairs on their behalf.

5.6 Other services that support these functions include: taxation and financial planning, financial products, unit registry and asset solutions, genealogy, and charitable and commercial trusts. Also included is a range of enterprise services, including marketing, distribution, finance and risk management, people solutions and business technology.

5.7 State Trustees' vision is "to be known for outstanding service to its customers".

Risk management policy and strategy

5.8 The strategic intent of State Trustees' risk management approach was identified as:

- helping achieve its business objectives;
- fostering a commercially risk-focused culture; and
- enabling compliance with relevant obligations.

5.9 State Trustees has focused its explicit risk management at the strategic, operational, financial, compliance and governance levels. The corporate planning process also incorporates risk management. While the implementation of risk management at the operational, compliance and governance levels is still under development, this is not unusual for an organisation in the early stages of an explicit strategy.

Risk management structures

5.10 State Trustees has set up effective risk management structures through:

- clearly defining the Board, the Board Committee and management roles and responsibilities;
- internally and externally supporting risk management processes; and
- developing risk-based links to the internal audit work.

5.11 The main area to be further developed is linking risk management to organisational and individual performance obligations and measures.

Risk management process and techniques

5.12 The explicit risk management processes undertaken, implemented and documented by State Trustees demonstrate elements of good practice, particularly the internal consultation process which encourages greater understanding and ownership of risk management at senior executive and divisional levels.

5.13 The key areas under development include:

- improving explicit risk analysis to consider underlying causes, the range of possible outcomes and how this may effect risk mitigation;
- refining mitigation actions to be more specific and measurable, with accompanying milestones; and
- implementing reporting processes in line with the Risk Management Policy.

Integration of risk management with business

5.14 State Trustees has made substantial progress in integrating risk management with management planning and monitoring. It plans to take this approach further into each business unit which, once implemented, will achieve greater integration.

TABLE 5A
STATE TRUSTEES' DETAILED FINDINGS

POLICY AND STRATEGY MATTERS

Outline of key risk management elements and findings	*Areas for possible improvement*
Strategic planning and budgeting • A corporate plan has been developed, documented and widely communicated within the organisation. The corporate planning process has explicitly and implicitly considered underlying risks, e.g. key business risks identified include those relating to the complexity of the business such as compliance obligations and fee structures. • The budgeting process has allowed expenditure for additional risk mitigation in certain risk areas, such as physical security controls and business continuity planning. • Strategic evaluation of services has included assessment of the risks associated with each service. ***Corporate policy*** • A risk management policy, approved by the Board, outlines the purpose and principles of the risk management approach and the respective roles and responsibilities of the Board, Board Committees and management. • A corporate policy has been developed and communicated to ensure compliance with obligations. • The Managing Director focuses on particular strategic and organisation-wide risks and meets regularly with the Chairman of the Board to discuss these risks and other important strategic matters. ***Risk appetite and focus*** • Neither the risk management policy nor documented risk management processes explicitly deal with issues of risk appetite and tolerance. However, these issues have been considered in the corporate planning process and service analysis, e.g. in prioritising resource allocation to State Trustees' services. Many of State Trustees' customers are highly dependent on the organisation to make "reasonable" decisions and provide value-adding services. In the course of the audit it was clear that management understood the risks associated with this role. • The explicit organisation-wide risk assessment focuses on areas of potential loss, such as business interruption or security threats. The corporate planning and service review processes cover "opportunity"-related risks. • There is a particular focus on reducing the risk of inappropriate customer service and on improving customer service. For example, a key challenge to be managed is striking the right balance between consistent application of financial planning and advisory policies to disabled customers and appropriately communicating the reasoning behind these policies.	***Risk appetite and focus*** • Implement the risk management policy at operational levels. • Incorporate greater consideration of the risk of lost opportunity within the risk management process (as referred to in the risk management policy). • Further consider and reduce risks that could lead to adverse publicity.

TABLE 5A
STATE TRUSTEES' DETAILED FINDINGS – *continued*

STRUCTURAL MATTERS

Outline of key risk management elements and findings	*Areas for possible improvement*
Organisation structure – roles and responsibilities • The Board is ultimately responsible for reviewing the effectiveness of risk management. It has set up a Compliance Committee and Audit Committee, with formalised Charters, to review the adequacy of internal controls to effectively manage risk and achieve compliance. • The roles of management have been clearly defined and distinguished from the Board and Board Committees. The Corporate Leadership Team, consisting of General Managers from each business unit, have been heavily involved in establishing the risk management processes. • The General Managers and middle management staff have a risk management support role to assist the Corporate Leadership Team implement the risk management policy. For example, the General Manager, Finance and Risk Management and the Manager, Compliance and Risk Management have been heavily involved in facilitating risk assessment workshops and in reporting outcomes. ***Management education*** • Workshops and written communication have been the main form of education at State Trustees, with an underlying focus on building management capability in risk management. State Trustees educates managers through workshops and documentation to enhance their risk management capability. ***Performance measurement, human resources and culture*** • The risk management policy requires that responsibilities for the management of specific risks are incorporated into individual managers' performance plans. Performance plans currently include "risk assessment" as an expected competency but specific risk responsibilities are not currently included. However, they may be addressed implicitly within position descriptions and employees' key result areas. • Organisation-wide key performance indicators are currently being aligned with the Corporate Plan and performance indicators specific to risk are yet to be developed. This is appropriate for an organisation at this stage. • A code of conduct has been in place for some time and this defines expectations of employees. • The culture of management and employees towards risk and risk management is generally risk averse, although this is not formally surveyed. ***Assurance*** • State Trustees has recently linked the internal audit strategy/plan to organisation-wide risk assessment. The focus of this plan is on providing assurance that the controls in place to manage the identified risks are operating effectively.	***Roles and responsibilities*** Based on review of the Charters and Risk Management Policy, there is a possibility of duplication of effort across the Compliance and Audit Committees in relation to the review of business risks and controls outside the "compliance" area. This has not been verified and is more of an efficiency issue rather than a lack of oversight and monitoring control. ***Management education*** The extent of management understanding and application of risk management is yet to be "tested" other than through the output of risk assessment. ***Performance measurement, human resources and culture*** Develop and link risk management to organisational and individual performance obligations and measures.

TABLE 5A
STATE TRUSTEES' DETAILED FINDINGS – *continued*

PROCESS AND RISK TECHNIQUE MATTERS

Outline of key risk management elements and findings	*Areas for possible improvement*

Risk identification, analysis and response/mitigation
• An organisation-wide risk assessment exercise with external assistance began in December 2001. State Trustees has since reviewed this, and the process is currently being implemented further within each business unit.
• The focus of the risk assessment has been on:
  ◦ strategic risks which are high level affecting the overall direction of the organisation;
  ◦ financial risks associated with financial processes and regulation;
  ◦ operations risks impacting on the delivery of services including HR and IT issues;
  ◦ compliance risks associated with regulation; and
  ◦ governance risks associated with the current culture and structure.
• Risks have been defined and documented as events that might impact on the achievement of objectives.
• Risk assessment has considered an "inherent" assessment (i.e. prior to considering current controls in place and operating effectively) and a "residual" assessment (i.e. after considering current controls). The assessments have been made on a "potential impact" basis, to assess "worst case" scenarios.
• The process has focused on improving risk mitigation. Documentation verified this. In some cases, there was evidence of specific, measurable actions with explicit accountabilities identified.
• Specific areas of risk have been analysed in further detail. For example, the Corporate Leadership Team undertook a succession planning workshop to determine in detail the nature of the risk when losing key staff and to develop detailed people development and succession plans to reduce potential impact.
Monitoring and reporting
• Weekly Corporate Leadership Team meetings continue to monitor the organisation's risk profile.
• The risk management policy requires the Corporate Leadership Team to review the framework quarterly and report to the Audit and Compliance Committees. Reporting covers the key risks and the current status of mitigation. A proposed quarterly reporting framework has also been developed (for the Compliance Committee) which will summarise the risks, current risk rating (e.g. extreme, high, medium, low), trend, action status and the prior risk rating.
	Risk identification, analysis and response/mitigation
	• Improve risk assessment to include consideration of:
	  ◦ the underlying causes of risks;
	  ◦ different scenario assessments for example, assessing "worst/most likely and best case" scenarios;
	  ◦ correlation of risks and how this might change risk mitigation; and
	  ◦ explicit risk correlation/aggregation analysis.
	• Consistent identification of specific and measurable actions (with accountabilities and time frames) to improve risk mitigation.
	• Continue progress to implement risk management within each business unit/division.
	Monitoring and reporting
	• Implement regular reporting processes as defined within the risk management policy.
	• Define organisation-wide incident reporting requirements.

