Risk Management in a University Environment

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Abstract

This paper describes a generic methodology for the identification and management of risk in a University or similar tertiary education environment. The importance of risk management for ensuring the quality of institutional governance is illustrated and a framework is outlined that enables the management of risk to be incorporated in the institution’s governance cycle. The paper is based on work done by the authors and others between March 2008 and April 2009 using the risk management standard as the basis for a comprehensive system for managing risk in an Australian University, and to define processes whereby risk management could be integrated with, and add value to, the overall governance of the University.

Introduction

Charles Perrow \cite{1} in a significant work entitled ‘Normal Accidents’ made the claim, over 20 years ago, that organisations and inter-organisational relationships have become so complex that the potential for crises is an inherent consequence of their design and modus operandi. The challenges of managing organisational exposure to risk (and crisis management) have assumed a higher profile in recent years. Part of the challenge is that many risks, like reputational threat, are intangible and can arise from a wide range of causes, with widespread adverse impacts not only for the institution itself but for the sector in which it is positioned.

While many of these crises are unintentional, such as a failure of our understanding of the interconnections of systems design or a breakdown in our detection or control processes, we are also increasingly facing intentional crises where the key players are only too well aware of the potential threat and do not act, when they can, to put procedures in place to minimise or indeed, prevent the event. It is clear that ineffective quality assurance and risk management are significant contributors to the development and scale of these crises. For example, two widely publicised recent examples are the BP oil drilling rig disaster in the Gulf of Mexico and the liabilities incurred by James Hardie Industries through their widespread use of asbestos. In both cases, inadequate risk management processes were a significant contributory cause. Risks of this nature may be categorised as ‘strategic’ in that, although their origin is not related to a single disruptive event, they can, if not appropriately managed, inflict serious damage not only on people and the environment but also on the reputation and standing of the organisation, the sector and in some cases the government, concerned. Further over the last year it has become apparent that some higher educational providers have severely damaged trust and confidence in education for international students, a situation which now requires immediate amelioration.

Quality assurance has been an ongoing debate in the Higher Education sector for at least the last decade or longer. Ensuring that all strategies, programs and outcomes are aligned, fit for purpose and outcome-focused with a proper quality assurance system is essential. Assuring quality is about how we understand, measure and improve it. Improving quality inevitably involves change, and implementing change, in itself, is a risky business \cite{2} as often the outcomes are not realised or there are inadvertent consequences. Given the current higher education landscape, major drivers of transformation include:
- Increased responsiveness and accountability. Universities are increasingly expected to take account of the needs of employers and the wider community in both the design and delivery of undergraduate courses and in the focus of research work undertaken;
- Broader student expectations in terms of the range of learning paradigms available, related to the importance of the ‘image’ presented by a university and its reputation, both of which enable the attraction of high quality students and faculty;
- Increased competition for students and faculty in what has become a global marketplace for tertiary education, and where the competition for faculty is exacerbated by the demographic shift towards higher age groups and consequent problems in succession planning;
- Increased external scrutiny. Universities’ activities are now subject to an increasing level of examination and review.
- Monitoring of compliance with regulatory requirements, providing philanthropists with assurance regarding the disposition of benefactions, and satisfying requests under the Freedom of Information Act are examples;
- Entrepreneurialism. Engagement with the commercial world is an increasing feature of most universities’ activities. Often such engagement is pro-actively driven by university researchers seeking partnering arrangements with commercial organisations whereby research work can be funded and the commercial value of research outputs can be realised and shared;
- Impact of information technology. Advances in information technology have impacted tertiary education in two major areas: first, with the advent of electronic or ‘e-learning’ giving rise to significant changes in traditional learning and teaching patterns, resulting in increased flexibility in exchange for reduced direct tutorial contact; and second, automation of student support services such as admissions and enrolments, and provision of a common platform that enables consolidation of financial and other administrative functions.

There is a greater emphasis on the management of risk as higher education institutions increasingly recognise the effective management of it as an essential component of their strategic planning process and in the management of their implementation programs. The challenge, addressed in this paper, is to ‘embed’ risk management processes into the basic management cycles of the university.

