



Newsletter | Summer 2007 Edition

Welcome to the summer edition of the R2A Newsletter.

Over the past 2 years there has been a complete shift in the way risk is addressed. This has seen a focus on precautions rather than hazards which would appear to be common sense as risk management should be about facilitating activities rather than preventing activities or slowing things down. This focus is also in line with the common law duty of care.

This edition contains a feature article which highlights this change in risk management philosophy and some of the issues organisations face. Such thinking underlies recently completed reviews by R2A including:

- the implementation of Digital Voice Announcement and Traction Interlocking on the RailCorp InterCity fleet
- SIL review for the AirportLink and Northern Bus Link in Brisbane (tender stage)
- Fire and Explosion SIL due diligence review of the unloading and transfer system at Sugar Australia's Glebe facility.

In addition, Richard has delivered Risk & Liability Management courses in Melbourne, Sydney and Brisbane over the last month or so.

With Christmas fast approach, the Directors and Staff of R2A wish you all the very best for the festive season and we look forward to working with you in 2008.

Published by:

Risk & Reliability Associates

Independent Technical Due Diligence

Risk Target Concept Legally Flawed

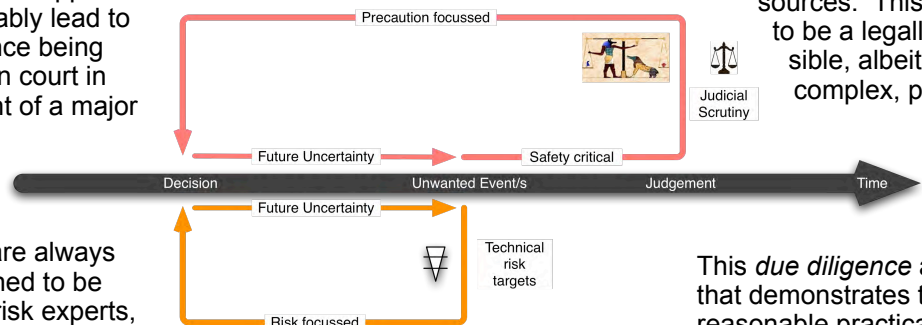
The organisational use of risk targets appears to inevitably lead to negligence being proven in court in the event of a major loss.

Big nasty events are always determined to be rare by risk experts, before they occur. If such low likelihoods were practically achieved such events would be so rare that they would not be expected to happen in our lifetimes. This means that if one does occur, the estimation of rarity must have been flawed. As one judge in Australia has commented during an inquiry after a particularly awful event: "What do you mean you didn't think it was going to happen, there are 7 dead".

This is a powerful argument and one which cannot be supported by the traditional risk based hazard management that suggest target

levels of risk are acceptable or tolerable in some way. Credible, critical threats must be seen to be man-

identical action lists of things to do enabling the decisions makers to determine the level of precautions based on the level of available resources. This seems to be a legally defensible, albeit more complex, process.



aged. The judicial test is not based on the level of risk per se, but rather on whether all reasonable practicable precautions were in place in view of the criticality of the outcomes.

Part of the reason for this conclusion is that risk assessors (experts or otherwise) never seem to numerically agree on the actual level of risk. Invariably there is a significant difference. If so, on whose opinion should the court rely? However, using such risk assessments to rank the available precautions generally does create

This *due diligence* argument that demonstrates that all reasonable practicable precautions are in place appears to underlie the revision of the Victorian OHS Act and regulations which came into force in July this year, and the opinion of the High Court.

Arguments to show due diligence are outlined in the Engineers Australia *Safety Case Guideline* on-line available from Engineers Media at www.engineersmedia.com.au/bookshop/epub.html. The significance of such arguments will be discussed further in future articles.