TABLE 5A
STATE TRUSTEES' DETAILED FINDINGS – *continued*

PROCESS AND RISK TECHNIQUE MATTERS - *continued*

Outline of key risk management elements and findings	*Areas for possible improvement*
• The Compliance Committee reports quarterly to the Board on the implementation of the risk framework. The Audit Committee's overview report also includes the status of both risk management and implementation of the internal audit plan. It reports monthly to the Board on some high-risk areas, particularly strategic risks. • Formal incident reporting has been established in relation to compliance obligations. However, other incidents requiring reporting are not explicitly defined in the risk management policy, although covered by current reporting processes.	

INTEGRATION

Outline of key risk management elements and findings	*Areas for possible improvement*

• There were some key areas of integration of risk management process and technique within State Trustees. Three were observed including:
  • making balanced decisions about services taking into account risk and return, among other factors;
  • evaluating and managing projects; and
  • identifying risk management costs and associated benefits within budgeting processes and including these in the final budget estimate, e.g. improved security arrangements to reduce physical and information technology security risks.
	• Continue to implement risk management within each of the business units/divisions.
	• Develop and link risk management to organisational and individual performance obligations and measures.

KANGAN BATMAN INSTITUTE OF TAFE

Context

5.15 Kangan Batman Institute of TAFE is Victoria's largest training provider in the:

- aviation industry;
- automotive industry;
- polymer engineering industry;
- apprentice/trainee programs;
- corrections education; and
- VET (Vocational Education and Training) in Schools training.

5.16 General information regarding Kangan Batman Institute of TAFE is outlined in Table 5B.

TABLE 5B
INFORMATION AT A GLANCE, AT 31 DECEMBER 2001

Population area served	Primarily north-west Melbourne.
Campuses	Broadmeadows, Richmond, Coburg, Essendon, Moreland and Avondale Heights.
Corrections campuses	Port Phillip Prison, Deer Park; Melbourne Juvenile Justice Centre; and Melbourne Assessment Prison. (Kangan Batman Institute of TAFE is the major provider of educational services in corrections settings throughout Victoria.)
VETASSESS	The Institute also manages the operations of Vocational Education and Training and Assessment Services (VETASSESS) located in East Melbourne.
No. student enrolments	30 027
Student contact hours	4.7 million
Total budget	$60.1 million
No. staff (equivalent full-time)	757

5.17 Kangan Batman has experienced 2 recent incidents, due to changes in the aviation sector and forced closure of facilities, which have had adverse outcomes for the Institute.

5.18 A summary of the audit findings is set out below, with more specific findings in each risk management area and suggested opportunities for improvement described in Table 5C.

Risk management policy and strategy

5.19 The overall strategic intent of risk management at Kangan Batman was identified as:

- creating a better understanding of the Institute's business;
- no surprises; and
- avoidance of negligence and meeting legal obligations.

5.20 Although not yet fully established, Kangan Batman has an increasingly strategic focus on risk management. Achievements to date include aligning the risk strategy and departmental plans, and management awareness of the compromises that may exist between achieving policy obligations and taking/mitigating risk to achieve these policy obligations; in particular, specialisation leading to particular market risks.

5.21 A major area for improvement is the development of specific measures or key performance indicators (KPIs) to determine the success of the risk strategy and management actions.

Risk management structures

5.22 Kangan Batman has clear and formal organisational roles and responsibilities for risk management. Informal education processes are in place to develop management capability. Developing and linking organisational and managerial KPIs to risk management will improve the structures.

Risk management process and techniques

5.23 Kangan Batman is developing, rather than consolidating, its risk management processes. The Institute has identified and analysed risks at a basic level, and is developing monitoring and reporting processes.

Integration of risk management with business

5.24 Kangan Batman has made substantial progress in integrating risk management within the organisation.

TABLE 5C
KANGAN BATMAN INSTITUTE OF TAFE DETAILED FINDINGS

POLICY AND STRATEGY MATTERS

Outline of key risk management elements and findings	*Areas for possible improvement*
Strategic planning and budgeting	
• The strategic plan includes a risk assessment. The assessment lacks detail on management actions that have specific measures, and is not quantified. • Alignment of the strategic and departmental plans was evident in documents and processes implemented (based on management's description of processes). • Kangan Batman's focus on specialisation in certain industry and geographic segments is acknowledged by management as a "market" risk that is in line with both ministerial direction and demographic demand. By pursuing a policy of specialisation, Kangan Batman takes on specific market risk attached to the industrial needs and bias of its constituents[1]. Exposure to aerospace/aeronautical and automotive sector performance may be material, in the event that a high percentage of funding is locked into these sectors. • Diversification into offshore training options and alternative markets (e.g. China and Indonesia) is being pursued, however, some risk exposure is evident; e.g. acting as an agent for offshore employment of teaching staff in Indonesia.	• Incorporate appropriate measures/KPIs for key risk exposures and assign responsibility. • Formally analyse sovereign risk and value accordingly in offshore ventures, prior to commencement. • Formally understand and analyse revenue streams and market risk particular to each speciality.
Corporate policy	
• Kangan Batman is reviewing and updating its policy on risk management. The policy is widely available, including via intranet, assisting with communications across the campuses.	
Risk appetite and focus	
• No specific reference was made within Kangan Batman's risk management documents to risk acceptance criteria or other measures specific to risk policy. (Some measures are implicit in Kangan Batman's financial responsibility guidelines.) • There is some focus on the risks of lost opportunity, although most risk assessment documentation was focused on loss and potential for loss. • Kangan Batman accepts some higher levels of "price risk" due to socio-economic influences on the student mix i.e. higher proportions of apprentices and concession students influences financial returns per student contact. hour. There is no formal scenario planning done, although some informal discussions on "what if" scenarios were reported to be commonplace.	

[1] The PEST (political, economic, social and technological) approach to analysing external factors developed by Porter is a useful technique to identify such risks as this.

TABLE 5C
KANGAN BATMAN INSTITUE OF TAFE DETAILED FINDINGS – *continued*

STRUCTURAL MATTERS

Outline of key risk management elements and findings	*Areas for possible improvement*
Organisation structure – roles and responsibilities	
• Structures for managing risk were evident in documentation and through interviews. Terms of reference, agenda, minutes, action points and summaries clarify the role of the Audit and Risk Management Committee (A&RMC). The A&RMC also has a development plan to further contribute to organisational performance. The involvement of management and non-management/non-executive staff on the A&RMC could create a lack of separation of duties and confusion about responsibility and accountability for action. This, in turn, may lead to confusion between governance and implementation roles.	• Develop or expand upon the KPIs for measuring and monitoring key risk exposures, and integrate these indicators/metrics into plans at unit and an individual level where practical. For shared or entity-wide exposures, KPIs should be identified for all relevant stakeholders.
• The escalation process for major risk matters was clear, in line with the structural clarity around planning obligations and alignment with Kangan Batman's overall strategy.	
Performance measurement, human resources and culture	
• Risk management is not yet an established aspect of performance management, nor does it drive individual behaviour. It is anticipated that non-financial KPIs will be used in performance planning and appraisals.	
Management education	
• Risk management education, such as attending courses, peer review and discussion, has been informal at the A&RMC level. Functional leaders educate on specific elements of risk when required.	
Assurance	
• Specialist resources in the "Workplace Risk Management and Environment Unit" provide advisory support to management across the campuses. The focus of this group is safety and environment rather than the wider business risk interests.	
• External specialists assist in specific areas of risk, e.g. financial and systems-related exposures.	
Risk culture	
• Risk culture appears to be focused on a "balanced formal culture of risk taking into account for growth and conservative attitudes to meeting obligations set down for a public institution". Recent survey data would need to be analysed further to support this, along with additional survey instruments.	

TABLE 5C
KANGAN BATMAN INSTITUE OF TAFE DETAILED FINDINGS – *continued*

PROCESS AND RISK TECHNIQUE MATTERS

Outline of key risk management elements and findings	*Areas for possible improvement*
Risk identification, analysis and response/mitigation • Kangan Batman has a tendency to fully document and establish procedures for most activities. It has high levels of methodology and process. • It has conducted a sound, but basic, risk analysis using the principles of the AS/NZS 4360:1999 *Risk management*. • The Institute has some business continuity capabilities and IT back-up processes in place, but none were verified as being fully tested. • Risk allocation in contract matters was addressed in broad terms, depending on the nature of the contract or agreement. ***Monitoring and reporting*** • Kangan Batman has used risk analysis attached to planning documents for reporting the organisation's key risks. The risks captured are cross-referenced to the organisation's procedures to assist in monitoring outcomes and allocation of responsibilities. • Two recent incidents showed a lack of contingency planning around activities with policy and contractual obligations. There is now an effort directed towards risk being managed actively, and led from the Executive Group. • Staff who are not part of the leadership group showed sound knowledge of what the organisation is doing about risk and particularly their own specific role in the delivery of risk management "policy".	Areas for improvement in risk analysis include: • a more strategic focus for risk analysis overall to ensure impact beyond Kangan Batman is considered at department and Victorian Government level; • a more complete and accurate description of risk with some effort to identify and separate cause from effect; and • the use of more quantitative measures of risk so as to estimate probabilities and the range of consequences, thus recognising possible value and cost-benefit of risk mitigation strategies and controls including the possible portfolio effects from education and State-sector as a whole. • clear lines of accountability and measures/KPIs and review timelines should be assigned to key risks. • there is no formal scenario planning or risk correlation analysis undertaken. There is some intention to undertake "stress" testing within the planning cycle.

