

Risk Management

This **two day** course provides an overview of risk philosophy and existing and emerging risk management techniques. Key tools and techniques to identify, manage and minimise technical risk are also provided.

The first day of the course is focused on risk philosophy. The second day provides a 'buyers' guide overview' of risk techniques and explains the strengths and weaknesses of a variety of risk management techniques and when the use of each is appropriate.

Target Audience ➤ For managers (eg line managers, middle managers and senior managers) who are involved in risk management within an engineering organisation. Also a more in depth view for those who have undertaken training in project risk management methods (eg project managers and those who are involved in project teams).

➤ Course Outline

Risk & Reliability Concepts

Insurance risk versus speculative risk philosophies; business risk versus safety risk; historical perspective; relationship of risk to reliability and quality.

Risk Management Paradigms & Safety Cases

Asset management approaches like HazOp and RCM; threat based SWOT or vulnerability assessments; market based risk as variance approaches; best practice versus hazard based risk management; computer simulated neo-Darwinism; risk culture approaches.

Legal Liability

Common law principles & due diligence; inquisitorial versus adversarial legal systems; human law versus laws of nature; adversarial legal system contradictions; the consequence driven nature of the courts.

Causation

A view of the future of risk: minimalist legal human error approaches; time & energy sequence approaches; culture/hazard versus vulnerability versus pathogen based; rise of the risk society in a context of globalisation.

Risk Criteria

Use of probabilistic criteria in Australian jurisdictions; societal risk criteria; environmental criteria; insurance criteria; ethical criteria.

Top Down Techniques

SWOT assessments vs threat and vulnerability assessments; risk characterisation systems & AS/NZS 4360: 2004; risk profiling processes & residual risk allocation; use & limits of risk audit systems; enterprise vs project risk profiling; risk ranking registers; acute OHS hazards; property underwriting; integrated risk based investment approaches.

Bottom Up Techniques

Technical risk assessment techniques HazOps; FMEA, FMECA and RCM; QRA; HACCP; different approaches.

Modelling Techniques

Reliability block diagrams; cause-consequence modelling (fault & event trees); threat barrier diagrams; risk based availability modelling; human reliability analysis.

Generative Techniques

Generative interview techniques; generative solution techniques; independent rapid risk reporting techniques.

➤ Course Objectives

At the end of the course participants will be able to:

- Understand risk and reliability concepts
- Appreciate the different risk management paradigms
- Understand legal and liability issues
- Apply top down risk management techniques
- Apply bottom up risk management techniques
- Carry out risk modelling techniques
- Carry out generative risk techniques
- Apply a more comprehensive approach to risk management

“ Good explanation of risk management and the diversity that it involves. Well presented by Richard's knowledge and experience. ”

Director, Thwaite & Associates