**Project Statement of Work**

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# **Project Statement of Work (SOW)**

## **Project Description**

### **Comprehensive Overview of the Project**

The \*\*Requirements Gathering Agent\*\* is a Node.js/TypeScript module designed to automate and streamline the creation of PMBOK-compliant project management documentation. Leveraging Azure AI and other leading AI providers, the tool generates comprehensive project charters, management plans, stakeholder registers, and other artifacts critical to successful project execution. It integrates seamlessly into existing workflows, enhancing accuracy, consistency, and compliance with industry standards.

### **Business Context and Background**

Project documentation creation is traditionally manual, time-consuming, and prone to errors. Inconsistent practices across teams lead to delays, compliance risks, and misaligned stakeholder expectations. With the increasing complexity of modern projects, there is a growing demand for tools that can automate documentation processes while ensuring alignment with PMBOK standards.

### **Problem Statement and Opportunity**

Manual documentation processes often result in inefficiencies and errors that impact project success. The \*\*Requirements Gathering Agent\*\* addresses this issue by automating the generation of standardized project artifacts, ensuring compliance, reducing administrative burden, and enabling better stakeholder alignment.

### **High-Level Solution Approach**

The solution employs advanced AI models integrated via Azure OpenAI, Google AI, GitHub Copilot, and Ollama to intelligently analyze project documentation, prioritize relevant content, and generate PMBOK-compliant artifacts. The system uses a modular architecture to ensure scalability and future extensions.

## **Project Scope**

### **Included in the Project**

• Automated generation of PMBOK-compliant documents, including:

- Project charter

- Stakeholder register

- Scope management plan

- Requirements management plan

- Risk management plan

- Work Breakdown Structure (WBS) and WBS dictionary

- Communication and resource management plans

- Procurement management plan

• Integration with multiple AI providers (Azure OpenAI, Google AI Gemini models, GitHub Copilot, Ollama).

• Intelligent context management system with smart relevance scoring and token optimization.

• Comprehensive CLI interface for configuration and operation.

• Validation and quality assurance for all generated documents against PMBOK standards.

• Support for multiple output formats (Markdown, JSON, YAML).

### **Excluded from the Project**

• Development of non-project management-specific documentation (e.g., marketing strategy documents).

• Integration with proprietary or third-party project management tools beyond the CLI interface.

• Ongoing support and maintenance beyond the initial rollout.

• Customization of PMBOK standards for specific industries or organizations.

### **Key Deliverables and Outcomes**

• A fully functional Requirements Gathering Agent module published to npm.

• Comprehensive PMBOK-compliant documentation for sample projects.

• User documentation, tutorials, and training materials for onboarding.

• Validation reports ensuring compliance with PMBOK 7.0 standards.

### **Performance Requirements and Constraints**

• All generated documents must meet PMBOK 7.0 compliance.

• Outputs must be validated for accuracy and consistency across artifacts.

• The system must support projects with up to 2 million tokens for ultra-large context models.

## **Objectives and Success Criteria**

### **Primary Objectives (SMART Goals)**

• Automate the generation of PMBOK-compliant project documentation with 90% context utilization for large AI models.

• Achieve a minimum quality score of 85/100 for all generated documents.

• Provide a user-friendly CLI interface for seamless configuration and operation.

### **Secondary Objectives**

• Support modular architecture for future integration with third-party tools.

• Enhance user experience with interactive AI provider selection and real-time feedback.

### **Success Metrics and KPIs**

• \*\*Document Quality\*\*: Average quality score of 85+ across all PMBOK artifacts.

• \*\*User Adoption\*\*: Achieve 250 weekly downloads within 3 months of release.

• \*\*Performance\*\*: Context utilization of 50-90% for large-scale AI models.

• \*\*Compliance\*\*: 100% adherence to PMBOK 7.0 standards.

### **Acceptance Criteria for Project Completion**

• All PMBOK-compliant documents are generated and validated successfully.

