



INSTITUTE OF DIRECTORS  
SOUTHERN AFRICA



# African Governance Showcase 2016

CSIR Risk Management that Works?



 Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Eidgenössisches Volkswirtschaftsdepartement EVD  
Staatssekretariat für Wirtschaft SECO

## CSIR: Risk Management that Works?

In July 2016, Tendayi Pswarayi, the chief risk officer at the state-owned Council for Scientific and Industrial Research (CSIR) was conducting his regular review of the organisation's risk management structures and processes. He knew that failure to identify and manage risk effectively could be catastrophic for the organisation. He wanted to ensure that the risk processes that had been introduced over the years at the CSIR would provide the board with the information that would enable effective risk management.

### Background on the CSIR

With the state as the sole shareholder, the CSIR was a leading scientific and technology research, development and implementation organisation. Among its inventions was the Tellurometer, the world's first successful electronic distance measurement device. With its ability to measure distances of up to 50km his technology had revolutionised map making. It was also used in the transmission of wireless signals.

The CSIR had a staff of almost 3 000 people, 66% of whom were researchers with science, engineering and technical (SET) skills. The CSIR used a shared services model for support functions like finance and human resources.

Risk management had always been a fundamental element of the CSIR's approach, although the advent of the King codes of governance and the Public Finance Management Act of 1999, both of which addressed a far wider spectrum of risk than in the past, had raised expectations regarding the management of risk in organisations. Thus, in 2006, the CSIR went through an operational review process with a view to improving its risk management strategies, among other things.

### The 2006 Diagnosis

The review process found that risks had traditionally been managed by individual research areas and shared services portfolios. Risks were identified by individuals in their divisions, with information only being shared within these divisions. As a consequence, risk and risk interdependencies were not identified or aggregated at an organisational level. The review process therefore highlighted the need for a central risk management office in the CSIR.

