Saskatchewan Research Council

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Main points

The Saskatchewan Research Council's (SRC) purpose is to assist Saskatchewan industries to be globally competitive through the responsible application of science and technology. SRC, by effectively managing its risks and achieving its objectives, can positively influence Saskatchewan's economy and social prosperity.

Risk management can be challenging. SRC is establishing strong risk management processes that other agencies may find useful.

This chapter reports the results of how SRC's Board used risk management processes. SRC's Board had adequate risk management processes except for monitoring both the causes of risks and risk management outcomes.

Introduction

Since 1947, the Saskatchewan Research Council (SRC) has developed innovative science and technology solutions. SRC's purpose is to assist Saskatchewan industries to be globally competitive through the responsible application of science and technology.[1] SRC achieves its purpose by researching new or better products or increasing productivity. It helps industries to apply innovative solutions and services, often using demonstrations and pilot projects. In 2008, SRC had revenue of $41.2 million and expenses of $36.7 million. At March 31, 2008, SRC held assets of $32.2 million. The *Saskatchewan Research Council 2007-2008 Annual Report* is available at www.src.sk.ca.

SRC also manages the Saskatchewan Research Council Employees' Pension Plan (Plan). At December 31, 2008, the Plan held assets of $16.8 million and had a deficit of $0.2 million.

Audit conclusions and findings

In our opinion, for the year ended December 31, 2008:

- **SRC had adequate rules and procedures for the Plan to safeguard public resources**
- **SRC complied with the authorities governing the Plan's activities relating to financial reporting, safeguarding public resources, revenue raising, spending, borrowing, and investing**
- **the Plan's financial statements are reliable**

The remainder of this chapter contains the results of our audit of SRC Board's risk management processes.

[1] Saskatchewan Research Council 2007/2008 Annual Report, p.1.

Managing risk in a changing environment

Risk is the chance of something happening that will have an impact on an agency's objectives.[2] That is, risks are missed opportunities or adverse events that could influence an agency's ability to meet its strategic objectives.

All agencies face risks in the process of achieving their objectives. The risks SRC faces are varied because it must respond to a wide range of rapidly changing needs across multiple sectors. For example, SRC influences the use of science and technology in agriculture, biotechnology and food, environment and forestry, energy, mining and minerals, and alternative energy and manufacturing.

SRC's risks can be shaped by others. Scientific discoveries, advances in technology, and decisions made by independent businesses all influence the demand for innovative solutions. Government policies and the economy may affect willingness to try new ideas.

SRC has increased risks due to its work at the forefront of scientific and technical advances and its leadership aspirations. SRC's vision is to "be an internationally recognized leader in the development and implementation of relevant science and technology." [3]

SRC has additional risks during this time of economic turbulence and rising concern for the environment. Managing risks is complex during periods of extensive change. It requires rapid, innovative responses to changes in technology, economic viability, and sustainability. SRC needs to collect and disseminate information rapidly so it can appropriately respond to risks. By effectively managing its risks and achieving its objectives, SRC can positively influence Saskatchewan's economy and social prosperity.

Audit objective, criteria, and conclusion

The objective of this audit was to assess whether the Saskatchewan Research Council's Board used adequate risk management processes as of February 15, 2009.

[2] Australia/New Zealand Standards, *Risk Management 4360* (2004), definitions pp.4-5.
[3] Saskatchewan Research Council 2007/2008 Annual Report, p.1.

To conduct this audit, we followed *The Standards for Assurance Engagements* established by The Canadian Institute of Chartered Accountants. We used audit criteria based primarily on the 2004 Australia-New Zealand Standard *Risk Management 4360.* To further support the criteria, we used selected references. SRC agreed with the criteria (Exhibit 1).

Exhibit 1—Criteria for risk management

To have adequate risk management processes, SRC's Board should:

- identify risks
  - build a common understanding (context) for risk management
  - establish comprehensive list of risks for each objective
  - identify potential causes of risks or missed opportunities
- analyze risk likelihood and impact
  - identify likelihood each risk will occur in short, mid, or long term
  - identify positive and negative impacts
  - list risks excluded from analysis due to low impact
- evaluate risk tolerance
  - decide criteria for risk tolerance
  - communicate with partners about risk
  - set priorities for risk treatment
- treat key risks
  - identify options for treating priority risks
  - assess cost and suitability of optional treatments
  - select risk treatment plans
  - discuss risk treatment plans with relevant partners
- monitor risks
  - report action taken on risk treatment plan
  - review risk process and outcomes of risk treatment
  - record residual risks and lessons learned

We concluded that as of February 15, 2009, the Saskatchewan Research Council Board used adequate risk management processes except for monitoring both the causes of risks and risk management outcomes.

Findings—risk management processes

We highlight what we expected (our criteria) in italics below each heading, followed by our significant findings and recommendations.

Identifying risks

We expected SRC to identify risks based on processes to:

- *build a common understanding for risk management*
- *establish a comprehensive list of risks for each objective*
- *identify potential causes of risks or missed opportunities*

SRC's Board and management built a common understanding about risk management through consistent, ongoing communication about risk (verbal and written). Orientation for new Board members and new employees included key terms and processes related to risk. During 2008-09, SRC held workshops about risk management at every level (i.e., board, managers, employees).

