# Smart Select

## Project Management Plan Extract

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November 8, 2024

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# Overview

## Project Name

Smart Select - A Modernized Student Registration System

## Project Deliverables

1. **Software Requirement Specification (SRS) Document**
    - Detailed documentation of functional and non-functional requirements, including use cases, user stories, and wireframes of the improved system.
2. **System Design Documentation**
    - Includes the system architecture, database schema, interface designs, and integration points.
3. **Prototype / Wireframe**
    - A low-fidelity (basic sketch/ simplified version of the system interface) or high-fidelity (high levels of visual details, including typography, colour schemes, buttons) prototype of the user interface, demonstrating the flow and functionality of the new system.
4. **Fully Developed Web-Based Platform**
    - Complete, scalable, web-based platform capable of handling high registration volumes, secure access, and real-time updates.
5. **User Testing Report**
    - Results from testing with students and faculty to ensure system usability, functionality, and security.
6. **System Security Plan**
    - Documentation of the security measures implemented, including data encryption, user authentication, and access control policies.
7. **Training Materials**
    - User manuals, video tutorials, and workshops for students, faculty, and administrators on how to use the new system.
8. **Deployment Plan**
    - Steps for moving the system from the testing environment to the live environment, including contingencies for rollback.
9. **Final Project Report**
    - Detailed report covering project development, testing, deployment, and project outcomes.
10. **Post-Deployment Support**
    - Support plan for bug fixes, updates, and system performance monitoring for a set period post-deployment.

## Schedule (Milestones) and Budget Summary

***Table 2: Milestones***

| Summary Activity/ Deliverable | Milestone Date |
|---|---|
| Project Initiation Complete | Oct 9, 2024 |
| Requirements Document Submitted | Oct 16, 2024 |
| Prototype Reviewed and Approved | Nov 5, 2024 |
| Phase 1 Development Complete | Nov 22, 2024 |
| Phase 2 Development Complete | Dec 4, 2025 |
| User Feedback Received | Dec 17, 2025 |
| System Deployed Successfully | Dec 19, 2025 |
| Training and Documentation Complete | Dec 26, 2025 |
| Post-Deployment Support Ends | Jan 2, 2025 |

Original table found in *Smart Select Business Case Summary and Project Charter,* adjusted based on updated schedule (not from *Smart Select Work Breakdown Structure and Project Schedule* – this Milestones table is based on the schedule post baseline setting).

***Budget Summary***

- **Initial Investment Estimate**: The project was initially estimated to require an investment of up to **$235,000**. This amount covered anticipated setup, resources, and development costs.
- **Ongoing Annual Cost**: The projected annual maintenance and operation cost for the project is estimated at **$55,000**, with expectations to support system updates, user support, and other running expenses.
- **Projected Annual Savings**: The project aims to generate annual savings of approximately **$80,000** by reducing manual processing times and improving efficiency in registration and record-keeping.
- **Budget Comparison**:
    - **Planned Budget** (BCWS): **$537,600.00** — This is the baseline budget set after detailed planning and resource allocation.
    - **Actual Cost to Date** (ACWP): **$573,360.00** — Current spending is **$35,760.00** over the initial budget plan, indicating a **negative cost variance** that requires monitoring to control further costs.

While initial estimates suggested a max investment of $235,000, the detailed project plan set a more comprehensive baseline of $537,600 (view in the Smart Select Earned Value and

Analysis Reporting project piece). With actual expenses exceeding the budget, we will need to review costs closely to prevent further overruns. The projected annual savings of $80,000 reinforce the long-term value, though short-term cost controls will be critical for alignment with the baseline budget.