In higher education we are faced with, a complex network of educational providers in a competitive global environment and this gives rise to ‘strategic’ risks, exemplified by the challenge of maintaining staff-student ratios at levels that provide not only an acceptable quality of a student learning experience with relevant pedagogies but also are dependent on an adequate supply of research infrastructure for addressing research needs. There have also been several individual incidents on tertiary campuses with serious or tragic results (Monash University [3], Virginia Tech. USA [4]). Risks associated with such incidents may be categorised as ‘operational’ or event-based, in contrast to strategic. However this has led management of universities to an event focus rather than seeing this as part of the institution’s systemic quality assurance.

The aim of this paper is to set out a process framework for the management of both categories of risk at a university. The framework establishes the relationship between strategic and operational risk management and provides information for use at executive level in monitoring the overall risk exposure of the university. In line with emerging best practice for embedding quality risk management in overall governance and strategic processes, the paper also identifies where the linkages between the risk management framework and other university governance processes occur, namely during the strategic planning process and the budgeting cycle.
**Understanding Risk**

**Definition of Risk**

Risk is defined in the previous ANZ/S 4360: 2004 standard as “The chance of something happening that will have an impact on objectives” [5] and there is a similar, more succinct definition in the new ISO 31000: 2009 standard: “Effect of uncertainty on objectives” [6]. This latter definition removes the event-related bias of the earlier definition and widens the range of risks encompassed to include those of a strategic nature that are not related to specific events. The latter definition is used in this paper.

**Risk in a University Context**

Universities are distinguished from typical commercial organisations by having a high visibility within the community at large, by a plurality of objectives as reflected in their strategic plans, and by a relatively high diffusion of accountability amongst those concerned with strategy implementation. University risks arise both from its position in the broader community and from its own internal governance activities as well as the long term and event-based risks embraced by the new standard and can be conceived as strategic, operational or both as follows:

1. **Strategic risks** are University-wide risks that relate to the broad university risk context in terms of outcomes of university activities, threats arising from the external environment in which the University operates, and risks associated with the internal governance of the university. Strategic level risks are usually associated with longer term consequences and may necessitate treatment processes involving policy changes.

2. **Operational** risks are those risks associated with activities carried out by Faculties and/or administrative units to implement University strategies, conduct the core University activities of learning, teaching and research, and to manage the operations and resources of the University. The risks may be common to several Faculties or units, or may be specific to an individual Faculty or unit.

The essential interconnectedness of operational activities to strategy enables managers to understand intractable issues rather than seeing events as isolated and therefore not traceable through the trajectory of activities and events at all stages of delivery. This is an important part of understanding quality assurance and risk [7].

**Case Study**

*Development of Risk Management in a Major Australian university*

During 2007 and 2008 an extensive program of risk identification and analysis was conducted at a major Australian university, resulting in the definition of a framework for the management of risk, and the population of the framework with identified risks. The framework included both ‘strategic level’ and ‘operational level’ risks, in a two-level risk hierarchy.

**Risk Identification**

Identification of risk – the first step in the risk management process as prescribed in the standard – used the technique of SWOT analysis. The categorisation of Strengths, Weaknesses, Opportunities and Threats in a ‘SWOT’ analysis produced the following results:

- **Strengths**: These were seen as the ‘elite’ reputation of the university in the local community and at large, with a consequent strong ‘brand’ image, together with the unusually wide range of undergraduate study offerings and the high quality and recognition level of the university’s research activities.

- **Weaknesses**: Potential obsolescence of the learning and teaching paradigms in use, as newer methods of e.g., on-line learning become more prevalent, the uneven quality of the university physical infrastructure, and uncoordinated and unwieldy internal governance procedures were
observed as key weaknesses. Additionally, it was noted that a small number of faculties were no longer economically viable.

- **Opportunities:** Growth in the international market for English-based tertiary education represents a significant opportunity for the university to develop within the Asian region; additionally, the university should be able to leverage its research capability and reputation to develop and increase the current research ‘centres of excellence’.

