

TEMPLATE EXAMPLE: Requirements Specification

A Requirements Specification is a complete document and should have a title page, revision details and a table of contents as per the organisation document template.

A Requirement Specification does not have an Executive Summary.

1. Purpose

Briefly state the purpose of the document.

To specify the engineering requirements for ...

2. Scope

Briefly describe the scope of the document. What is included and what is not.

The document specifies...

The document does not include...

3. Applicable Standards

State the Standards relevant to the project, including year or revision details.

Standard	Document Title

4. Reference Documents

State any other documents used for reference. These could include the project brief, or organisation policies or design manuals.

Reference	Document Title

From this point, the document is a statement of each of the individual requirements necessary for the design. Ideally, each requirement should be simply stated and be testable. The following sentence structure is common:

If/when/while <CONDITION>, then <SYSTEM> shall/should <SYSTEM RESPONSE>.

The document should make consistent use of modal verbs (words like shall, should, must, may). Generally 'shall' is used for a binding requirement that must be met, and 'should' for requirements that are non-binding – that is, desirable, but not absolutely necessary. Each requirement must contain only one modal verb.

The use of the word 'and' can often indicate a second requirement. In such instances it should be separated into its own requirement, or listed as items a), b), c) etc. so they may be referenced and tested individually.

It is useful but not necessary to provide a rationale statement for each requirement. The rationale may simply refer to the relevant section of a standard or client brief from which the requirement was derived or may be a short paragraph to explain the reason for the requirement.

The requirements are organised under headings to identify the requirements for all aspects of the project, and all lifecycle phases of the product. The template should contain all the headings relevant to an organisation's projects. If a heading is not applicable for a project, then the heading should remain and a short statement of why it is not applicable should be given.

Requirements should be arranged in a hierarchical structure, which may be organised by system/subsystem, by process or operating modes, or both. Additional heading levels can be added as necessary for complex projects.

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5. Performance Characteristics

5.1 General

ID	Requirement	Rationale
5.1.1	<i>If/when/while <CONDITION>, then <SYSTEM> shall/should <SYSTEM RESPONSE>.</i>	
5.1.2		

5.2 Sub System / Process A

ID	Requirement	Rationale
5.2.1		
5.2.2		

5.3 Sub System / Process B

ID	Requirement	Rationale
5.3.1		
5.3.2		

6. Safety

6.1 General

ID	Requirement	Rationale
6.1.1		
6.1.2		

6.2 Hazards

ID	Requirement	Rationale
6.2.1		
6.2.2		

6.3 WHS Requirements

ID	Requirement	Rationale
6.3.1		
6.3.2		

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7. Environmental Considerations

7.1 Performance

ID	Requirement	Rationale
7.1.1		
7.1.2		

7.2 Compliance

ID	Requirement	Rationale
7.2.1		
7.2.2		

7.3 Impact

ID	Requirement	Rationale
7.3.1		
7.3.2		

8. Materials

8.1 General

ID	Requirement	Rationale
8.1.1		
8.1.2		

9. Physical Properties

9.1 Dimensions

ID	Requirement	Rationale
9.1.1		
9.1.2		

9.2 Mass

ID	Requirement	Rationale
9.2.1		
9.2.2		

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9.3 Optical

ID	Requirement	Rationale
9.3.1		
9.3.2		

9.4 Finish

ID	Requirement	Rationale
9.4.1		
9.4.2		

10. Chemical Properties

10.1 General

ID	Requirement	Rationale
10.1.1		
10.1.2		

11. Design

11.1 General

ID	Requirement	Rationale
11.1.1		
11.1.2		

12. Interface

12.1 External

ID	Requirement	Rationale
12.1.1		
12.1.2		

12.2 Internal

ID	Requirement	Rationale
12.2.1		
12.2.2		

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13. Test

13.1 General

ID	Requirement	Rationale
13.1.1		
13.1.2		

14. Manufacture

14.1 General

ID	Requirement	Rationale
14.1.1		
14.1.2		

15. Transportability

15.1 General

ID	Requirement	Rationale
15.1.1		
15.1.2		

16. Installation

16.1 General

ID	Requirement	Rationale
16.1.1		
16.1.2		

17. Operability

17.1 General

ID	Requirement	Rationale
17.1.1		
17.1.2		

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18. Reliability

18.1 General

ID	Requirement	Rationale
18.1.1		
18.1.2		

19. Availability

19.1 General

ID	Requirement	Rationale
19.1.1		
19.1.2		

20. Maintainability

20.1 General

ID	Requirement	Rationale
20.1.1		
20.1.2		

21. Spares

21.1 General

ID	Requirement	Rationale
21.1.1		
21.1.2		

22. Storage

22.1 General

ID	Requirement	Rationale
22.1.1		
22.1.2		

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23. Energy Efficiency

23.1 General

ID	Requirement	Rationale
23.1.1		
23.1.2		

24. Human Factors

24.1 General

ID	Requirement	Rationale
24.1.1		
24.1.2		

25. Foreseeable Misuse

25.1 General

ID	Requirement	Rationale
25.1.1		
25.1.2		

26. End of Life

26.1 Definition

ID	Requirement	Rationale
26.1.1		
26.1.2		

26.2 Decommissioning

ID	Requirement	Rationale
26.2.1		
26.2.2		

26.3 Disposal

ID	Requirement	Rationale
26.3.1		
26.3.2		

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27. Quality

27.1 Quality Control

ID	Requirement	Rationale
27.1.1		
27.1.2		

27.2 Quality Assurance

ID	Requirement	Rationale
27.2.1		
27.2.2		

28. Resources

28.1 Financial

ID	Requirement	Rationale
28.1.1		
28.1.2		

28.2 Personnel

ID	Requirement	Rationale
28.2.1		
28.2.2		

28.3 Schedule

ID	Requirement	Rationale
28.3.1		
28.3.2		

28.4 Tools and Equipment

ID	Requirement	Rationale
28.4.1		
28.4.2		

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29. Legal

29.1 General

ID	Requirement	Rationale
29.1.1		
29.1.2		

30. Policy

30.1 General

ID	Requirement	Rationale
30.1.1		
30.1.2		

31. Security and Privacy

31.1 General

ID	Requirement	Rationale
31.1.1		
31.1.2		

END OF SPECIFICATION

A Requirements Specification does not have a summary or make any conclusions and can seemingly end quite suddenly. It can therefore be pertinent to have an 'END OF SPECIFICATION' statement to demark the end of the document.