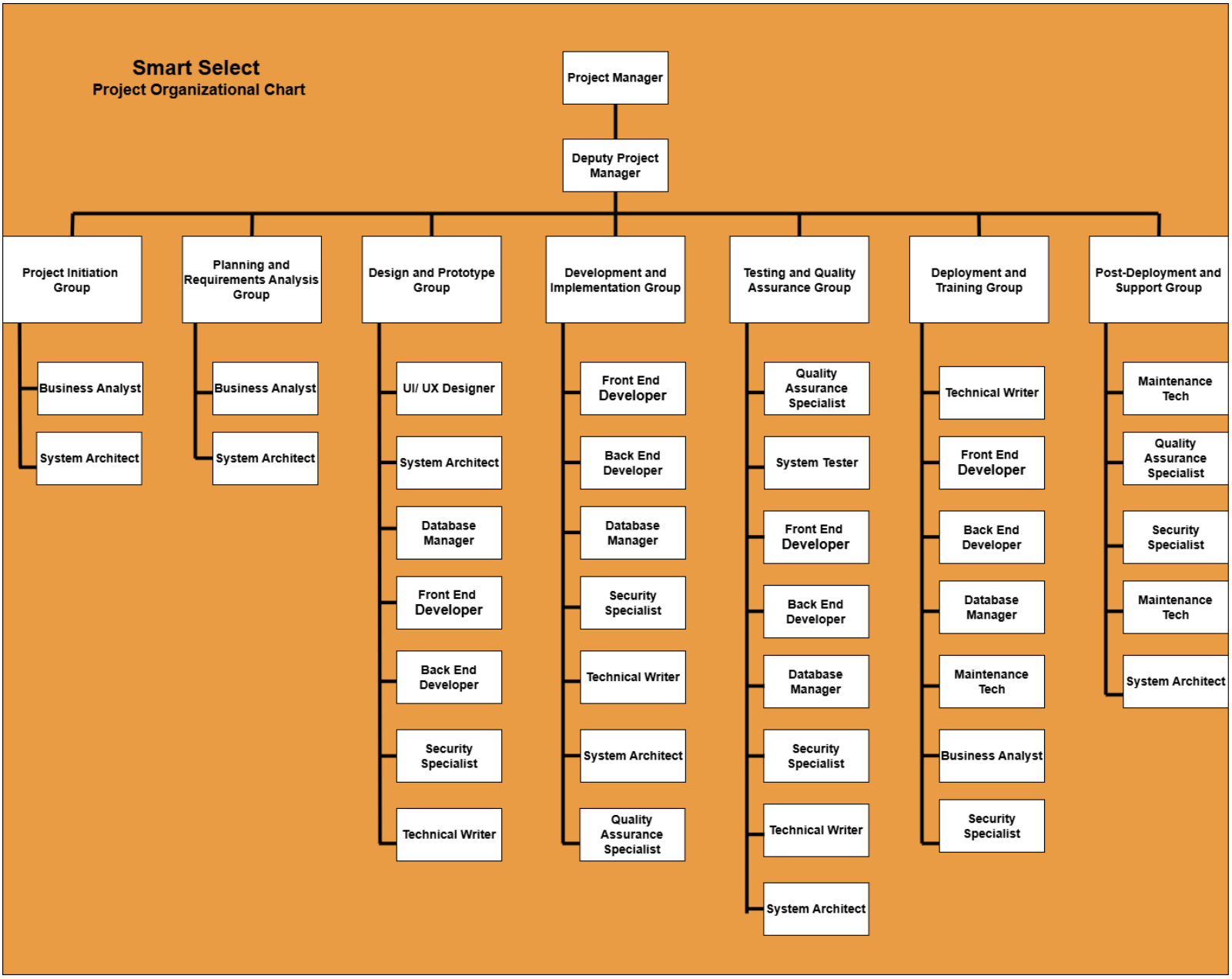
# Subsidiary Plans (Extract)

## Human Resource Management

| Human Resource | Roles | Authority | Responsibilities | Competency |
|---|---|---|---|---|
| **Project Manager** | Oversees entire project | High: Approves resources, deadlines, and budgets | Manages project timeline, scope, and budget; communicates with stakeholders | Project management, leadership, communication |
| **Deputy Project Manager** | Assists PM, manages day-to-day tasks | Medium: Delegates tasks, tracks progress | Supports PM, coordinates team tasks, ensures adherence to schedule | Organization, problem-solving, communication |
| **UI/UX Designer** | Designs user interfaces and user experience | Low: Makes design decisions for UI | Creates wireframes, prototypes, and user flows, ensuring a user-friendly experience | UX/UI design, prototyping, creativity |
| **Front End Developer** | Develops front-end functionality | Medium: Decides on code architecture | Implements UI elements, handles user interactions, ensures responsive design | HTML, CSS, JavaScript, framework proficiency |
| **Back End Developer** | Develops server-side logic | Medium: Decides on database and server solutions | Manages APIs, builds server-side functionality, optimizes performance | Programming (Java, Python), database knowledge, problem-solving |
| **Database Manager** | Manages database infrastructure | Medium: Decides on database configurations | Designs, creates, and maintains databases, ensures data integrity | Database design, SQL, data management |