TABLE 5C
KANGAN BATMAN INSTITUE OF TAFE DETAILED FINDINGS – *continued*

INTEGRATION

Outline of key risk management elements and findings	*Areas for possible improvement*

• The organisation provides clarity on risk policy, and some awareness of how risk contributes to planning and investment appraisal.
• Budgeting processes have not explicitly considered the implications of specific risks identified.
	• Develop formal investment appraisal and budget guidelines to address risk management content, including:
	  • risk acceptance criterion;
	  • risk analysis;
	  • risk monitoring/KPIs; and
	  • accountability and review obligations.
	• Continue to embed risk responsibilities at all levels across the organisation and reinforce/celebrate achievements and highlight consequences for exceptions to expected performance.

RESPONSE *provided by Kangan Batman Institute of TAFE*

TABLE 5C

Policy and strategy matters - Strategic planning and budgeting (dot point 4)

A reference is made to risks associated with off-shore operations and specifically commenting that the Institute is accepting a risk associated with acting as an agent for off-shore employment for teaching staff in Indonesia. It should be noted that the Institute only assists in locating staff for an Indonesian college delivering TAFE level training. We do not employ the staff or in any way incur a risk beyond assisting with recruitment.

Process and risk technique matters – Monitoring and reporting (dot point 2)

There is a reference to a lack of contingency planning in relation to 2 recent events. These events are identified in paragraph 5.17 as "… changes in the aviation sector and forced closure of facilities". In respect to the first, the failure of Ansett certainly had an impact on the local community we serve and, of course, the aviation industry, in which we specialise in delivery. Ansett was our largest aviation customer. We accept the comments made that we had not adequately identified this risk, which, in some way, we are required to take in servicing this special industry sector. In respect to the second incident, we would strongly disagree that there was a lack of contingency planning. We believe we had identified the OH&S risks that caused the major workshop to be closed and were monitoring the situation in conjunction with the Office of Training and Further Education. We had several meetings with them where all the risks had been discussed, although alternative accommodation in the event of closure had not been identified. We note the comments and will add this to possible scenario building in the future.

WESTERN METROPOLITAN HEALTH SERVICE

Context

5.25 Western Metropolitan Health Service (Western Health) offers a comprehensive range of acute, aged care and rehabilitation, and drug and alcohol services to the western metropolitan areas of Melbourne. It serves a population of 440 000 people and spans over 1 612 square kilometres. Western Health was created in July 2000, following the restructure of the former North Western Health Care Network.

5.26 Western Health cares for its community through Western Hospital, Sunshine Hospital and The Williamstown Hospital, DASWest Drug & Alcohol Services, and an aged care and rehabilitation service that includes Hazeldean Nursing Home and Reg Geary House.

Surgeons in the operating theatre at Sunshine Hospital.
(Photo courtesy of Western Health.)

Risk management policy and strategy

5.27 The intent of Western Health's risk management approach focuses on clinical risk and maintaining optimal health standards in the delivery of patient care services. Although many informal risk management processes are in place for non-clinical risk, the scope of this review does not include conclusions to be drawn on the adequacy of these processes.

Risk management structures

5.28 Effective clinical risk management structures have been established through defined committee structures, ongoing education processes, and defined key result areas and indicators. Structures to manage non-clinical risk are less explicit and are driven through the finance and quality functions. This may increase the possibility of non-clinical risks receiving less resource and attention than clinical risks that have a similar financial impact.

Risk management process and techniques

5.29 Western Health's clinical risk processes are established and under constant review. Non-clinical risk processes are in varying stages of completion and lack quantitative risk analysis and accountability measures.

Integration of risk management with business

5.30 Based on information gained through interviews, the extent to which risk techniques are applied as a matter of course is most developed in the clinical area. From a review of documents on business case assessment, there is a lack of specific risk analysis and quantification, which indicates that non-clinical risk is not yet completely formally integrated into strategy, structure and process. Informally, risk awareness by staff was observed to be strong in both clinical and non-clinical areas of risk.

Conclusion

5.31 Management of clinical risk is integrated into Western Health and its operation. There is less explicit focus on non-clinical risk and there would be value in a more explicit focus on consideration of non-clinical risk.

TABLE 5D
WESTERN METROPOLITAN HEALTH SERVICES

POLICY AND STRATEGY MATTERS

Outline of key risk management elements and findings	*Areas for possible improvement*

Risk appetite and focus
• For clinical risks, there are established risk acceptance or performance criteria that are measured and monitored. In relation to non-clinical risks, there was no particular consistency in the manner in which risks were accepted or the basis for it.
• The use of performance indicators for Clinical and Hospital Operations/Quality is established and widespread. Operational matters such as ambulance by-pass, patient waiting times and staffing levels are rigorously measured and monitored, in part creating a default position on risk acceptance.
• There is significant focus on the risks of lost opportunity (“upside”), in addition to a focus on the risk of loss. A focus on pursuing and not losing (“upside”), in a number of specific areas was verified. By way of example:
    • “zero-tolerance” model for ambulance by-pass;
    • “innovation awards”; and
    • “lease structure for high capital cost equipment in Radiology”.
• The Board has recently requested detailed information about Western Health’s most significant risks (“top 20”). This work was in progress at the time of the audit. The Board regularly receives and reviews reports on financial and clinical risk matters.
	• Establish a framework for risk acceptance for non-clinical risk matters using existing quality and financial benchmarks where practical and developing new criteria as required. These can be used to guide Western Health on mitigating against loss and lost opportunity. For example, the application of a 3-tier approach to hazard management, accept level/action level/unacceptable level, such as that used in the European Union model, on precautionary principle) may assist in operational risk acceptance.

TABLE 5D
WESTERN METROPOLITAN HEALTH SERVICES – *continued*

STRUCTURAL MATTERS

Outline of key risk management elements and findings	*Areas for possible improvement*
Management education • Clinical risk management education is a continuous activity with both formal and informal training activities undertaken. • Non-clinical risk related education is provided to nursing, operations and maintenance staff through various courses delivered by the Integrated Learning Centre. • There is no "risk management" function per se, in line with the Western Health organisational design that drives risk management through 3 critical focal points: Clinical, Financial and Quality functions. ***Performance measurement, human resources and culture*** • There are risk management key performance indicators (KPIs) for clinical staff – although they would be more accurately characterised as key result areas (KRAs). There is some sensitivity to strict quantitative measures for each individual, as risk outcomes are examined on a process or systemic basis, not individually. • KPIs were yet to be identified for risk outcomes in non-clinical areas. • The opinions on risk culture were consistently characterised by the leadership group and others we interviewed within Western Health as being that of continuous improvement, innovation, continuous review, with attitudes of "get by and can do", and "no blame". ***Assurance*** • Specific risk expertise is utilised through both shared services (e.g. managing cooling tower legionellosis) and the use of external advisors for non-core specialist advice.	• Development of, and agreement on, appropriate lead and lag indicators on key risk areas (synonymous with key management areas) in both the clinical and non-clinical areas. This would support the overlying 3-tier structure of risk management (Clinical, Financial and Quality).

TABLE 5D
WESTERN METROPOLITAN HEALTH SERVICES – *continued*

PROCESS AND RISK TECHNIQUE MATTERS

Outline of key risk management elements and findings	*Areas for possible improvement*
Risk identification, analysis and response/mitigation	

• Clinical risk processes are well established and include the use of semi-quantitative and qualitative methods to identify, analyse, mitigate and monitor Western Health's clinical risk portfolio.
• The use of risk-reward methods in investment appraisal and investment risk analysis are not yet established within Western Health. However, business case assessment for numerous initiatives and innovations provide some basic consideration of risk and some degree of scenario planning although not in a highly developed manner.
• Insurance processes are imposed and monitored by the Victorian Managed Insurance Authority, including levels of self-insurance.
• A review of the internal audit risk assessment showed that risk analysis processes for non-clinical matters provide generic foundation risk data. Risk quantification and scenario planning is done using subjective probabilities in the clinical risk area. Beyond this, risk quantification is not specifically undertaken at Western Health.
	• Improve risk analysis methods to address:
	  • differentiation between cause and effect;
	  • use of risk estimation/quantification methods; and
	  • managerial accountabilities, timelines and KPIs, particularly in the non-clinical area as it they are established in the clinical area.

