DEFENCE STANDARD 00-56

Safety Management Requirements for Defence Systems (Part 1, Issue 5)
The Standard specifies the safety management requirements for acquisition of Products, Services and Systems for Defence Systems.

The Standard considers a system to be a combination of elements that are used together in a defined operating environment to perform a given task or achieve a specific purpose.

The elements would include personnel, procedures, materials, tools, products, facilities, services and/or data as appropriate. Whilst a contract life may be limited, application of this Standard should require consideration of the full life of the system, and for clarity, be and defined in the contract.

Application of the Standard should relate to all situations and scenarios, including but not limited to trials, operations and training for operations as defined in the user requirement.

Def Stan 00-56 has an enviable reputation for innovation.

The up-issue to Issue 4, formalised a move from a prescriptive process-based standard to a goal- and evidence-based standard.

The review to Issue 5 up-holds this reputation.
The Standard – Issues Addressed in Issue 5

• Clarity of the MOD Duty Holder:
  • Risk to Life
  • ALARP
• Clarifying current perceptions of safety acquisition
  – Naming convention for inherent processes and requirements
• Tailoring
  – Application of the Standard– bullets to Aircraft Carriers
  – Supply of Service contracts
  – Domain specific requirements
• CADMID/T Cycle
  – New and Legacy equipment safety management
  – New or change of use analysis
The Standard – Concepts

• Several new concepts have been introduced by the up-issue to Issue 5 which will impact and influence safety training and supporting processes, in summary they are:

  – The introduction of the concept of scope of contract, which is composed of two sub concepts scope of supply and scope of analysis;
  – The clear identification of requirements for safety engineering and for safety maintenance;
  – The clear identification of a range of responsibilities (primarily the Contractor’s);
  – The explicit inclusion of requirements for the contractor to meet safety requirements and manage shortfalls with mitigation strategies.

• These concepts are based on existing practice and evidence but additional training and guidance may be needed to ensure that project teams competently implement Def Stan 00-56 Issue 5 on Contractors
The Standard – Key Concepts

• Several new concepts have been introduced by the up-issue to Issue 5. The full list is set down in the linked Concept document.

• The eight key novel concepts are:

  – The clear identification of requirements for safety engineering and for safety maintenance
  – The introduction of the concept of scope of supply;
  – The introduction of the concept of scope of analysis;
  – The introduction of the concept of scope of contract;
  – The clear identification of a range of responsibilities (primarily addressing the Contractor’s responsibility, or not, for safety management, safety engineering and safety maintenance);
  – The clear identification of a Documentary Deliverables;
  – The explicit inclusion of requirements to design for safety and for health monitoring.
  – The explicit inclusion of requirements for the contractor to meet safety requirements and manage shortfalls with mitigation strategies.
The Standard – Terms and Definitions

• A number of terms used in Def Stan 00-56 have been strengthened, or newly introduced. The issue is that a changed definition of a term could indicate a change in interpretation eg with regards to Risk to Life:
  – all three of the fundamental terms ‘accident’, ‘harm’ and ‘safe’ have been reviewed.
• The full list of changed definitions is in the linked Definitions document.

• There is currently no definitive single taxonomy for definitions and terms used in MOD or Industry. The Safety taxonomy is currently under review and has already identified several authoritative sources of dissimilar definition.
The Standard - Use

NEW PROJECTS
• It is expected that New Projects will use Issue 5 for contracting.

LEGACY PROJECTS
• Legacy projects contracted to Issue 4 may continue to use Issue 4. Copies are available through the DStan Helpdesk.
• It may be prudent for some projects, in the early stages of the CADMID cycle, to consider amendment to use Issue 5; but this will be dependant on the benefit, eg through life cost of such a decision, and agreement between MOD and the Contractor.
• Part 3 of Issue 4, Requirements (Air Sector) has been capture within Issue 5 and has a specific Air Sector Tailoring Matrix.
The Standard – Relationship Def Stan 00-55

- Defence Standard 00-55, Requirements for Safety Related Software in Defence Systems is obsolescent.
- During the review of Def Stan 00-56 it was considered that the Safety Integrity Annex C of Part 2, Issue 4 required more and it was agreed to look at Revising Def Stan 00-55 to align with the Def Stan 00-56 Issue 5 strategy.
- Move to “Programmable Elements” defined as Products, Services and Systems that are implemented in software or custom hardware.
- Until Def Stan 00-55 issue 3 is published, procurers of PE should refer to SMEs for advice and the following guidance, where appropriate:
  - Def Stan 00-56 Part 2 Annex C (Extracted and updated in the linked “Integrity” document.
  - AOF and Defence Intranet websites
  - Def Stan 00-55 Issue 2
The Standard – Integrity of PE

• The integrity of PE, to be addressed in Defence Standard 00-55 Issue 3, will be based on objectives to meet the following principles:
  – **Principle 1.** PE Safety Requirements shall be defined to address the PE contribution to system hazards.
  – **Principle 2.** The intent of the PE Safety Requirements shall be maintained throughout requirements decomposition.
  – **Principle 3.** PE Safety Requirements shall be satisfied.
  – **Principle 4.** Hazardous behaviour of the PE shall be identified and mitigated – addressed by failure modes and supported by designing for safety.
  – **Principle 5.** The confidence established in addressing the other PE safety principles shall be commensurate to the contribution of the PE contribution to system risk and will be addressed by Design Integrity requirements.

Reference Def Stan 00-56 Part 1 Issue 5 Annex D
The Standard - Awareness

• Although Issue 4 referred to tailoring and a compliance matrix, it was not always achieved. Issue 5 puts more emphasis on contracting, tailoring and compliance to support better engagement with Contractors. To support Acquisition Teams, there is an intent to:
  – Provide Contracting and Tailoring Briefings in Mar 14:
    • For Industry in London
    • For MOD DES Site Mar 2014
    • For MOD and Industry Abbey Wood CFB 10 Mar 2014
  – Review current publications eg POSMS
  – Support the review of safety taxonomy
  – Review current System Safety Training including;
    • Contracting and Tailoring module
The Standard - Points of Contact

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