SRC documented its risk management definitions, processes, and policies and kept them up-to-date and accessible. SRC used an internal website to communicate to Board members, managers, and employees, for example, with monthly reports from the President.

SRC's Board used policies and job descriptions to communicate who had been assigned to manage risks. SRC policies required all employees to identify risks and inform their supervisor (and the accountable manager).

The Board approved a comprehensive list of 43 important risks that SRC faces. It organized the risks into eight types—strategic, reputation, financial, human resources, safety, environmental, intellectual property, and operational risks. The Board's policies directed managers to identify risks that would prevent it from achieving its objectives and asked employees to tell their managers if a process could be improved. During discussions about the risks, the Executive Team (and the Board's Governance Committee[4]) informally related risks to SRC's key objectives.

SRC's Board approved clear risk statements that allowed employees and others to see how the risks related to SRC's objectives. During 2008-09, SRC's risk register stated its top five priority risks as follows:

Failure to ensure adequate mentorship/succession planning
Failure to retain employees
Failure to successfully manage change
Failure to hire quality applicants
Failure to maintain strong relationships with stakeholders

[4] In 2009, SRC renamed this Committee as the Governance and Nominating Committee.

SRC did not ask its employees to clearly identify and record the causes of risks. Rather, it used broader wording (e.g., understand and manage risks), which may include identifying causes. SRC's strategic plan and operational plan both list some major causes of risk related to risk types. Consistently identifying and recording causes would help achieve timely, effective, and economical management of the risks. For example, recording identified causes that could weaken or strengthen relationships with stakeholders would help SRC to focus how it addresses this risk.

1. We recommend the Saskatchewan Research Council Board require management to record identified causes of risks to aid in effective and economical risk management.

Management told us it concurs with this recommendation. It told us SRC has conducted root cause analysis in the majority of its risk assessments and is currently in the process of implementing a system that will ensure root causes are clearly documented.

Analyzing the likelihood and impact of risks

We expected SRC to analyze the likelihood and impact of risks by using processes to:

- *identify the likelihood each risk will occur in short, mid, or long term*
- *identify positive and negative impacts*
- *list risks excluded from analysis due to low impact*

SRC had strong systems to analyze the likelihood and impact of all significant risks it identified. The Board used a comprehensive risk management strategy and framework that guided managers to analyze risks consistently across the agency. The guidance set out five levels of probability from "rare" to "almost certain" events. It also expected managers to identify the time period in which a risk was most likely to occur (e.g., annually, once in three, ten, or thirty years).

The Board's risk management strategy and framework communicated the importance of identifying positive and negative impacts. A "consequence matrix" provided specific quantified measures to guide the consistent assessment of the impact of adverse events or positive opportunities. The matrix provided detailed guidance on the range of potential impacts, who

or what would be affected, and quantified the extent of the impact to determine the severity of the risk. SRC ranked its 43 most significant risks, and ranked lower those risks with less serious consequences.

Evaluating risk tolerance and appetite for opportunities

We expected SRC to evaluate its tolerance for threats to its objectives and its appetite for opportunities with processes to:

- *decide criteria for risk tolerance*
- *communicate with its partners about risk*
- *set priorities for risk treatment*

SRC's Board approved risk tolerance statements for every risk type. These statements included critical words (i.e., criteria) showing how SRC related its tolerance of risk to the importance of the risk. For example, SRC considered its employees its most important asset and so had less tolerance of risk in this area. SRC valued its reputation and proactively protected it. These general risk tolerance statements were supported with detailed guidance. For example, the consequence matrix outlined tolerance levels for safety and financial risks. Policies such as the signing authority policy also quantified the amount of risk that SRC's Board will tolerate without additional approval and Board involvement.

SRC communicated extensively with its partners about risk. Often the discussion about sharing risks began when SRC initiated the partnership. In most cases, a written contract guided the partnership. Although SRC may begin discussions with a standard contract, each contract became unique because it represented decisions among the partners about how to manage risks, for example, like loss of confidentiality or inadequate insurance.

SRC's risk tolerance criteria sometimes related directly to its strategic goals. For example, in projects to clean-up abandoned mine sites, SRC required contractors to hire local people to do about 25% of the work. In this way, SRC's criteria for managing risks also contributed to its strategic goal of sustainable development (e.g., building local skills).

SRC's Executive Team annually recommended priorities for risk treatment to the Board for approval. These priorities were aligned with SRC's strategic plan and annual operating plan. The risk of inability to

hire and retain expert employees was a priority in 2008. The priorities influenced SRC's tolerance for risk and directed managers about how aggressively to take action on those risks.

Treating key risks

We expected SRC to treat key risks based on its processes to:

- *identify options for treating priority risks*
- *assess cost and suitability of optional treatments*
- *select risk treatment plans*
- *discuss risk treatment plans with relevant partners*

SRC's Board and Executive Team identified options for key or priority risks (see short list under heading *Identifying risks*). The Executive Team often discussed priority risks during its bi-weekly meetings. The Executive Team also focused on priority risks during daylong meetings when it assessed the cost and suitability of various options and outlined risk treatment plans. For example, it discussed optional treatments for risks to human resources twice yearly.