Monitoring and reporting	
• Processes for sharing risk information across Western Health are well established in the clinical risk area. In the non-clinical aspects of Western Health some work in progress exists to address knowledge management. This includes the capture of incidents. • Processes for recording and reporting contingent events and disaster recovery have been developed from earlier work on Y2K. There were plans referenced for technology failures and other "disasters" including escalation procedures, cross-campus or single campus issues and training. The extent of desktop exercises or simulations was advised to be at least 2 exercises per year. Integration with the State level DISPLAN was also referenced as part of the disaster planning processes.	

TABLE 5D
WESTERN METROPOLITAN HEALTH SERVICES – *continued*
INTEGRATION

Outline of key risk management elements and findings	*Areas for possible improvement*

• As noted above, a high degree of informal management of risk was observed across Western Health, and supplemented with specific risk disciplines in the Clinical, Financial and Quality areas.
• Also, The risk taking/innovation culture of Western Health was demonstrable in numerous areas, including:
  • the publicised nature of "innovation awards" and the need to solve risk problems;
  • the willingness to take risk to provide better healthcare outcomes (e.g. MRI and radiology ventures); and
  • numerous examples of process improvement in areas such as rapid assessment unit, ICU liaison nursing and legionellosis management.
	• Undertake periodic risk culture survey to assess the continuing contribution to managing risk.
	• Recognition/celebration of risk management successes/achievements and sharing of learnings across the Health/Department of Human Services portfolio.
	• Ensure risk-reward analysis is objectively undertaken as a key element of investment appraisal.

***RESPONSE** provided by Department of Human Services*

The Department supports the strengthening of policy, structure, strategy and accountability for risk management generally, and non-clinical risk management specifically in the health services. DHS also places a high priority on clinical risk management and governance, as demonstrated through initiatives such as the development of the Clinical Risk Management Strategy, establishment of Statewide sentinel event reporting, the establishment of the Victorian Quality Council and support for hospital-based clinical risk management programs. The management of non-clinical risk, especially financial risk, is a critical issue in health services, and DHS supports an increased focus on improving systems and accountability.

The report provides recommendations for a number of areas of possible improvement at Western Health. These will provide valuable input into the work being undertaken by the Department in establishing a framework and standards for risk management. This will enable a stronger focus on accountability for the management of risk equally across the dimensions – clinical, financial and quality.

DRINKING WATER QUALITY IN VICTORIA

Context

5.32 In Victoria, 3 metropolitan retail water companies and 15 regional urban water authorities[2] principally supply drinking water. Six Alpine Resorts Management Boards supply the ski resorts, such as Mt Buller, while Parks Victoria supplies national parks, such as Tidal River at Wilsons Promontory. Various government departments, statutory authorities, local government, and incorporated and unincorporated co-operatives supply a small number of remote towns, roadside amenities, caravan parks and leisure resorts.

5.33 The purpose of this examination of the quality of drinking water was to assess whether:

- the Victorian Government has a strategy for managing drinking water quality risk across the State;
- there are structures and processes across the Government, and within agencies and authorities, to support the particular strategy or strategies; and
- the water industry has approaches to risk management that may apply more broadly to other public sector agencies.

5.34 Documentation was reviewed and interviews were undertaken with representatives of senior management at:

- the Essential Services Commission;
- the Department of Human Services;
- the Department of Sustainability and Environment3;
- Barwon Water;
- Central Highlands Water Authority;
- City West Water;
- Melbourne Water; and
- South-East Water.

5.35 This examination has not attempted to study, to comment or to conclude on the adequacy or otherwise of specific management processes and controls to manage particular drinking water quality risks across Victoria, such as microbiological water quality.

[2] The term "water authority" is being used generically to represent all water businesses in Victoria.

[3] Prior to December 2002, named the Department of Natural Resources and Environment.

What are some of the risks to drinking water quality in Victoria?

5.36 Key risk areas[4] would include:

- Technical risks relating to microbiological, chemical and physical water quality, caused by either natural or human factors or events, such as error or equipment failure at any point along the water supply chain, i.e. from catchment-to-tap;
- Lack of analysis of, and pro-active response to, risks that might exist from catchment-to-tap;
- Lack of clarity and/or consistency in water quality standards, including defined limits requiring emergency action and action to rectify, e.g. the point at which shutdown of supply should occur;
- Insufficient monitoring, in real time or other wise, of water quality;
- Inability to forecast changes in potable water quality, including the possible interdependency of independent variables. For example, an authority suggested that there may be insufficient knowledge of how a number of parameters, such as bacterial and algal growth, react to affect water quality. It was asserted that there may not be sufficient understanding to accurately predict when bacteria and/or algae will proliferate other than by direct observation, making prediction of their occurrence difficult;
- Inconsistent and possibly inadequate approaches to managing water infrastructure assets across the State for a range of reasons, such as industry fragmentation, competition for capital and deficiencies in risk analysis techniques;
- Lack of regulatory standards and guidance for non-reticulated drinking water and bodies other than water authorities such as Alpine Resorts Management Boards, Parks Victoria, local co-operatives or private water suppliers; and
- Lack of co-ordination or the absence of systemic escalation of a health-related water incident, or outbreak, leading to an inadequate response by the State of Victoria. This includes managing any particular crisis, public confidence and contingency planning terms, or “work-arounds” for localised problems.

Current industry policy and regulatory environment

5.37 The Department of Human Services, the Department of Sustainability and Environment, and the Essential Services Commission regulate drinking water supplies and the performance of water authorities.

---

[4] Some of the abovementioned risks are not unique to Victoria; indeed certain water authorities emphasised that lack of ability to forecast potential changes in potable water quality are risks that the entire industry faces in Australia and internationally.

5.38 The Department of Human Services is the principal Victorian Government agency with overall responsibility for public health. In particular, it employs its powers under the *Health Act* 1958 to administer water quality regulations and manage incidents, and to ensure that drinking water supplies in Victoria do not pose a risk to public health. The Act does not specify any particular standard for drinking water in Victoria, but allows the Department to act if a supply presents a threat or potential threat to public health. The Act provides for regulation on a wide range of purposes associated with protecting water supplies through the Health (Quality of Drinking Water) Regulations 2002, and the Health (Infection Diseases) Regulations 2001.

5.39 All water authorities in Victoria, including Melbourne Water, the metropolitan water companies and the non-metropolitan urban water authorities, must comply with the provision of the Health (Quality of Drinking Water) Regulations 2002. The Regulations do not apply to bodies supplying water in Victoria that are not water authorities, such as Alpine Resorts Management Boards, Parks Victoria, local co-operatives or private water suppliers. Regulations under the Health (Prescribed Accommodation) Regulations 2001 also address the provision of drinking water quality. Obligations in respect of drinking water quality are also imposed on the metropolitan water companies through operating licences issued under the *Water Industry Act* 1994.

5.40 The *Water Act* 1989 regulates the Victorian non-metropolitan water sector. Water service agreements, signed by the Minister for Environment and Conservation[5] and the water authority, place drinking water quality and risk management obligations on regional urban water authorities. Section 166 of the *Water Act* 1989 provides that an authority, or any member or person acting on behalf of an authority, is not liable for any action taken in connection with the treatment of water (including disinfection or fluoridation) in accordance with this or any other Act. This is a significant difference to the companies operating under the Water Industry Act.

5.41 Water suppliers also face general duty of care obligations under common law and obligations under the *Trade Practices Act* 1974. These can be used by consumers who suffer illness or loss to take action for damages.

---

[5] In December 2002 the Victorian Government announced the appointment of a Minister for Water.

Proposed changes to regulatory framework

5.42 The regulatory framework for drinking water quality in Victoria is presently under review[6] as a result of a number of previous investigations and reports which identified a need to improve:

- the existing regulatory structure for drinking water quality; and
- the consistency in the quality of drinking water supplied around Victoria.

5.43 The principal objectives of the proposed regulatory framework, which appears to be supported by relevant stakeholders, are:

- the protection of public health and consumer needs;
- clarification of roles and accountabilities for the water industry;
- introduction of uniform Statewide standards for drinking water quality;
- reduction of future economic and health risks; and
- increased public communication.

Yan Yean Reservoir has a total available capacity of 30 000 megalitres and supplies water to Melbourne's northern suburbs and central city area.

---

[6] So far, the key steps in the review have been to:

- develop A New Regulatory Framework For Drinking Water Quality In Victoria – Consultation Paper, by the Department of Human Services and the Department of Natural Resources and Environment in August 2000, the key elements of which were endorsed by the Government in October 2001; and
- request for, and analysis of, submissions from the water industry, Parks Victoria and Alpine Resort Management Boards in Victoria, reflected in Drinking Water Quality Regulatory Framework For Victoria – Analysis Of Submissions by the Department of Human Services and the Department of Natural Resources and Environment in May 2002.