- **Threats:** These are categorised as arising from competitive pressures exemplified by newer universities with more aggressive course structures and up to date learning and teaching methods, together with intensive global competition for top faculty and students. The university’s reputation in important overseas markets (e.g., India) is threatened by association with poor experiences of international students in Australia.

**Methodology**

The SWOT analysis was completed by a series of interviews with the senior executive group of the University, each of whom was requested to identify those areas of greatest importance to the University, in terms of the goals set out in the university’s Strategic Plan, and the risks impinging on the achievement of those goals. Risks identified from the SWOT analysis were largely of a strategic nature as defined above, although some operational level risks also became apparent. The identified risks were categorised as follows, those:

- related to the University’s relationships with and provision of services to the student population
- associated with the conduct and outcomes of research activities
- arising from limitations in the quality and availability of academic and general staff, and physical infrastructure
- associated with economic management, performance, and internal governance
- related to occurrence and response to disruptive incidents, and
- associated with failure to maintain commercial and compliant relationships with external stakeholders.

To complete the identification and analysis of operational level risks, structured interviews and review workshops were held with senior members (Deans and/or Faculty Managers) and with managers of professional service units (PSU). Interviewees were asked to identify the risks, both external and inherent in their respective operations, of most concern. Interviewees were guided in ranking the risks identified in terms of both likelihood of occurrence and consequence (in terms of severity of impact). The results were analysed to identify risks that were common between Faculties and professional services units, and were then further analysed to determine linkages with the strategic level risks identified from the SWOT analysis.

**Risk Assessment**

**Likelihood and Consequence Tables**

To provide a consistent method for assessing risks in compliance with the standard and to facilitate the ranking process the likelihood and consequence tables shown below were adapted from the generic standard for the university environment. These also served as a calibration tool to ensure a common standard was used across all groups surveyed. The risk ratings were then read from the likelihood–consequence matrix reproduced following the tables.
Table 1: Consequence

<table>
<thead>
<tr>
<th>Consequence</th>
<th>Consequence Rating</th>
<th>Operational/ Capability</th>
<th>L &amp; T</th>
<th>R &amp; I</th>
<th>Student Experience</th>
<th>Community Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insignificant</td>
<td>1</td>
<td>Negligible delay/impact to core or support activities</td>
<td>Negligible impact on L&amp;T activities</td>
<td>Negligible impact on research activity</td>
<td>Minimal impact on meeting student demands and expectations</td>
<td>Negligible impact on community engagement and participation</td>
</tr>
<tr>
<td>Minor</td>
<td>2</td>
<td>Minor delay/impact to core or support activities</td>
<td>Minor impact on L&amp;T activity and outcomes</td>
<td>Minor impact on research activity</td>
<td>Minor inability to meet student demands and expectations</td>
<td>Minor impact on community engagement and participation</td>
</tr>
<tr>
<td>Moderate</td>
<td>3</td>
<td>Minor delay/impact to core or support activities over a sustained period</td>
<td>Minor impact on L&amp;T activity and outcomes over a sustained period</td>
<td>Minor impact on research activity over a sustained period</td>
<td>Significant inability to meet student demands and expectations</td>
<td>Significant impact on community engagement and participation</td>
</tr>
<tr>
<td>Major</td>
<td>4</td>
<td>Major delay/impact to core or support activities over a sustained period</td>
<td>Major impact on L&amp;T activity and outcomes over a sustained period</td>
<td>Major impact on research activity over a sustained period</td>
<td>Serious failure to meet student demands and expectations</td>
<td>Serious impairment to community engagement and participation</td>
</tr>
<tr>
<td>Excessive</td>
<td>5</td>
<td>Unable to participate in core activities for a sustained period</td>
<td>Serious impairment to L&amp;T activities and outcomes</td>
<td>Serious impairment to research activities</td>
<td>Complete failure to meet student demands and expectations</td>
<td>Series brand damage</td>
</tr>
</tbody>
</table>

