



Guidance on Risk

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Background/context

- Last published risk material in 1993
- Pace of addressing global challenges means taking some risks
- There almost never is full knowledge about a situation
- Need to establish public trust and confidence
- Engineering Council publishes guidance in support of UK-SPEC
- Accredited degrees cover aspects of risk

Remit of Risk working group

- To develop brief, top level, generic, profession-wide material
- Assist professional engineering institutions (PEIs), prospective registrants, professional review interview assessors, academics
- Demonstrate to society the profession's commitment to managing risk effectively
- Draw on existing materials

Some of the issues discussed

- Several definitions of risk – acknowledge this
- Engineers have a key leadership role to play
- People, behaviour and attitudes matter, not just technical issues
- How far should engineers be prepared to challenge?
- Importance of interconnectivity, dealing with whole systems
- Mustn't encourage risk aversion – opportunity, development
- There are different 'communications' - colleagues, the public
- How bold to be without appearing to have all the answers

Principles to guide professional engineers and technicians

1. Apply professional and responsible judgement and take a leadership role
2. Adopt a systematic and holistic approach to risk identification, assessment and management
3. Comply with legislation and codes, but be prepared to seek further improvements
4. Ensure good communication with the others involved
5. Ensure that lasting systems for oversight and scrutiny are in place
6. Contribute to public awareness of risk

1 Professional & responsible judgement, take leadership role

- A central principle
- Demonstrate commitment by example to others
- Use of informed judgement
- The balance of risk and reward is important
- Be prepared to challenge assumptions

2 Adopt a systematic and holistic approach.....

..... to risk identification, assessment and management

- Factors cannot be examined in isolation, inter-dependency, patterns, relationships
- Inclusion of non-technical factors and perspectives - human, cultural, organisational
- Look for opportunities - equally, mustn't substitute risk assessment for professional judgement
- Pragmatism : quantify risk as far as able to, is relevant and there is evidence

3 Comply with legislation and codes....

..... **but be prepared to seek further improvements**

- Aiming for culture of continuous improvement
- Remember that products may end up outside the UK where there may be different legislation
- Avoid hiding behind regulations

4 Ensure good communication with those involved

- Shortcomings in communication are present in nearly all failures
- 'Those involved' includes customers, clients, suppliers, subcontractors and colleagues, also the public and local community
- Consultation and feedback, an open reporting approach, spirit of questioning

5 Ensure lasting systems for oversight and scrutiny

- Importance of these as safeguards
- Aim for challenging processes, not only confined to auditing the paper trail – include culture and responses
- Out-sourcing can bring particular challenges
- Should be independent of those creating the risk

6 Contribute to public awareness

- Hugely important
- Awareness that others perceive risk differently
- ‘We know best’ won’t work
- Need to acknowledge and deal with fear or apprehension
- Be honest
- Be prepared to challenge mis-representations

Using the guidance

- To guide and motivate professional engineers and technicians in identifying, assessing, managing and communicating about risk
- As the basis for discipline-specific guidance from PEIs
- To assist academics when planning courses
- For use as a teaching resource on risk issues
- For students as part of introduction to professionalism?
- Key reference materials are listed on the 'risk' webpage



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Comments on the guidance welcome
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