Drinking water "fit for human consumption"

5.44 At present, there are no legislated standards for drinking water quality that apply Statewide in Victoria. Instead, there are 2 guidelines with slightly different requirements regarding the microbiological, chemical and physical quality of drinking water:

- regional urban water authorities, through the Water Services Agreements with the portfolio Minister, use standards based on the World Health Organisation's (WHO) *Water Quality Guidelines,* 1984; and
- Melbourne metropolitan supplier and retailers, under their current operating licences and the associated customer contracts, use standards and criteria based on the NHMRC[7] *Guidelines for Drinking Water Quality in Australia*, 1987.

5.45 The components of drinking water quality are generally accepted to include:

- microbiological quality, such as levels of bacteria;
- chemical quality, such as levels of metals and chlorine; and
- physical quality, such as taste, odour and colour.

5.46 The question of what quality of water is fit for human consumption is currently being debated in the regulatory consultation process. The Department of Human Services' discussion paper *Proposed Standards for Drinking Water Quality in Victoria* (November 2001) details proposed performance standards, i.e. a benchmark against which drinking water quality can be assessed in Victoria. The discussion paper asserts that drinking water supplied to consumers must at all times, and for every litre, be "fit for human consumption", described in general terms as not allowing "potential gross failure of the drinking water supply or localised very poor quality water".

Audit findings

5.47 The key findings and possible areas for improvement in relation to the management of drinking water quality risk are outlined below in 3 key areas:

- the strategy and structural elements of risk management;
- the process elements of risk management; and
- the output/outcome elements of risk management which are evidence of integration.

These sections include specific illustrations of practice, some of which are good practice.

[7] NHMRC – National Health and Medical Research Council.

Risk management strategy and structures

5.48 Victoria has no formal (written and co-ordinated) and consistent Statewide strategy or structure for managing drinking water quality risk. This has been acknowledged within, and by virtue of, the current regulatory review which is focused on addressing the lack of clarity and inconsistency in current standards. Under normal operating circumstances, it would appear that:

- the Department of Sustainability and Environment is mostly focused in setting policies and strategy in relation to the State's resources and infrastructure that enable the provision of drinking water quality; and
- the Department of Human Services, given its overall responsibility for public health, has a role to regulate under the Health (Quality of Drinking Water) Regulations 2002 and is focused on providing standards for drinking water quality and monitoring achievement of same.

5.49 Each water authority interviewed has its own risk strategy for water quality management which is typically documented in a drinking water quality policy. Water Service Agreements and Memoranda of Understanding generally govern that a risk management strategy be developed and implemented within the water authorities. Each water authority is required to demonstrate to the Minister, through their business and corporate planning process, that risks are identified and managed and that appropriate capital expenditure is made. The proposed regulatory framework may strengthen this, through independent audits of risk management processes.

5.50 The *Framework for Drinking Water Quality – A Preventative Strategy from Catchment to Tap*, developed by the NHMRC/ARMCANZ Co-ordinating Group, notes that the *"… development of a drinking water quality policy is an important step in formalising the level of service to which the drinking water supplier is committed and in increasing the focus on water quality management"*. Each of the water authorities interviewed had developed and documented a clear strategy and policy for managing drinking water quality.

5.51 It is likely that risk strategies and policies that exist in respect of water quality management at the local levels reduce residual Statewide risk exposure. Table 5E sets out extracts from a selection of these policies representing catchment-to-tap. Whereas the Melbourne bulk water supplier, Melbourne Water, focuses on the quality of water from catchment to the water retailer, its retailers' policies focus reflect more on the end users, in terms of community education, and reporting and awareness of water quality matters.

5.52 These policies do not necessarily reflect how well drinking water quality is managed, but they provide direction for, and demonstrate, an organisation's commitment.

TABLE 5E
POLICIES TO MANAGE DRINKING WATER QUALITY

Melbourne Water

Melbourne Water will aim to sustainably:

- provide a low cost, reliable supply of safe, high quality drinking water that consistently meets National Health and Medical Research Council Australian Drinking Water Guidelines; and
- ensure that the public health benefits of achieving high drinking water quality, treated effluent quality and waterway water quality, relative to the costs, can be demonstrated.

Melbourne Water will fulfil this policy by:

- maintaining and implementing an independently certified drinking water quality management system incorporating Hazard Analysis Critical Control Point (HACCP) and ISO9001; this means adopting a multi-barrier approach to drinking water safety, including:
    - restricting human access to catchments and reservoirs;
    - detention in large storages;
    - closed distribution system; and
- appropriate treatment, monitoring and verification;
- ensuring reliable water and wastewater treatment using processes tailored to Melbourne's unique conditions;
- managing the recycling of water and bio-solids to minimise public health risks, while conforming to statutory requirements and optimising business opportunities;
- improving performance and optimising public health outcomes by:
    - remaining abreast of relevant international trends in public health policy, epidemiology studies, treatment technology and system management and operation; and
    - undertaking research on the relationship between water quality and public health;
- developing an understanding of the public health impacts and implications of the business through:
    - regular monitoring of the quality of drinking water, treated sewage effluent, stormwater and receiving water; and
    - assessing performance against regulatory requirements and stakeholder expectations.
- establishing a good working relationship with public health agencies to ensure Melbourne Water contributes to the debate on the setting of statutory requirements, industry standards and guidelines, and other standards relevant to public health;
- ensuring that our people are equipped to anticipate and manage public health risks and responsibilities in their day-to-day work through appropriate contingency planning and incident response capability; and
- providing relevant and timely information to customers, stakeholders, and the community about public health issues.

City West Water

City West Water is committed to supplying its customers with high quality drinking water. We will utilise effective, efficient and innovative management and operational practices to reliably deliver safe and acceptable drinking water. Our commitment to water quality will be sustained by:

- complying with regulatory requirements on drinking water quality;
- managing drinking water quality in a manner that gains the confidence and respect of customers, regulators and the water industry;
- improving our awareness of customers' understanding and expectations regarding drinking water quality;

TABLE 5E
POLICIES TO MANAGE DRINKING WATER QUALITY - *continued*

City West Water - *continued*

- welcoming customer feedback on water quality issues and responding effectively to meet customers' concerns and needs;
- providing publicly available information and reports on the quality of the drinking water supply and associated issues;
- keeping at the forefront of drinking water quality innovations and regulations;
- taking part in research programs and studies aimed at better understanding and improving drinking water quality; and
- having an accredited, effective and improving water quality management system that will continue to assure a safe and effective water supply.

Barwon Water

Barwon Water has developed, documented and communicated a strategy and policy for managing risk across the organisation, including drinking water quality risk. This policy has been reproduced below. It highlights the strategic and operational elements to its approach.

> *"Barwon Water exists to provide water, sewerage and river management services in an efficient, cost-effective and environmentally responsible manner, meeting the needs of our customers in an increasingly competitive business environment.*
>
> *"Our challenge is to apply risk management to all parts of our business. By integrating the principles of strategic risk management and operational risk management in our activities, we will ensure business impacts are minimised and opportunities enhanced.*
>
> *"We will achieve, maintain and review a risk management system which is based on AS/NZS 4360:1995 Risk management. This commitment is driven by the Board, which, in turn, is implemented by the Executive and extends to all employees of the organisation.*
>
> *"Barwon Water is committed to:*
>
> *Strategic Risk Management*
>
> - *identifying impacts or events which may prevent or impair the organisation's ability to meet its major objectives and to plan and co-ordinate appropriate responses.*
>
> *Operational Risk Management*
>
> - *recognising that in all day-to-day activities, there are associated risks and these risks need to be appropriately addressed;*
> - *establishing formal management and operational practices which will ensure exposures to risk are identified, quantified and controlled through appropriate risk management strategies;*
> - *developing and maintaining a risk management culture in all our employees through leadership, communication and education; and*
> - *monitoring and reviewing the performance of its risk management system.*
>
> *"This policy assigns responsibility for risk management to all Barwon Water employees and acknowledges that corporate responsibility lies with the Board, Chief Executive and Executive Management."*

Source: Policy documents from Melbourne Water, City West Water and Barwon Water.

Risk acceptance

5.53 Regulators have provided guidance on water quality standards, but not on risk acceptance. Some consideration could be given to a framework which identifies when an issue should be escalated, rather than just a single point determination of risk being unacceptable. Further guidance on risk acceptance is not the panacea in improving water quality, but is rather one important element of an overall framework. For example, the pro-active catchment-to-tap approach to managing drinking water quality advocated within the *Framework for Drinking Water Quality – A Preventative Strategy from Catchment to Tap*, and increasingly applied by the water authorities reviewed, is a fundamental aspect of a risk management approach.