Table 2: Likelihood of Occurrence

<table>
<thead>
<tr>
<th>Consequence</th>
<th>Consequence Rating</th>
<th>Likelihood</th>
<th>Likelihood Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insignificant</td>
<td>1</td>
<td>Highly Likely</td>
<td>A</td>
</tr>
<tr>
<td>Minor</td>
<td>2</td>
<td>Probable</td>
<td>B</td>
</tr>
<tr>
<td>Moderate</td>
<td>3</td>
<td>Possible</td>
<td>C</td>
</tr>
<tr>
<td>Major</td>
<td>4</td>
<td>Unlikely</td>
<td>D</td>
</tr>
<tr>
<td>Excessive</td>
<td>5</td>
<td>Remote</td>
<td>E</td>
</tr>
</tbody>
</table>

Table 3: Risk Rating (LC)

<table>
<thead>
<tr>
<th>Consequence</th>
<th>Insignificant</th>
<th>Minor</th>
<th>Moderate</th>
<th>Major</th>
<th>Excessive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Likely</td>
<td>Medium</td>
<td>Significant</td>
<td>High</td>
<td>Extreme</td>
<td>Extreme</td>
</tr>
<tr>
<td>Probable</td>
<td>Low</td>
<td>Medium</td>
<td>Significant</td>
<td>Extreme</td>
<td>Extreme</td>
</tr>
<tr>
<td>Possible</td>
<td>Low</td>
<td>Medium</td>
<td>Significant</td>
<td>High</td>
<td>Extreme</td>
</tr>
<tr>
<td>Unlikely</td>
<td>Low</td>
<td>Low</td>
<td>Medium</td>
<td>Significant</td>
<td>High</td>
</tr>
<tr>
<td>Remote</td>
<td>Low</td>
<td>Low</td>
<td>Medium</td>
<td>Significant</td>
<td>High</td>
</tr>
</tbody>
</table>
Assessment Results
The risk identification and assessment processes resulted in the derivation of a ‘top 20’ set of university risks linked to the elements of the Strategic Plan, as shown in the following table. No risks were rated ‘Extreme’ or ‘Low’, possibly reflecting a 'smoothing' effect as individual risks were aggregated, and also the genuine perception that there were no risks requiring the urgent high level action that the ‘Extreme’ category would require.

Table 4: Assessment Results

<table>
<thead>
<tr>
<th>No of Risks at each Rating</th>
<th>Strategic Plan Element</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ALL</td>
</tr>
<tr>
<td>Extreme</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>2</td>
</tr>
<tr>
<td>Significant</td>
<td>2</td>
</tr>
<tr>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td></td>
</tr>
</tbody>
</table>

The analysis of risk was significant in providing a basis for the development of the risk management framework described in the remaining section of this paper. During the analysis it was also noticed that:

- Many of the risks identified were common to several Faculties or units; although the terminology used differed, the risks were essentially the same. Additionally, a minority of the risks identified were of wider relevance to the University than the identifying group.
- ‘Operational’ risks that apply across the university may reflect issues that have strategic implications (examples are the absence of crisis management or continuity planning).
- In all cases, there was only a tenuous connection between the identification of risk and the University’s budget cycle or strategic plan. Risks were referenced in budget documents in an anecdotal, qualitative manner and it was clear that the processes and incentive needed to incorporate consideration of risk into the management of operations and preparation of inputs to the business management cycle were largely absent.
- Risk was not seen as a key part of the management process and ‘embedding’ risk management into the governance culture of the university would only happen if risk was made an integral part of the budget cycle and performance measurement.
- A lack of regular two-way communication with staff on specific risks and their management meant that a number of actions which could lead to significant improvements in the mitigation and amelioration of those risks were not being identified or taken forward.
- There was a need for a simplified representation of key risks (selected according to defined criteria and aligned with the University’s strategic plans) for review at the most senior level, and this should include an indication of the efficacy of the management of each risk, separate from the risk rating.

Risk Management

Framework
The risk management framework developed for the University provides for successive iterations through risk analysis, budget preparation, and audit stages. The process enables the risks associated with implementing the University’s strategic plans to be monitored and controlled. The feedback from the
budget and audit stages is used to modify the constituent activities in line with the University’s level of tolerance for risk.

