# Requirements Traceability Matrix

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**Description:** PMBOK Requirements Traceability Matrix

## Requirements Traceability Matrix (RTM) - Requirements Gathering Agent

This RTM traces requirements from their source to verification methods, ensuring comprehensive traceability throughout the project lifecycle.

| Requirement ID | Requirement Description | Requirement Type | Priority | Source | Success Criteria | Test Case Reference | Verification Method | Status | Notes |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| FR-001 | Generate PMBOK-compliant Project Charter | Functional | High | Project Charter (README) | Project Charter generated, containing all mandatory PMBOK elements. | TC-001 | Automated validation against PMBOK template and checklist. | Complete |  |
| FR-002 | Generate Stakeholder Register | Functional | High | Stakeholder Register (README) | Stakeholder Register generated, containing all identified stakeholders and their information. | TC-002 | Manual review and data completeness check. | Complete |  |
| FR-003 | Generate Scope Management Plan | Functional | High | Scope Management Plan (README) | Scope Management Plan generated, including scope definition, WBS, and verification process. | TC-003 | Review against PMBOK guidelines and completeness check. | In Progress |  |
| FR-004 | Integrate with Azure OpenAI | Functional | High | README, Architecture.md | Successful API calls to Azure OpenAI with Entra ID authentication. | TC-004 | Unit tests for API calls and authentication. | Complete |  |
| FR-005 | Generate JSON output | Functional | High | README | All generated documents are in valid JSON format. | TC-005 | Schema validation against predefined JSON schema. | Complete |  |
| NF-001 | System should be robust and handle errors gracefully | Non-functional | High | README | System handles invalid inputs, API failures, and file access errors without crashing. | TC-006, TC-007 | Unit and integration tests for error handling scenarios. | Complete |  |
| NF-002 | System should have a fast response time | Non-functional | Medium | README | Average response time for document generation should be under 60 seconds. | TC-008 | Performance testing with various inputs. | In Progress |  |
| NF-003 | System should be secure and protect sensitive data | Non-functional | High | README | Secure handling of API keys and user data, compliant with security best practices. | TC-009 | Security audit and penetration testing. | Planned |  |
| BR-001 | Reduce manual effort in project documentation | Business | High | README | Reduction in time spent on manual documentation by at least 50%. | TC-010 | Time tracking and comparison with manual documentation. | Planned |  |
| BR-002 | Improve project documentation quality | Business | High | README | Improved consistency and accuracy of project documentation, as measured by stakeholder feedback. | TC-011 | Stakeholder surveys and feedback analysis. | Planned |  |
| FR-006 | Support multiple AI providers (Azure, Google, etc.) | Functional | Medium | README | Successful integration and testing with multiple AI providers. | TC-012, TC-013 | Unit tests for each provider integration and switching mechanism. | In Progress |  |
| FR-007 | Provide CLI for configuration and execution | Functional | High | README | CLI allows users to specify AI provider, output directory, and other options. | TC-014 | Manual testing of CLI commands and options. | Complete |  |
| FR-008 | Comprehensive Project Analysis | Functional | High | README | System accurately identifies and analyzes relevant project files (markdown, JSON, etc.). | TC-015 | Unit tests for file analysis and scoring mechanisms. | Complete |  |
| NF-004 | System should be scalable to handle large projects | Non-functional | Medium | README | System can handle projects with a large number of files and complex structures. | TC-016 | Load testing with simulated large projects. | Planned |  |
| BR-003 | Improve stakeholder alignment | Business | High | README | Increased stakeholder satisfaction with improved clarity and accessibility of project documentation. | TC-017 | Stakeholder feedback and satisfaction surveys. | Planned |  |

**Key:**

* **TC-XXX:** Refers to a specific Test Case ID (detailed test cases would be documented separately).

This RTM will be updated regularly throughout the project lifecycle to reflect changes in requirements and their status. The “Notes” column can be used to add additional context or details as needed.