5.54 There is the possibility that water authorities with their own "perceived" view of risk may differ to that of the regulators. They may, therefore, allocate capital differently, relative to the needs of the State as a whole, i.e. their allocation of capital may not be aligned with a portfolio view of drinking water quality risk. In turn, this may have further consequences for the allocation of capital to the sector from central sources, although some opportunity to take a portfolio view arises at the level of ministerial review of business plans and Licence/Water Service Agreements.

5.55 This raises particular risk management questions – how does the Government, at a State-sector level, decide how much capital to allocate to "at-risk entities" and to the industry as a whole, and on what basis? For example, based on condition of assets, population at risk, perceived risk, levels or patterns of non-compliance with water standards. The Water Service Agreement and corporate planning process agreed to by the portfolio Minister currently substantiate capital needs. In the future, it is understood that a Memorandum of Understanding will operate between the Essential Services Commission, as the economic regulator, and the drinking water quality regulator, as the technical regulator, to ensure that works are appropriate and due notice is taken in price setting. This may assist in more efficient capital allocation across Victoria.

Residual risks

5.56 There is a residual risk to regional drinking water customers given that "current regulatory arrangements do not cover smaller yet significant service providers"[8]. There is also potential residual risk for remote supplies where the reticulated water is not intended for drinking, i.e. non-potable. The proposed standards will not apply to these zones[9]. There are also potential risk exposures among regional minorities who are self-sufficient in respect of drinking water and who may rely on contracted supply, e.g. tankered water delivery, where it appears as though there are no independent quality standards or monitoring controls in place. Potable supply on-sold by a third party is subject to the *Food Act* 1984.

---

[8] Department of Human Services and the Department of Natural Resources and Environment. *A New Regulatory Framework For Drinking Water Quality In Victoria – Consultation Paper*. Victoria, August, 2000.

[9] Department of Human Services. *Proposed Standards for Drinking Water Quality in Victoria*, Victoria. November, 2001.

Future regulation

5.57 On a prospective basis, it is important to highlight that action is being proposed by the Department of Human Services to ensure consistent health standards for drinking water quality across the whole-of-State. The Department of Human Services' discussion paper highlights that standards will be set by regulations subordinate to a proposed new Act covering the quality of drinking water in Victoria. The paper recommends that the *Australian Drinking Water Quality Guidelines,* 1996 be used as the basis for defining good quality drinking water for all urban drinking water supplies in Victoria, and as the basis for scientific information used for setting standards for key parameters. Consistent standards will not in themselves reduce the risk to drinking water quality but provide better direction for risk management strategies. Preventative catchment-to-tap risk management strategies are once again noted as playing a vital role in managing drinking water quality.

5.58 The new regulatory framework clearly describes 4 complementary principles for management of drinking water quality:

- risk management;
- enforceable water quality standards;
- community-based variations to non-health-related standards; and
- public reporting on performance against standards.

5.59 A third party independent audit process is proposed and seen as a means to stimulate ongoing improvement and also could provide a mechanism for incident review to encourage continuous improvement in service delivery.

5.60 The lead regulatory authorities, the Department of Human Services and the Department of Sustainability and Environment, have taken and continue to take action to implement a revised regulatory framework. Once effectively operating, this framework will substantially reduce residual risk at a strategic level, such as being particular about the intended direction and outcomes for water quality management and structural level such as being particular about the role, function and accountabilities of central agencies and authorities.

Risk management process and techniques

Risk identification, assessment and mitigation

5.61 The water authorities examined had undertaken explicit drinking water quality risk assessments. There is wide recognition and adoption of the Hazard Analysis and Critical Control Point (HACCP) technique, which the Australia and international food industry uses extensively (see Table 5F).

TABLE 5F
THE USE OF THE HACCP APPROACH TO MITIGATE DRINKING WATER QUALITY RISK

The Hazard Analysis and Critical Control Point (HACCP) is a systematic methodology to control safety hazards in a process by applying a 2-part technique: first, an analysis that identifies hazards and their severity and likelihood of occurrence; and second, identification of critical control points and their monitoring criteria to establish controls that will reduce, prevent, or eliminate the identified hazards[10].

Some key definitions are:

- hazard - a source of potential harm or a situation with a potential to cause harm (AS/NZS 931:1998); a biological, chemical or physical agent that has the potential to cause harm or loss;
- critical control point (CCP) – a point, step or procedure at which control can be applied and is essential to prevent or eliminate a hazard or reduce it to an acceptable level; and
- critical limit – a prescribed tolerance that must be met to ensure that a CCP effectively controls a potential health hazard, a criterion which separates acceptability from unacceptability.

In Melbourne, the 3 retail water companies (City West Water, South East Water, Yarra Valley Water) and the bulk supplier (Melbourne Water) have HACCP plans. Collectively, these authorities have developed a HACCP plan covering all system activities and sources of supply to the relevant zones from water received from the catchments to the customer. They focus on health and aesthetic quality of water supplied to the customers.

The key elements of the approach adopted by the 3 Melbourne water retailers and the bulk supplier is to:

- identify and map the “process flow” for each catchment source to the customers;
- undertake a hazard analysis (focusing on physical, chemical and biological hazards) for each of these “process flows”, including what might cause these hazards; and
- identify preventative measures and critical control points (to reduce the likelihood for contamination and level of contaminants if they enter the supply system), critical limits, monitoring processes and corrective action that would be required in the event of a breach - this has been focused on the significant risks.

It is understood that this approach has and continues to identify and provide a focus for important uncertainties/risk issues which may require further research or investigation to help quantify and understand the risks and identify system improvements to better manage the risks.

5.62 The strategy for mitigation being progressively employed by the industry is a preventative catchment-to-tap approach. This approach has been reinforced by the NHMRC/ARMCANZ Co-ordinating Group’s public consultation on its *Framework for Management of Drinking Water Quality – A Preventative Strategy from Catchment to Consumer*. Table 5G illustrates one pro-active approach.

[10] NHMRC/ARMCANZ Co-ordinating Group. *Framework for Management of Drinking Water Quality (A Preventative Strategy from Catchment to Consumer),* Public Consultation, 2002.

TABLE 5G
BACKFLOW PREVENTION – PRO-ACTIVE RISK MANAGEMENT

An example of the pro-active approach to managing water quality risk was noted at South East Water.

A key area of potential risk relates to the possibility of backflow of water entering the system from a customer's facilities, e.g. an industrial customer.

South East Water has identified the most significant risks of backflow and has, in consultation with their customers, implemented preventative and contingency plans to reduce the risk of contaminated water entering the system prior to the supply reaching drinking water customers.

5.63 Most authorities are advancing from a qualitative risk assessment approach, such as high, medium, low risk, to a more quantitatively oriented approach. One example of a more quantitative approach is the use of statistical techniques such as Monte Carlo analysis – a statistical simulation method used widely in industry and commerce to provide a quantitative assessment of uncertainty around a particular measure or objective.

5.64 At the same time, there has been an increased focus on the use of risk assessment as input into the development of business case analysis. Table 5H illustrates how risk analysis techniques to assist capital expenditure decisions.

TABLE 5H
RISK-BASED CAPITAL EXPENDITURE DECISIONS – CENTRAL HIGHLANDS WATER

In developing its 5 year capital works program from 2002-03 (estimated total cost in excess of $50 million) Central Highlands Water has utilised qualitative risk analysis techniques to assist in identifying and prioritising key projects. This risk analysis forms part of the development of the project business case, and covers:

- a statement of the need for the project;
- alignment with strategic objectives;
- consequences of deferral (e.g. higher risk or not?);
- assessed risk from existing conditions (prior to and after existing controls);
- required outcomes – expressed in water quality terms;
- stakeholder/regulatory compliance benefits;
- preferred option;
- assessed risk following implementation of preferred option;
- anticipated risks;
- forecast expenditure on a monthly basis; and
- proposed delivery plan.

This approach has assisted Central Highlands Water in focusing capital expenditure on the most significant areas of risk and scope for risk improvement within their own jurisdiction.

5.65 A strong research focus was also noted across water authorities and departments, with the objective of understanding potential hazards to water quality and how these might be managed better, in both local and international contexts. A key element of the research focus is with the Cooperative Research Centre for Water Quality and Treatment in which some water authorities actively participate.

Contingency and incident management

5.66 The joint Department of Human Services and Department of Sustainability and Environment paper of May 2002, *Drinking Water Quality Regulatory Framework For Victoria – Analysis Of Submissions*, noted that *"... there is little confidence that all regional urban water authorities in Victoria have adequate incident and emergency management plans in place to address incidents that may affect the quality of drinking water"*. There is agreement with the paper's recommendation that both agencies need to take a higher profile in ensuring that this exposure is rectified and that effective incident management plans be rapidly developed and practised by the entire water industry. This is a key residual risk to the State of possible direct health consequences and/or loss of public confidence in the drinking water system.