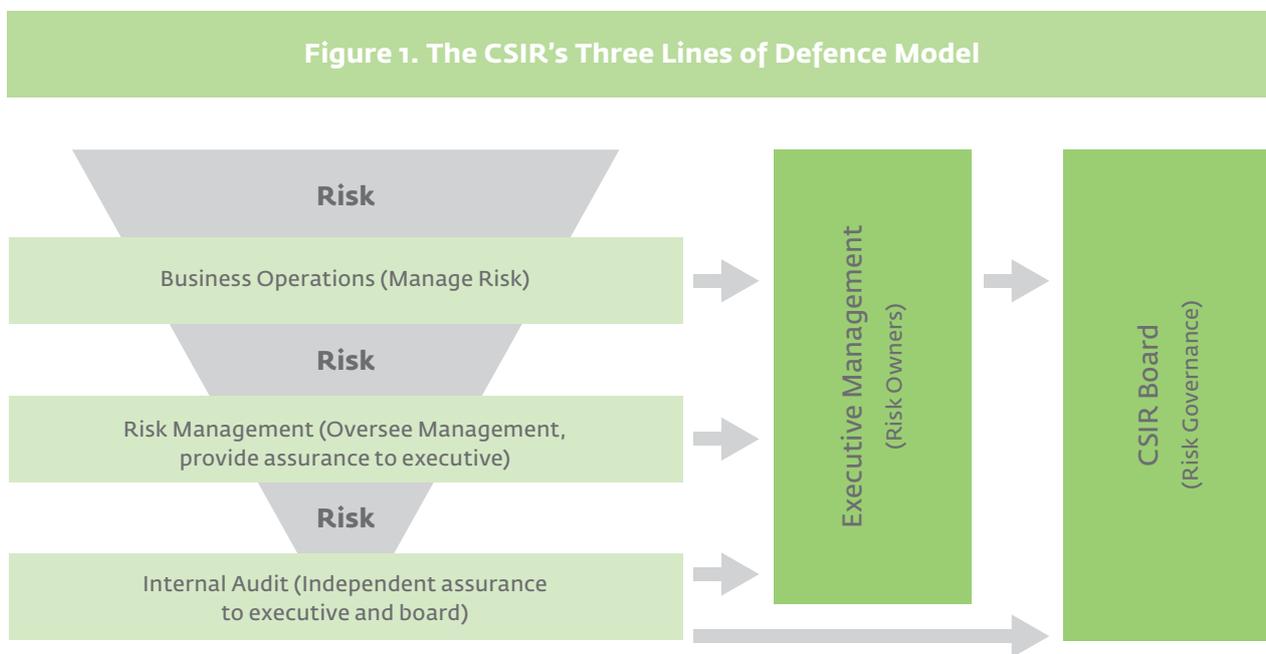
### The Remedy

The CSIR Internal Audit Services (IAS) assumed responsibility for facilitating and coordinating risk management in the organisation and developed a formal risk management process that was aligned to the ISO 31000 standard. This process ran in parallel with the formation of the shared services Risk Assurance Office (RAO). RAO was established for the purpose of enabling efficient and effective governance of significant risks and related opportunities amongst the shared services portfolios. Thus, the risk management and risk assurance functions were separated.

In 2013, with the support of senior management and the board (see Exhibit 1 for the board composition), the RAO was elevated in status and became known as the CSIR Enterprise Risk Management office (ERMO). ERMO made responsible for designing and implementing risk management strategies and for monitoring the management of risk in the CSIR. To do this, ERMO was tasked with: facilitating the development of organisational risk management standards; enhancing a co-ordinated and uniform risk management system within the organisation; continued monitoring of compliance to set standards through internal and external assessments and audits; and assessing compliance with applicable laws, regulations, standards and board policies.

## CSIR Risk Management Architecture

Included in the CSIR’s risk management mechanisms was the principle of levels of defence: with the CSIR having built three lines of defence into its system: business operations, formal risk management and internal audit (see Figure 1 below).



The Board-appointed audit and risk committee met four times a year and was responsible for considering the risk management plan. The plan gave details of the CSIR’s risk assessment methodology, its risk response strategy and its plan for continual monitoring of risk. The board approved this plan annually and the plan formed part of the performance agreement between the CSIR and the Department of Science and Technology, the government department to which the organisation was accountable.

The Internal Audit Service reported to the audit and risk committee and provided a written assessment of the effectiveness of the risk management system to the board. On an annual basis, the board disclosed its view on the effectiveness of the risk management process in the CSIR’s annual report.

### How does CSIR make ERMO work going forward?

Having put this system in place, ERMO then embarked on a training and change management programme to educate staff on the risk management framework and entrench the process within the organisation.

However, Pswarayi was aware that having all the systems in place did not guarantee that the organisation’s risk management would be effective. Having a central office drive the risk management agenda came with its own risk: that the business would view risk management as ERMO’s responsibility, and not the responsibility of each component of the business. There were also those who viewed ERMO as being there to “police” them.

In addition, the process of identifying and assessing risk was complex and, in an organisation such as the CSIR, open to subjectivity. The CSIR had put together a risk management team to identify the risks to which the organisation was exposed. Its process involved reviewing audit reports, creating and administering risk questionnaires, brainstorming, analysis of the internal and external environment, scenario analysis, and interactions with internal and external stakeholders. Pswarayi wondered whether this was sufficient to provide the CSIR board with the information it needed to manage risk effectively.

## Questions

**Can the risk processes introduced at the CSIR provide the board with sufficient and correct information that enable effective oversight in terms of risk**



**What information does the board need to inform its oversight role**



**Is the risk structure adequate**



**Can management be seen to have done all it can to ensure proper risk management**



**What risks can appear that aren't taken into consideration by this particular risk architecture**



**What skills set does the board need to ensure effective risk management in the CSIR**



## Exhibit 1 CSIR Board Composition

Total number of board members 10 – Chair, CEO and eight non-executive directors

### Major Qualification Disciplines

Chemistry/Chemical Engineering	2
Electromechanical engineering	1
Electrical engineering	1
Legal	1
Biotechnology	2
Nuclear engineering	1
Financial/chartered accountant	2
Mathematics education	1

### Level of Qualification

PhD	6
Masters	3
Honours (Honours equivalent)	2

### Employer

Academic	2
Business/consulting/legal	6
Government	1
State-owned enterprise	2

**Disclaimer:** This case study was submitted to the African Governance Showcase for 2016. The author of each case study is solely responsible for the content thereof. The publication of the case study shall not constitute or be deemed to constitute any representation by the IoDSA, IFC or SECO. The information contained in each case study is to be used only as a case study example for teaching purposes. The information in the case study is both factual and fictional. Opinions formulated by the author are those of the author solely. Copies of this case study may not be sold for commercial benefit.