Using its risk management policies, SRC's Board approved the assignment of vice presidents and other Executive Team members as risk owners. The Board expected risk owners to assess risk treatment options including whether the option would reduce the likelihood or the consequences of risks. For example, SRC used its consequence matrix to help managers select ways to treat risks. The matrix helped managers consider which options would best treat SRC's priority risks. The matrix ranked (one to five) the potential financial, physical, legal, reputation, and operational impacts. The matrix made possible a more standard analysis of treatment options.

Risk tolerance statements and a signing authority policy also guided how managers selected options for treating risk. For example, when priority risks were associated with specific projects, project managers assessed cost and suitability and recommended the selected option for treating the risk to the Executive Team. Often the project managers explored the options during contract negotiations when a project began.

SRC used its contract-approval process to reach agreement with partner agencies on how it planned to treat risks. These discussions involved

project managers, division managers, or Executive Team members depending on the nature of the risk. The Executive Team and/or the Board approved the selected options when contracts were finalized or during the budget process. In cases where the Board judged the risk to be high, it requested more frequent project reports on treatment options and discussions with partners (e.g., quarterly reports on its contract to clean up abandoned uranium mines in northern Saskatchewan).

Monitoring risk

We expected SRC to monitor risks using processes to:

- *report action taken on its risk treatment plan*
- *review its risk processes and outcomes of risk treatment*
- *record residual risks and lessons learned*

SRC's Board received project reports and special reports on specific risks to keep it informed of action taken to treat risks. For example, the Executive Team and the Board received reports on an independent audit of its safety processes. The Board used checklists to monitor that it (and Board committees) received the reports it required.

SRC actively reviewed and regularly updated its risk management processes during 2005 to 2009. SRC provided routine updates of its risk management processes to its Executive Team, the Governance Committee, and the Board. For example, in July 2008, a risk management report to the Board explained the key controls SRC used to manage its priority risks, using safety and employee retention as examples. The report showed progress and outlined intended future reports.

SRC's Board had not yet selected measures for risk-related outcomes. As a result, the Board did not routinely receive reports showing the results of risk treatments. For example, the percentage of critical positions that are vacant could measure the outcome of efforts to retain employees.

Instead, SRC used 20 key performance indicators to monitor its progress toward achieving its plans. Some of these indicators helped to monitor risk-related outcomes. For example, an annual client survey assessed whether SRC's clients valued their services and were satisfied with the relationship, a priority risk. Also, annually measuring employee

satisfaction with their supervisor helped SRC to monitor its ability to retain its skilled employees, another of its priority risks. More frequent and focused monitoring would give the Board and management more timely notice of changing circumstances.

SRC monitored the residual risk remaining after its efforts to control the risks. SRC's risk register recorded the amount of risk remaining after controls were in place for each of SRC's 43 identified risks.

2. We recommend the Saskatchewan Research Council Board monitor outcomes related to priority risks to enable timely response.

Management told us it concurs with this recommendation. It told us this process is already underway, and that SRC plans to implement a process for monitoring outcomes related to priority risks.

Selected references

Amitrano, M. & Woolcott, J. (2008, April). The new wave of risk management. *Accountancy Magazine*, 45-47.

Auditor General Victoria. (2004). *Managing risk across the public sector. Good practice guide*. Melbourne, Australia: Author. http://www.audit.vic.gov.au/reports_par/agp84cv.html (26 Mar. 2009).

Beasley, M.S., Branson, B.C., & Hancock, B.V. (2008). Rising expectations. Audit committee oversight of enterprise risk management. *Journal of Accountancy*, 43-51.

Committee of Sponsoring Organizations of the Treadway Commission. (2004). *Enterprise risk management – Integrated framework: Application techniques*. New Jersey: American Institute of Certified Public Accountants.

Government Accountability Office. (February 2008). *Head start: A more comprehensive risk management strategy and data improvements could further strengthen program oversight.* Washington, D.C.: GAO-08-221.

Government of British Columbia. (2006). *Enterprise risk management guideline*. Victoria, B.C.: Risk Management Branch and Government Security Office. http://www.fin.gov.bc.ca/pt/rmb/ref/RMB_ERM_Guideline.pdf (26 Mar. 2009)

Lindsay, H. (2003). *Twenty questions directors should ask about risk*. Toronto: Canadian Institute of Chartered Accountants.

Lindsay, H. (2005). *Risk Management. What Boards should expect from CFOs*. Toronto: Canadian Institute of Chartered Accountants.

Psica, A. (2008). The right fit: Auditing ERM frameworks. *Internal Auditor*, 50-55.

Standards Australia/New Zealand. (2004). *Risk management AS/NZS 4360*. Sydney: Standards Australia.

Standards Australia/New Zealand. (2004). *Risk Management Guidelines—Companion to AS/NZS 4360: 2004.* Sydney: Standards Australia.