5.67 The authorities examined had developed, documented and communicated incident management plans. It is understood that co-ordinated testing of incident management plans for the metropolitan authorities, Department of Human Services and other relevant authorities was undertaken in late 2002. Under current arrangements, the Department of Human Services and the Department of Sustainability and Environment provide direction and assistance in the event of a major incident.

5.68 Table 5I outlines some water authority incident management and contingency plans.

TABLE 5I
CONTINGENCY AND INCIDENT MANAGEMENT PLANS

Melbourne metropolitan water industry

The metropolitan authorities have developed and regularly test industry emergency response plans. The industry also has agreed protocols in place with the Victoria Police and Department of Human Services for any breaches of security related to the water supply system.

City West Water

City West's water supply contamination contingency plan is focused on 5 key categories of possible contamination:

- reports of elevated levels of test parameters from water supply monitoring programs;
- notification of potential contamination from Melbourne Water, South East Water or Yarra Valley Water;
- multiple reports of illness;
- atypical water quality-related customer complaints; and
- notification of accidental, deliberate or threatened action which could cause contamination.

All plans included guidance under what circumstances the plan should be enacted, or when and what specific action should be taken (e.g. test results exceeding defined microbiological limits).

South East Water

South East Water has in place and tests crisis and emergency management plans including specific contingency plans for a water quality event. South East Water has incorporated dedicated incident management facilities with its purpose designed head office site which are in a permanent state of immediate readiness.

TABLE 5I
CONTINGENCY AND INCIDENT MANAGEMENT PLANS - *continued*

Melbourne Water Corporation
Melbourne Water's PERFORM (Prompt Emergency Response for Melbourne) plan incorporates prevention, response and recovery components for any adverse incident which affects or is likely to affect Melbourne Water. It forms the basis on which more specific and detailed contingency plans and standard operating procedures can be implemented. The 5 elements of the PERFORM program are: • The standard operating procedures describe the necessary operational tasks. It is the responsibility of each group within Melbourne Water to ensure that their employees are trained and are familiar with their standard operating procedures; • The Incident Management Plan addresses the operational response. It sets out the overall framework for emergency operational response. It also covers the important quality assurance areas of training, incident reporting and debriefing. The Plan provides information on how to manage an incident, and details the roles of the site and incident managers. For specific site and function risks, contingency plans provide detail on what has to be done should an incident occur; • An emergency will be declared when a major incident occurs which significantly impacts on Melbourne Water's ability to continue its normal operations. Melbourne Water's Emergency Management Response (EMR) Plan provides guidelines on how a corporate team will address the important strategic and management issues caused by the incident. The EMR Team addresses issues such as interface with stakeholders and other external influences, dealings with the media, communication with the Minister's/Premier's office, personnel and next of kin procedures, public relations, and specific functions such as environmental, financial, legal and insurance. Specific Communications and Human Resources (welfare) Plans are available for these groups to respond effectively. The Plans are the responsibility of the Communication and Human Resources Teams; • The Industry Response Plan is activated should an emergency impact on more than one metropolitan water company. This Plan ensures that a response is managed in a consistent, co-operative and effective manner. A metropolitan water industry Communications Plan has been written by the 4 water companies to provide guidance on industry communication procedures; and • Where external emergency agencies are required to help manage the incident, the State Emergency Response Plan is used. Under these arrangements, Melbourne Water is the support agency for the control and co-ordinating agencies which include police, CFA, SES and ambulance services.

5.69 However, the residual exposure for non-metropolitan water authorities and central agencies is that incident management plans are not co-ordinated with departments, including the Department of Human Services, and are infrequently practised. The escalation process does not appear to be consistently understood, leaving open the possibility that the rights and obligations of the water authorities and central agencies will be interpreted in a wide variety of ways. One of the deficiencies identified in *A New Regulatory Framework For Drinking Water Quality In Victoria – Consultation Paper* is that "... *the division of responsibilities for the prevention and management of water quality incidents is blurred*".

5.70 The key risk exposure questions are:

- at what point, e.g. at what level of pre-determined risk, does the relevant regulator take control and responsibility for giving directions and co-ordinating, or assisting, in the management of a water quality incident; and

- in such a case, is there a re-allocation/transfer of risk (i.e. economic and operational) to the regulator away from the authority? For example, if the central agency requires further asset expenditure or operational changes, who pays for this? If liability claims are made, due to fatalities for example, who bears this risk if it is as a result of issues arising after the original incident took place and the central agency had assumed responsibility?

5.71 It has been noted that members and officers of authority from Melbourne Water and the 3 metropolitan licensees do not have immunity as provided under section 90 of the *Water Act* 1989. In future, this is an issue that may be considered for rural and regional urban water authorities.

5.72 Also in relation to non-metropolitan authorities, an area of ambiguity was found in relation to the application and development of drinking water standards through community consultation processes. While the proposed regulatory framework recognises that "one size does not fit all", the current arrangements highlight the risk that can arise from different perspectives on water quality risk. This is set out in more detail in Table 5J.

TABLE 5J
COMMUNITY CONSULTATION AND DRINKING WATER QUALITY IN REGIONAL VICTORIA

On occasions, the drinking water quality in regional Victorian towns does not meet drinking water quality standards. The process that is followed involves consultation with the affected community to resolve treatment actions or other resolutions. In the event the community disagrees with the water authorities' proposed course of action, the authority cannot proceed with treatment or other actions. The Department of Human Services is notified and a separate process of resolution follows. In addition, various techniques are employed by authorities to notify the public such as signs erected in public areas and warning notices on water accounts. In the interim, drinking water quality may well be compromised without any specific resolution of how the risk should be mitigated. The rights of the community to avert any actions the authority might take, such as by chlorination, would appear to be given higher priority than the mitigation of residual drinking water quality risk to that same community. There is uncertainty regarding the point at which the allocation of risk for mortality, morbidity or simple physical quality transfers away from the authority to the consumer? This area of uncertainty poses a residual risk to the quality of drinking water in non-metropolitan areas of Victoria in addition to potential litigation exposure for the authorities.

Monitoring and reporting

5.73 There are a range of monitoring and reporting techniques that exist in water authorities, in the Department of Human Services and in the Essential Services Commission on a daily, monthly and annual basis. The monitoring is focused on water quality test results and complaints received by the public. Public reporting takes place through annual reports of the water authorities and regulators. Relevant reports include:

- metropolitan water authorities' monthly reporting on test results to Department of Human Services;

- the Essential Services Commission's *Melbourne's Retail Water and Sewerage Companies*: *Performance Report (*July 2000 - June 2001), which containing a section on the quality of the water supply;
- the Department of Human Services and Department of Sustainability and Environment independent report for non-metropolitan Victoria: *Bacteriological Water Quality Victorian Domestic Water Supplies* (July 2000 - June 2001);
- the *Urban Water Review* (2000-01) published by the Victorian Water Industry Association Inc. includes a section on public health, and covers water quality compliance against key measures for all water authorities; and
- an annual whole-of-regional urban report on microbiological standards and biannual report of physical/chemical standards.

5.74 Monitoring activity at the water authorities examined was overseen by a Water Quality Manager and/or an executive committee, such as the Water Quality Management Committee.

5.75 There is consistent use and monitoring of performance indicators across water authorities, including real-time and on-line indicators. However, these are primarily lag indicators, that is, historical measures of actual outputs or outcomes. An example, is the *Urban Water Review* (2000-01) reporting water quality compliance key measures (lag indicators).

5.76 While there are some lead indicators, there does not appear to be a significant focus on forecasting future possible changes in water quality through the use and monitoring of such lead indicators, e.g. heavy rainfall predictions in catchment areas that might be predictive of a change in potable water quality.

5.77 Notwithstanding the various reporting and monitoring processes currently in place, including the annual *Urban Water Review*, the new regulatory framework should include clear, consistent and independent guidelines for monitoring and reporting. This should include provision for a comprehensive regular public report on drinking water quality for Victoria to be published by the most relevant independent regulator and could include details of test results and data on customer complaints**.** Independent auditors currently assess data from metropolitan water authorities; this is not the case for the non-metropolitan authorities.

5.78 There does not currently appear to be a process in place to review drinking water quality risk at whole-of-State level which could lead to the possibility of decisions being made at a local level which may not be in the interests of the State overall.

5.79 Water authorities currently obtain and determine assurance on the effectiveness of processes to manage drinking water quality risk. The proposed regulatory changes require implementation of independent auditing of risk management processes to manage drinking water quality, and should provide further assurance.

Integration of risk management with business

5.80 All the water authorities reviewed had water quality strategies and initiatives identified in their strategic, business planning and budgeting processes. Structures for managing and monitoring water quality risk, including committees and dedicated managers were evident and well documented.

5.81 The language of interviewees and relevant water quality management documents consistently reflected risk management as a technique and an approach. Not surprisingly, management of drinking water quality has been and continues to be a core capability and focus of the industry.

