

Standard for writing good requirements

A **standard for good requirements** ensures that requirements are clear, unambiguous, and meet the needs of stakeholders. Below is a well-established standard for good requirements followed by a detailed **workout process** for writing and managing them.

Standard for Good Requirements (Attributes)

1. **Clear and Concise:**

- Requirements should be easy to understand, avoiding technical jargon (unless necessary for the audience) and being as concise as possible without losing necessary details.

2. **Complete:**

- Every requirement must fully describe the functionality, constraint, or expectation without leaving room for interpretation or assumptions.

3. **Consistent:**

- The requirement should not contradict other requirements or documentation.

4. **Unambiguous:**

- It should have only one possible interpretation. Requirements must be testable, ensuring that the same understanding is shared between stakeholders, developers, and testers.

5. **Measurable (Testable):**

- Requirements must be verifiable. Each requirement should describe a feature or behavior that can be objectively tested to ensure it meets stakeholder needs.

6. **Feasible:**

- It should be possible to implement the requirement within the project's technical and resource constraints (e.g., time, budget, personnel).

7. **Relevant (Necessary):**

- Each requirement must address a specific need or feature that contributes to the solution and not be extraneous.

8. **Traceable:**

- The origin of each requirement should be clear, and it must be linked to business goals, user needs, or higher-level requirements. This allows for impact analysis if changes are required.

Process for Writing and Managing Requirements

1. Initiation (Identify Stakeholders and Objectives)

- **Responsibility:** *Tender Manager (TM)* and *Business Analyst (BA)*
- **Activities:**
 - Identify all relevant stakeholders (end-users, customers, project sponsors).
 - Clarify the project's business objectives and scope.
 - Conduct initial stakeholder interviews or workshops to capture high-level goals.
 - Gather existing documentation for reference (if any).

2. Requirements Elicitation

- **Responsibility:** *Tender Manager (TM)* and *Business Analyst (BA)*
- **Activities:**
 - Use various elicitation techniques like:
 - Stakeholder/Client interviews.
 - Workshops and brainstorming sessions.
 - Observation or job-shadowing.
 - Prototyping or wireframing (for better visualization).
 - Focus on understanding both functional (what the system should do) and non-functional (performance, security, etc.) requirements.

3. Requirements Documentation

- **Responsibility:** *Business Analyst (BA)*
- **Activities:**
 - Write each requirement according to the **standard for good requirements**.
 - Use a template for uniformity (e.g., User Stories, Use Cases, System Requirements Specification).
 - Each requirement should include:
 - A unique ID for traceability.
 - Clear description.
 - Priority (MoSCoW method: Must have, Should have, Could have, Won't have).
 - Acceptance criteria for testability.
 - For user stories: follow the format "As a [role], I want [goal] so that [benefit]."

- For system requirements: "The system shall [function] within [constraint]."

4. Requirements Validation

- **Responsibility:** *Business Analyst (BA), Tender Manager (TM), Technical Lead (TL), Verification&Validation manager, Stakeholders.*
- **Activities:**
 - Review the requirements document with stakeholders for completeness, accuracy, and alignment with business goals.
 - Conduct validation sessions:
 - *Walkthroughs* (led by the BA) where stakeholders review requirements line by line.
 - *Workshops* where conflicts between stakeholders are addressed.
 - Prioritize the requirements based on business value, technical risk, and implementation complexity.
 - Obtain formal sign-off from stakeholders.

5. Requirements Analysis

- **Responsibility:** *Technical Lead (TL), Business Analyst (BA), Engineering Team (Eng. Team).*
- **Activities:**
 - Assess technical feasibility of each requirement.
 - Break down high-level requirements into smaller, more actionable tasks or user stories for development.
 - Ensure that all non-functional requirements (like performance and security) are clearly defined.
 - Perform an impact analysis to identify dependencies and potential risks.

6. Requirements Management and Change Control

- **Responsibility:** *Project Manager (PM) and Business Analyst (BA)*
- **Activities:**
 - Establish a process for managing requirement changes:
 - Define who can request changes.
 - Log all change requests and assess their impact (time, budget, scope).
 - Use a Requirements Management System (e.g., Relatics, DataStorms, Levvr) to track and manage changes.
 - Conduct regular meetings (e.g., *Change Control Board*) to review and approve/reject changes.

- Ensure traceability of each requirement back to the original business objective or need.

7. Design and Development

- **Responsibility:** *Technical Lead (TL) and Engineering Team (Eng. Team)*
- **Activities:**
 - Use the documented requirements to design the solution architecture and begin development.
 - Ensure traceability by linking objects, design documents, and test cases to the original requirements.
 - Maintain ongoing collaboration between the engineering and requirements team to clarify questions during implementation.

8. Verification and Validation (Testing)

- **Responsibility:** *Quality Assurance (QA), Verification&Validation Manager (V&V) and Engineering Team (Eng. Team)*
- **Activities:**
 - Develop test cases based on acceptance criteria in the requirements document.
 - Ensure that each requirement can be traced to one or more test cases.
 - Conduct user acceptance testing (UAT) to verify that the requirements meet business needs.
 - Track and resolve any defects or issues found during testing.

9. Requirements Closure

- **Responsibility:** *Project Manager (PM) and Business Analyst (BA)*
- **Activities:**
 - After final testing and user acceptance, formally close the requirements.
 - Ensure that all stakeholders agree that the requirements have been met.
 - Archive the requirements documentation for future reference (e.g., in case of future enhancements or audits).

Responsibilities Overview

Phase	Responsibility	Primary Activities
Initiation	TM, BA	Identify stakeholders, define objectives, clarify scope
Elicitation	BA	Use interviews, workshops, and observation to gather requirements
Documentation	BA	Write clear, concise, and testable requirements
Validation	BA, TM, TL, V&V, Stakeholders	Validate, prioritize, and get sign-off from stakeholders
Analysis	BA, TL, Eng. Team	Assess feasibility, break down tasks, perform impact analysis
Management and Change	PM, BA	Manage changes, maintain traceability, conduct reviews
Design and Development	TL, Eng. Team	Use requirements for design and development
Verification and Testing	QA, V&V, Eng. Team	Develop test cases, conduct testing, and ensure requirements are met
Closure	PM, BA	Finalize requirements, get stakeholder approval, archive documentation

This process ensures that requirements are well-defined, verifiable, and consistently managed from initiation through closure. Effective communication and collaboration between stakeholders and the project team are crucial for success.