
Technical Report Writing for Engineers: Decision-Ready Reports and Peer Review Training Course

4 – 8 April 2027
Zoom





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Programme Summary

Technical report writing for engineers is the subject of this one-week training course for senior engineers and technical managers at advanced level, culminating in a report standard and review protocol for their own function. Findings often reach decision-makers buried in dense documents, so approvals stall. The approach moves from reader analysis and report architecture to evidence, data display, plain language, editing and peer review. Mars Training Centre UK delivers this programme in technical report writing.

The Business Case

Technical reports carry the evidence on which capital, safety and operational decisions rest. When the conclusion is hidden on page twenty, executives delay or decide without the evidence. A disciplined writing and review process shortens the path from investigation to action and leaves a defensible technical record. Poorly structured reports also generate repeated clarification requests that consume senior engineering time.

- Decision Cycle Time: Shortens as executive summaries state findings, implications and requests on the first page.
- Rework and Review Loops: Fall as structured peer review catches gaps before reports reach approvers.
- Audit and Dispute Exposure: Reduces as reports record methods, assumptions and limitations in a traceable form.

Principles and Evidence Base

- ISO 24495-1:2023 Plain Language: Its find, understand and use principle frames reader analysis in Session 1.
- ASD-STE100 Simplified Technical English: Its rules on short sentences and one word for one meaning guide Session 4.
- Conventional Engineering Report Structure: Its standard sequence of sections gives the architecture built in Session 2.
- Structured Drafting and Review Practice: Staged drafting and commenting informs the review protocol in Session 5.



Intended Participants

- Engineers who author inspection, investigation, test and feasibility reports.
- Managers who approve technical reports before they reach executives, clients or regulators.
- Heads of technical functions who set reporting standards for their teams.
- Specialists who turn analysis and field data into recommendations for decision.

The programme serves engineering, operations, asset integrity and quality functions in energy, utilities, construction, manufacturing and government entities.

Learning Outcomes

1. Participants will be able to analyse the readers of a technical report and define the decision the report must support.
2. Participants will be able to construct a report architecture that places findings and recommendations before supporting detail.
3. Participants will be able to evaluate evidence, assumptions and limitations and state them in a traceable way.
4. Participants will be able to design tables and figures that a reader can interpret without the author present.
5. Participants will be able to edit technical text for plain language and controlled terminology.
6. Participants will be able to justify a peer review protocol and report standard for their function.

Programme Structure

Day 1: Readers, Purpose and the Technical Report Brief

Who will read the report, and what decision must it enable?

- Reader Mapping: Approvers, Users and Secondary Readers
- Report Types: Inspection, Investigation, Test, Feasibility and Progress
- Defining the Decision Question and Scope
- Plain Language Principles: Find, Understand and Use
- The Report Brief Template Agreed Before Drafting

Day 2: Technical Report Architecture and the Executive Summary

How should a technical report be organised so the conclusion comes first?

- Summary, Body and Appendix: Allocating Content by Reader
- Writing the Executive Summary: Finding, Implication and Request
- Logical Sequencing of Method, Results and Discussion
- Conclusions Versus Recommendations: Separating Judgement From Action
- Headings, Numbering and Navigation for Long Reports



Day 3: Evidence, Data and Visual Presentation

How are results presented so that readers trust and interpret them correctly?

- Recording Methods, Assumptions and Limitations
- Uncertainty, Tolerances and Significant Figures
- Table Design for Comparison and Lookup
- Chart Selection: Trend, Distribution and Composition
- Captions, Units and Cross-Referencing of Figures

Day 4: Plain Language and Controlled Technical English

How is technical text made precise, concise and readable for mixed audiences?

- Simplified Technical English Writing Rules
- Controlled Terminology and Project Glossaries
- Sentence Length, Active Voice and Nominalisation
- Writing for Readers Using English as a Second Language
- Self-Editing Checklists and Readability Tests

Day 5: Peer Review and Report Standards in Practice

How does a technical function review, approve and standardise its reports?

- Peer Review Roles: Author, Checker, Reviewer and Approver
- Applying Day 2 Architecture to a Live Draft Report
- Reviewing Day 3 Tables and Figures Against Reader Needs
- Comment Resolution Logs and Version Control
- Completing the Report Standard and Review Protocol

Methodology

The programme relies on peer review of real and simulated documents. Participants rebuild an anonymised report from their own work through the sessions and review a colleague's draft. Cases come from asset inspection, incident investigation and project feasibility.

- Suggested activity: Rewriting a ten-page inspection report as a one-page executive summary.
- Suggested activity: Redesigning a cluttered results table and chart for a non-specialist approver.
- Suggested activity: Running a timed peer review with a comment resolution log.



Capstone Output

Each participant completes a report standard and review protocol for their function. It contains a report brief template, a standard report architecture, data presentation rules, a controlled glossary, an editing checklist and the review roles and comment log. It becomes the team's reference for future reports.

Frequently Asked Questions

Is technical report writing training at this level suitable for experienced engineers?

Yes. It is set at advanced level for engineers and managers who already write or approve reports, and assumes working knowledge of their discipline.

Which standards does the technical report writing programme rest on?

It rests on ISO 24495-1:2023, ASD-STE100 Simplified Technical English and the conventional engineering report structure.

How is the report standard from technical report writing training used at work?

You can apply its checklist before submission and run its review protocol before any report reaches approvers.