5.82 Decision-making at a water authority level, in relation to project management and investment appraisal, consistently included explicit consideration of risk. It is not possible to comment on the use of similar techniques at a State-sector level.

5.83 In some cases relevant staff performance plans and obligations incorporated water quality-related responsibilities and measures.

Conclusion

5.84 There is currently no formalised (written and co-ordinated) and consistent Statewide strategy and structure for managing drinking water quality risk. However, based on the views of the water authorities interviewed, it is likely that water quality management risk strategies and policies at the local levels mitigate the risks arising from the absence of such formalised arrangements.

5.85 Regulators have provided guidance on water quality standards, but not on risk acceptance. Some consideration could be given to a framework which identifies when an issue should be escalated, rather than single point determination of risk acceptance. Beyond the relevant water quality standards, a framework should include the capacity to measure risk in the catchment, and distribution and treatment systems to develop an adequate cause and effect risk profile. It is understood that the intention of the proposed drinking water quality standard is to inculcate into the Victorian water sector these 2 risk strategies:

- drinking water quality standards, e.g. key performance indicators (KPIs); and
- drinking water quality systems, e.g. critical control points (CCPs).

5.86 To achieve this the ongoing framework needs to incorporate:

- The relevant independent variables, particular to water quality standards like KPIs. Although well-established metrics exist, they are not yet consistent across Victoria;
- The relevant system and inter-dependencies of CCPs. The authorities interviewed widely use this established method;
- The ability to interrogate the water quality systems with scenarios that do not assume that the variables are independent and/or that the system behaves as expected; and/or

- The ability to examine the interdependency and possibility of aggregation of risk; i.e. one event compounding another.

5.87 The processes to manage and monitor water quality risk at those water authorities examined in Melbourne would appear to be in place and operating. The non-metropolitan authorities interviewed are still developing their processes.

5.88 Incident management and reporting processes require further testing and refinement at a State-sector level.

5.89 Many processes are in place to monitor and report on water quality, however, there is a need to implement consistent, regular, independent and verified Statewide public reporting processes. Proposed revised drinking water regulatory arrangements would address this.

5.90 It would appear as though the water authorities interviewed are aware of the need for forecasting risk outcomes and scenario planning for water quality. This may increase the need for new or modified indicators or systems to measure and monitor water quality.

5.91 The water authorities examined have consistently integrated management of water quality within their strategies, structures and processes.

5.92 The lead regulatory authorities, the Department of Human Services and the Department of Sustainability and Environment, have taken, and continue to take, action to implement a revised regulatory framework. If adopted and implemented, risk at:

- strategic – i.e. the intended direction and outcomes for water quality management;
- structural – i.e. the role, function and accountabilities of central agencies and authorities in managing water quality; and
- process – i.e. techniques and procedures to identify, assess, respond to, monitor and report on risk;

levels could be expected to be more effectively managed.

RESPONSE *provided by Department of Human Services*

The Department has been working on a new regulatory framework for drinking water quality in Victoria in consultation with the Department of Sustainability and Environment (DSE), the CRC for Water Quality and the water industry. The framework, based on pro-active catchment-to-tap risk management, verified by drinking water standards, independent audit and public disclosure, is central to new legislation being considered. The framework is based on the current draft revision of the Australian Drinking Water Guidelines, developed by the National Health and Medical Research Centre.

In relation to paragraphs 3.71 and 3.72 of the report, the Department is also working with the water industry, DSE and Victoria Police on a risk assessment tool (Security Vulnerability – Risk Assessment Framework for Water Utilities), primarily focusing on critical Victorian water industry infrastructure. This will prepare the water industry to respond to such threats as escalating national alerts. This assessment tool has recently been developed and is being tested. This process has also identified the need for a higher level of industry wide emergency and risk management plans than currently in place. The assessment tool together with the implementation of the new regulatory framework will strengthen preparedness to manage risks.

Appendix A

List of participating public sector organisations

PUBLIC SECTOR ORGANISATIONS PARTICIPATING IN THE AUDIT

Public sector organisations interviewed

Architects Registration Board
Australian Alpine Institute Proprietary Limited
Barwon Health
Barwon Region Water Authority
Building Commission
Centre for Adult Education
Chinese Medicine Registration Board of Victoria
Chiropractors Registration Board of Victoria
Coliban Region Water Authority
Department of Infrastructure
Desert Fringe Regional Waste Management Group
Driver Education Centre of Australia Ltd
East Gippsland Institute of TAFE
East Wimmera Health Service
Essential Services Commission
First Mildura Irrigation Trust
Food Science Australia
Grampians Regional Waste Management Group
Hepburn Health Service
International Fibre Centre Limited
Kangan Batman Institute of TAFE
Kerang and District Hospital
Kilmore and District Hospital
Kooweerup Regional Health Service
Legal Practitioners' Liability Committee
Mallee Track Health and Community Service
Melbourne 2002 World Masters Games Ltd
Melbourne Market Authority
Melbourne Port Corporation
Melbourne Water Corporation
Mildura Regional Waste Management Group
Mount Baw Baw Alpine Resort Management Board
Northern Health
O'Connell Family Centre (Grey Sisters) Inc.
Office of the Legal Ombudsman
Office of the Public Advocate
Osteopaths Registration Board
Peninsula Health
Prince Henry's Institute of Medical Research
Psychosurgery Review Board
Public Transport Corporation
Residential Tenancies Bond Authority
Roads Corporation
Rural Finance Corporation of Victoria
State Sport Centres Trust
State Trustees Limited
Swinburne Graduate School of Integrative Medicine
Templestowe Cemetery Trust
Timboon and District Healthcare Service
Urban and Regional Land Corporation
Victoria University of Technology (Singapore)
Victorian Arts Centre Trust
Victorian College of the Arts
Victorian Energy Networks Corporation
Victorian Managed Insurance Authority
Western District Health Service
Western Metropolitan Health Service
Wodonga Institute of TAFE
Yarra Bend Park Trust
Yarrawonga District Health Service
Zoological Parks and Gardens Board

Organisations selected for detailed audit

Barwon Region Water Authority
Central Highlands Water Authority
City West Water Authority
Department of Education and Training
Department of Human Services
Department of Sustainability and Environment
Essential Services Commission
Kangan Batman Institute of TAFE
Melbourne Water
South East Water Authority
State Trustees Limited
Western Metropolitan Health Service

Central agencies

Department of Premier and Cabinet
Victorian Managed Insurance Authority
Department of Treasury and Finance

PERFORMANCE AUDIT REPORTS
of the Auditor-General
issued since 1999

Report title	*Date issued*
Victoria's prison system: Community protection and prisoner welfare	May 1999
Road construction in Victoria: Major projects managed by VicRoads	December 1999
Land use and development in Victoria: The State's planning system	December 1999
Represented persons: Under State Trustees' administration	May 2000
Building control in Victoria: Setting sound foundations	May 2000
Reducing landfill: Waste management by municipal councils	May 2000
Non-metropolitan urban water authorities: Enhancing performance and accountability	November 2000
Services for people with an intellectual disability	November 2000
Grants to non-government organisations: Improving accountability	November 2000
Implementing Local Priority Policing in Victoria	May 2001
Teaching equipment in the Technical and Further Education sector	May 2001
Managing Victoria's growing salinity problem	June 2001
Post-acute care planning *(a)*	June 2001
Management of major injury claims by the Transport Accident Commission	October 2001
Teacher work force planning	November 2001
Management of injury claims by the Victorian WorkCover Authority	November 2001
Departmental performance management and reporting	November 2001
International students in Victorian universities	April 2002
Nurse work force planning	May 2002
Investment attraction and facilitation in Victoria	May 2002
Management of roads to local government	June 2002
Managing Victoria's air quality	June 2002
Mental health services for people in crisis	October 2002
Management of food safety in Victoria	October 2002
Community dental health services	October 2002

(a) This report is included in Part 3.2, Human Services section of the *Report on Ministerial Portfolios,* June 2001.

The Victorian Auditor-General's Office website at **www.audit.vic.gov.au** contains a more comprehensive list of all reports issued by the Office. The full text of the reports issued over the past 10 years is available at the website. The website also features a "search this site" facility which enables users to quickly identify issues of interest which have been commented on by the Auditor-General.

AUDITOR GENERAL
VICTORIA

AVAILABILITY OF REPORTS

Copies of all reports issued by the Victorian Auditor-General's Office are available from:

- Victorian Auditor-General's Office
  Level 34, 140 William Street
  Melbourne Vic. 3000
  AUSTRALIA

  Phone: (03) 8601 7000
  Fax: (03) 8601 7010
  Email: comments@audit.vic.gov.au
  Website: www.audit.vic.gov.au

- Information Victoria Bookshop
  356 Collins Street
  Melbourne Vic. 3000
  AUSTRALIA

  Phone: (03) 1300 366 356 (local call cost)
  Fax: (03) 9603 9920