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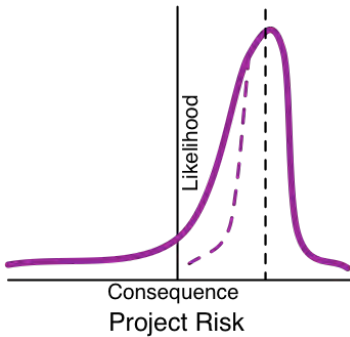
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Projects and Risk

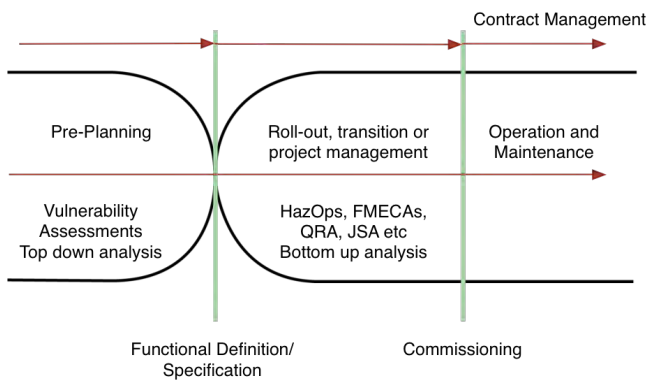
In today's society of multi-million dollar projects, risk seems to have become a second currency. If a new project is mooted, the first hurdle is how much will it cost (meaning what community resources are required) and the second question is, has there been a risk sign-off? Risk sign-off includes compliance with statute and common law provisions in addition to probity and other issues. These days, both the money and risk hurdles must be met for the project to proceed.

Projects conceptually have an interesting risk profile. They assume an upside risk position for a project taking into consideration all the associated benefits. Risk assessments then generally focus on the issues that prevent the assumed upside benefits from being achieved. That is, it is a downside risk assessment process from an assumed



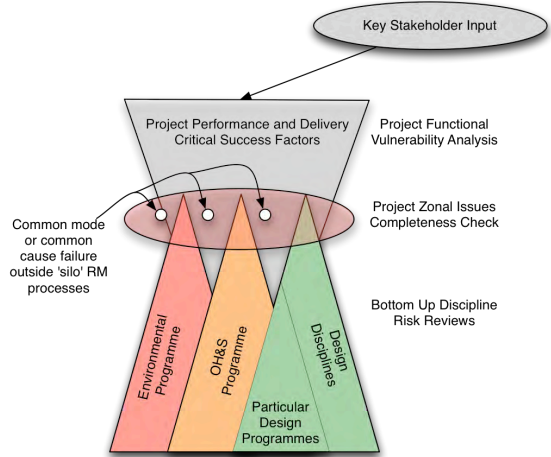
upside risk position which can be represented by the adjacent diagram. Some market or business risk techniques can also be laid over the top to tweak the upside benefits often in terms of cost savings.

Analysis can be done at any stage of a project's life cycle and can use a variety of risk assessment techniques as shown in the diagram below.



One of the main advantages of project risk profiling is that it can be done very early on in the project concept stage to identify overarching issues and potential project 'show-stoppers'.

Project risk profiling typically uses a combination of top down and bottom up risk techniques and generally involves two main tasks: a high level vulnerability assessment and associated risk profiling as required, supported by specific detailed bottom up reviews. The overall concept can be described by the following figure.



The objective of such reviews is to identify early on any potential project 'show-stoppers' and ensure that all sensible practicable precautions are in place based on the balance of the significance of the risk versus the effort required to reduce it.

Engineers Australia - Women in Engineering

With 2007, the Year of Women in Engineering drawing to a close, Gaye Francis has again been busy as co-chair of the WIE Victorian Committee.

To celebrate what has been a very successful year, an end of year cocktail function was held at the Hyde Cocktail Lounge on Thursday 18 October 2007. 60 guests took the opportunity before the mad Christmas rush to network in a relaxed and friendly environment.

October saw the launch of Purple Boots in Victoria with a charity breakfast attended by over 200 people. In this year of Women in Engineering, Engineers Australia is working with the Breast Cancer Foundation of Western Australia and safety footwear manufacturer, Steel Blue to support breast cancer education through the Purple Boots campaign. \$30 from the sale of every pair of purple coloured boots goes to the foundation. Further information about the campaign can be found at www.purpleboots.com.au.

In addition, Gaye also gave a briefing to the Goulburn Valley Region on Safety Integrity Level (SIL) Allocation and Due Diligence.

The 7th edition of the R2A text, 'Risk & Reliability - An Introductory Text', is available for purchase:

**Black & white, soft cover: \$100 + GST + postage & handling
Colour, coil-bound: \$200 + GST + postage & handling**