Diagram 1 depicts the overall process and the stages are described following the diagram.

**Diagram 1: Risk Management Framework**

(1) **University-wide Risk Analysis**
Risks are classified in a two-level hierarchy:

1. **Strategic** Risks as defined above are associated with the elements of the University Strategic Plan and apply across the University. These risks were initially identified through the processes of SWOT analysis supported by senior management group interviews.

2. **Operational** Risks are associated with the specific activities of one or more particular Faculties and/or professional service units (PSUs). These risks:
   - may contribute to higher level risks especially in cases where a similar risk applies to more than one Faculty or PSU; and
   - are treated using Risk Treatment Plans developed and managed at the Faculty/PSU level.
Risks identified are recorded in Risk Registers. Risk ratings associated with each of the strategic risks are used to prioritise the risk treatment plans that are developed for the contributory Faculty and/or PSU common risks.

(2) Budget Cycle

This cycle provides the means for the integration of risk with the governance processes of the University. The components of the cycle are:

- Operational risk reviews
- Risks consolidation
- Executive dashboard

Operational Risk Reviews

The reviews follow an annual review cycle, in line with the budgeting process and take the following form:

- A unit level review of the current register and treatment plans, designed to take place in the six month period following the establishment of the budget for the following year, and is the responsibility of the Faculty Dean/Manager or the HOA of a service unit. The assessment of each risk “owned” by the unit is revisited in the light of implemented treatment plans and a determination of the residual risk level made. New risks identified since the previous stage in the cycle are added to the register with appropriate ratings as determined by the responsible Faculty or unit;

- Budget submission reviews take place in the alternate half yearly period to the unit reviews and form part of the budget submission preparation process. The risk register of each Faculty and service unit is reviewed and those risks identified for which:
  - the residual rating is ‘Significant’ or higher [7];
  - funding is needed to initiate or continue one or more of the treatment plans associated with the risk.

Risks Consolidation

This takes place after the budget submission reviews are completed and is carried out by the risk custodian function within the University. Those risks identified as ‘Significant’ or higher across all Faculties and service units are collated and where appropriate consolidated into a single entity. (This is feasible where a set of apparently diverse risks as described in the individual registers are all referring to a single underlying risk, e.g. OH&S, disruption of campus). Commonality does not necessarily imply consistency of rating, because similar risks may be perceived by different areas of the organisation as having different degrees of consequence. Criteria for assigning a risk rating to each of the consolidated risks are developed from a combination of rating levels and frequency of occurrence of the individual source risks.

Executive Dashboard

This provides a ‘snapshot’ of the current status of each consolidated risk, and also includes those risks identified at a strategic level. It includes a ‘risk control’ assessment and complements and extends the risk rating derived from the likelihood and consequence assessments by providing a summary measure of the extent of University exposure to each risk, and the extent to which the risk is being effectively managed. It also enables the efficacy of risk treatment processes to be assessed by comparison of results from successive periods. The dashboard is prepared initially and refreshed each year by the risk custodian function within the University, with inputs from the owners of the individual risks where appropriate.
Three control levels are used in the dashboard:

1. ‘Red’ – There are significant external factors outside the University’s control associated with the risk and/or systemic internal weaknesses not adequately addressed by the current treatment processes that result in significant University exposure, and require senior management intervention
2. ‘Amber’ – There are potential exposures associated with the risk and although these are being managed the efficacy of treatments needs to be kept under review
3. ‘Green’ – Well defined and appropriate treatment processes are in place and on track. No special management action is required.

(3) Internal Audit Review

This takes place following the budget preparation and uses the output together with the Executive Dashboard to assess the efficacy of the risk treatment plans and the acceptability of the resulting residual risks. In this stage, audit may recommend further mitigation or control measures.

Conclusion

The approach to managing risk described in this paper is applicable for higher education providers and it is hoped will be useful as a model for future practitioners. The framework and the process of integration with the budgeting cycle places the identification and treatment of both strategic and operational risks within the governance structure and will facilitate the ‘embedding’ of a risk-based management culture within the organisation.

References