• The system is published as an npm package and extensively tested.

• Stakeholder feedback indicates satisfaction with functionality and usability.

## **Deliverables**

### **Major Deliverables with Descriptions**

\*\*Requirements Gathering Agent Module\*\*: A CLI tool for generating PMBOK-compliant documents.

\*\*PMBOK Document Suite\*\*: Includes project charter, stakeholder register, management plans, WBS, and other artifacts.

\*\*User Documentation\*\*: Comprehensive onboarding guides, tutorials, and troubleshooting documentation.

\*\*Validation Reports\*\*: Detailed reports on compliance, quality, and consistency of generated documents.

### **Quality Standards for Each Deliverable**

• Adherence to PMBOK 7.0 standards.

• Comprehensive validation of document completeness and terminology consistency.

• Detailed quality assessment with actionable recommendations.

### **Delivery Schedule and Milestones**

| Milestone | Target Completion Date | Deliverable |

|-------------------------------|------------------------|----------------------------------------|

| Initial CLI Prototype | Month 1 | Functional CLI tool |

| PMBOK Document Suite | Month 2 | Full suite of compliant documents |

| Validation and Quality Reports| Month 3 | Comprehensive validation reports |

| User Documentation | Month 3 | Tutorials and onboarding guides |

### **Dependencies and Assumptions**

• Availability of Azure OpenAI and other AI provider APIs.

• Access to comprehensive project documentation for testing.

• Stakeholder approval for project scope and deliverables.

## **Approach and Methodology**

### **Project Management Methodology**

• Adopting a \*\*PMBOK-aligned project management methodology\*\*.

• Iterative development cycles with regular stakeholder reviews.

### **Development Approach and Standards**

• Modular architecture using \*\*TypeScript\*\* for scalability and maintainability.

• \*\*Test-driven development\*\* leveraging Jest for unit and integration tests.

### **Quality Assurance Processes**

• Comprehensive validation of generated documents against PMBOK standards.

• Regular feedback loops with users to improve functionality and accuracy.

### **Risk Management Approach**

• Identify risks related to AI provider integration and token constraints.

• Develop fallback mechanisms for provider failures or limited context utilization.

## **Assumptions and Constraints**

### **Key Project Assumptions**

• Stakeholders will provide detailed project documentation for analysis.

• AI providers will maintain consistent API availability and performance.

### **Technical Constraints**

• Token limits for AI models may restrict context utilization.

• Compatibility with Node.js runtime environment.

### **Resource Constraints**

• Limited access to high-capacity AI models for testing (e.g., Gemini 1.5 Pro).

• Dedicated resources for TypeScript development and testing.

### **Timeline Constraints**

• Project must be completed within 3 months to meet market demand.

## **Roles and Responsibilities**

### **Project Organization Structure**

• \*\*Project Manager\*\*: Oversees planning, execution, and stakeholder communication.

• \*\*Technical Lead\*\*: Manages development and integration of the Requirements Gathering Agent.

• \*\*Quality Analyst\*\*: Validates PMBOK compliance and document quality.

• \*\*Stakeholders\*\*: Provide input on project scope and deliverables.

### **Key Roles and Responsibilities**

• \*\*Project Manager\*\*: Approval of deliverables, risk management, and timeline adherence.

• \*\*Technical Lead\*\*: Development of CLI tools and AI integration.

• \*\*Quality Analyst\*\*: Validation and testing of generated documents.

• \*\*Stakeholders\*\*: Review and feedback on project outputs.

### **Decision-Making Authority**

• Technical decisions will be made by the Technical Lead.

• Scope changes will require stakeholder approval.

### **Communication Protocols**

• Weekly progress updates via email.

• Monthly stakeholder review meetings.

• Dedicated Slack channel for real-time communication.

This Statement of Work adheres to PMBOK standards and provides a detailed framework for initiating, planning, and executing the \*\*Requirements Gathering Agent\*\* project. Upon stakeholder approval, the project will commence as outlined above.