Newsletter | February 2010

ENGINEERING DUE DILIGENCE

r2a DUE DILIGENCE ENGINEERS

Welcome to the February 2010 edition of the R2A Newsletter

Happy new year to everyone. This is the first edition for a new decade and contains the upcoming happenings of R2A and a feature article which we trust you will find interesting. The due diligence discussions in previous R2A newsletter have prompted a number of requests to explain the differences between traditional hazard based risk management and solution based, precautionary due diligence style risk management. This is the subject of our feature article below.

R2A Briefings and Workshops

R2A has developed a suite of briefings and workshops to teach the R2A method, a top-down approach to uncertainty management that optimises risk outcomes and is defensible under law – unlike most standards based approaches.

Engineering Due Diligence
(½ day briefing for senior decision makers)
Cost effectively ensure risks are minimised and decisions are defensible. How to consider criticality, risk and reliability together to ensure due diligence in your organisation.

Organisational Risk Management
(½ day briefing for management)
Making risk registers useful. How to develop a straightforward and effective risk management program satisfying due diligence requirements and preventing analysis paralysis.

Project Due Diligence
(1 day workshop for management and senior decision makers)
Ensure your project succeeds – performance and delivery. How to look back from the desired project end-state to focus on those issues that will affect project outcomes.

Availability Profiling (1 day workshop for management)
Make your system the best it can be – at the best cost. How to combine criticality, risk and reliability analyses to optimise the effectiveness of the whole system with a top-down approach that is readily understood by major decision makers.

SIL Allocation (1 day workshop for management)
Applying SILs effectively and cost efficiently. How to make SILs work for you as effective safety management tools.

These workshops and briefings are to be managed by Rocarm on behalf of R2A. Further details and registration at www.rocarm.com/R2a.htm

R2A DIrector Gaye Francis is the 2010/2011 Victorian representative on the National Women in Engineering Committee and Hon Treasurer for the 15th International Conference for Women Engineers and Scientists to be held in Adelaide in 2011.

She is also on the organising committee for the upcoming International Women's Day breakfast to be held at Zinc Federation Square on Tuesday 9 March 2010. For further information and registration see www.engineersaustralia.org/wievic

International Women's Day

2010 Dates and Locations			
Engineering Due Diligence (½ day briefing)	Wellington - 23 Feb	Melbourne - 12 Oct	Brisbane - 23 Nov
Organisational Risk Management (½ day)	Perth - 29 Apr	Melbourne - 8 Jun	
Project Due Diligence (1 day workshop)	Melbourne - 16 Mar	Canberra - 7 Sep	
Availability Profiling (1 day workshop)	Brisbane 13 Apr	Perth 10 Aug	
SIL Allocation (1 day workshop)	Sydney - 13 Jul	Perth - 14 Sep	

Level 1, 55 Hardware Lane, Melbourne 3000 | P +61 3 8631 3400 | F +61 3 9670 6360
E the.editor@r2a.com.au | W www.r2a.com.au
Also in Perth & Wellington

There is frustration at present in industry, especially at board and general manager levels, that the effort directed at risk management is not as useful as it is made out to be. It is often a barrier or hinderance for getting on with a project or task rather than a vehicle for enabling action. This leads to questions, such as the following, from our clients:

- *We have applied the risk management process described in the Risk Management Standard. We have used reputable consultants to do this. We talked to every stakeholder we could. But when we went to act on the outcomes of all these deliberations, all hell broke loose, including potential legal action. What happened, why did it happen and what can we do about it?*
- *We are required to have a risk register. It satisfies our audit requirements but it actually doesn't work very well and causes enormous organisational frustration. Can you help?*
- *Our organisation uses a 5x5 (or 3x3 or 6x4) risk characterisation tool. But as a board level decision making tool, it's not making sense. Why is this?*
- *Does obtaining a license to trade from our regulator mean that we have satisfied our common law duty of care? That is, does achieving ALARP (As Low As Reasonably Practicable) in the eyes of our regulator satisfy the courts?*

Many of these difficulties can be explained by the table below which highlights the key differences between the traditional hazard based risk management process and the solution based, precautionary due diligence risk management process. Solution based risk management is greatly preferable and quite stimulating.

Solution based, precautionary risk management	**Hazard based risk management**
Focus is on solutions and the way forward.	Focus is on problems and their complexity.
Focuses stakeholders on common ground.	Causes stakeholders to analyse issues from a personal or local perspective creating suspicion, arguments and discord, often requiring resolution via a legal or quasi-legal process.
Facilitates decision justification with multiple stakeholders with overlapping interests.	For difficult problems, it creates an extraordinary level of detailed unrepeatable analysis that is unclear to the different stakeholders.
Understood by senior decision makers.	Almost impossible for senior decision makers to comprehend due to the analytical complexity and specialist skill set required.
Consistent with common (case) law precautionary scrutiny.	Fails common law scrutiny. Can only be sustained by statute law (and supporting regulation).
Top down and contextually sound.	Bottom up and often out of context.
Transparently deals with all known credible issues.	Can lose sight of the main issues amongst the detail.
Accepts that risk is primarily a human construct with some scientific aspects like consequence modelling.	Suggests risk analysis is wholly scientific and provides consistent, repeatable results. This is clearly not so. Two independent hazard analysts never come up with the same answer.
Holistic viewpoint.	Results depend on the particular analysis metaphor adopted and so results can have a skewed meaning.
Recognises that risk issues are unique to place, time and culture and may need different risk management tools and techniques to solve.	Assumes that all risk issues are equally tractable to the same risk management process.
Produces a small number of cost effective precautions to address multiple issues.	Produces a large number of difficult-to-justify individual precautions for each issue, which potentially work at cross purposes or duplicate tasks across the organisation.
Ensures identified good practice is applied to known issues.	Tends to reinvent the wheel for each identified issue.