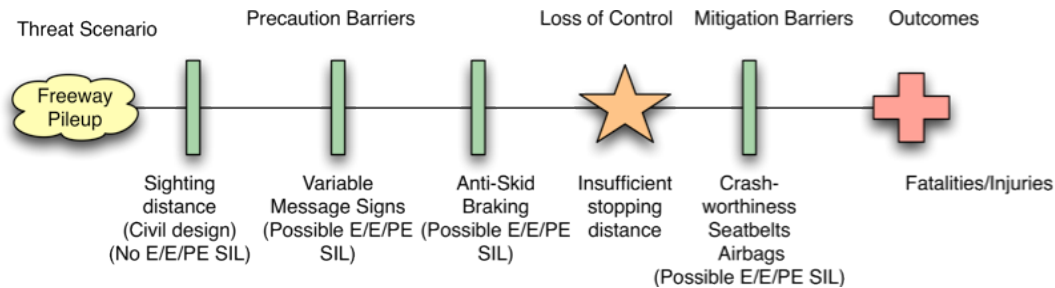


SIL Allocation

A one-day workshop for line, design and project managers

Applying Safety Integrity Levels (SILs) effectively and cost efficiently



Source: Risk & Reliability – An Introductory text (revised 7th edition)

This workshop demonstrates how to make SILs work for you as effective safety management tools.

- Understand the different Safety Integrity Levels
- Determine whether a SIL rating is needed – and, if not, transparently demonstrate why not
- Select the lowest required SIL – preventing expensive over specification
- Ensure every SIL allocation meets common law due diligence requirements

The process has been used in most Australian jurisdictions to the satisfaction of project managers, corporate counsel and regulators. It specifically rejects the target level of risk approach suggested in AS (IEC) 61508 in favour of the common law due diligence process.

SYDNEY | Tuesday 13 July 2010, 8.30am – 4.30pm

PERTH | Tuesday 14 September 2010, 8.30am – 4.30pm

Fee | \$595 per person, includes Risk & Reliability – An Introductory text (revised 7th edition)
Registration | training@r2a.com.au | F +61 3 9670 6360 | T +61 3 8631 3400

Workshop Leaders | [Richard Robinson BE BA FIEAust](#) | Director R2A
| [Gaye Francis BE MIEAust](#) | Director R2A

SIL ALLOCATION

Briefing Outline

Ensuring determined Safety Integrity Levels (SILs) are accurate and defensible

A one-day workshop for line, design and project managers

Objective

The objective of the workshop is to describe and have participants use a process which can robustly determine the minimum required SIL rating of plant and equipment which satisfies the liability management needs of corporate counsel and the common law.

The Issue

SIL levels are being called up in many government contracts based around the functional safety standard IEC (AS) 61508. Derivative standards like IEC 61511 are being used in the process industries to determine control system reliability requirements and IEC (AS) 62061 for safety of machinery for mining operations. Prescribing an excessively high SIL creates significant expense for little gain, but getting the SIL determination wrong will create huge liabilities in the event of an incident. And if in doubt, designers tend to be very conservative. The sorts of questions R2A is being asked include:

- A SIL study has been completed. The allocated SIL seems intuitively too high and is going to be very difficult to implement and will also be very expensive. What has happened and can anything be done about it?
- The contract calls up SIL 2 for all IT elements. Is this sensible?
- Will the SIL determination process described in IEC (AS) 61508 (which uses a target level of risk or safety) survive common law scrutiny Australian and New Zealand jurisdictions?

Workshop Focus

The bulk of the expense in any SIL rated project arises from the initial SIL allocation and is represented in Part 1 of the Standard. This is the focus of the workshop. The realisation of these determined SIL requirements will not be formally covered. The workshop will specifically explain why the target level of risk approach to the determination of safety integrity requirements described in Part 5 of the standard is rejected as being unable to survive at common law scrutiny in Australia and New Zealand.

Experience

R2A has been involved with the functional safety assessment standard IEC (AS) 61508 since it was a draft standard in the mid nineties. Projects include certification for ESW (electronic safe-working) of trains on single line track, power station control upgrades, ITS reviews for freeways and tunnels, and process control systems. Legal counsel has been involved with most of these reviews.