| | | | | |
|---|---|---|---|---|
| **Maintenance Technician** | Provides system support and maintenance | Low: Troubleshoots and applies fixes | Conducts system checks, handles maintenance tasks, resolves technical issues | Troubleshooting, system maintenance, technical support |
| **System Tester** | Tests system functionality and performance | Low: Suggests test strategies | Executes test cases, reports bugs, ensures software quality | Testing methodologies, attention to detail, analytical skills |
| **Quality Assurance Specialist** | Ensures system quality standards | Low: Approves or rejects based on quality | Develops testing procedures, evaluates system for quality | Quality control, testing expertise, process improvement |
| **Business Analyst** | Analyzes business needs | Medium: Recommends solutions based on analysis | Gathers requirements, analyzes business processes, liaises between stakeholders | Analytical skills, communication, requirements gathering |
| **Security Specialist** | Manages system security | Medium: Enforces security policies, approves security updates | Conducts security assessments, implements protocols to secure data | Cybersecurity, risk assessment, knowledge of security protocols |
| **Technical Writer** | Documents project and system details | Low: Develops and edits documentation | Prepares user manuals, system documentation, and project reports | Technical writing, communication, documentation skills |
| **System Architect** | Designs system architecture | High: Makes decisions on system structure | Creates overall system framework, defines technical standards and guidelines | System design, software architecture, technical knowledge |

## Project Organizational Chart




## RACI Chart

- **Responsibility (R)**: Who does the task?
- **Accountability (A)**: Who signs off on the task or has authority for it?
- **Consultation (C)**: Who has information necessary to complete the task?
- **Informed (I)**: Who needs to be notified of task status and results?

*See table below:*

| | Project Manager | Deputy Project Manager | UI/ UX Designer | Front End Developer | Back End Developer | Database Manager | Maintenance Tech | System Tester | Quality Assurance Specialist | Business Analyst | Security Specialist | Technical Writer | System Architect |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Identify stakeholders | A | C | | | | | | | | R, C | | | |
| Define project goals | A | R, C | | | | | | | | C, I | | | C, I |
| Gather initial requirements | A | R | | | | | | | | R, C | | | C |
| Create project plan and timelines | A, R | R | | | | | | | | C | | | C |
| Allocate resources | A, R | R | | | | | | | | C | | | C, I |
| Gather detailed system requirements | A, C | R | | | | | | | | C | | | R |
| Design system architecture | C | I | I | I | C | R, C | | | | | C, I | | A, R |
| Design database schema | C, I | | I | I | I | A, R | | | | | C, I | I | R, C |
| Create user interface mockups | C | | A, R | C, I | C | I | | | | | | | C, I |
| Develop prototype for review | C, I | I | R | A, R | I | I | | | | | | I | I |
| Develop web-based platform | C, I | I | | R | R | R | | | | | C, I | I | A |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Implement secure user authentication | C | I | | | R | R | | | | | A, C | I | C, I |
| Develop real-time registration features | C | | | R | A, R | R | | | | | | | C, I |
| Integrate external systems | C | I | | R | R | A, R | | | I | | C, I | I | C, I |
| Unit testing of individual components | C, I | | | R | R | R | | R | A | | I | I | I |
| Integration testing for system components | C, I | | | I | I | I | | R | A | | I | I | I |
| User Acceptance Testing (UAT) | I | | | | | | | R | A | | I | I | I |
| Load testing for peak registration performance | I | | | I | I | I | | R | A, R | | | | I |
| Deploy system in phased manner | A, R | C | | R | R | R | C, I | | | I | I | I | |
| Train students, faculty, and staff | A | C | | | | | R | | | I | | R | |
| Provide user manuals and tutorials | C, I | | | | | | R | | | I | | A, R | |
| Monitor system performance | I | I | | | | | R | | A | | I | I | I |

# Team Contract

## Smart Select Team Contract (Team Charter)

***Purpose and Scope***

This contract outlines the agreed-upon guidelines, expectations, and commitments for team members throughout the project. It aims to foster collaboration, clear communication, and mutual accountability to ensure the project's success.

**1. Team Values**

We commit to maintaining a collaborative, respectful, and accountable work environment where all team members feel valued and supported. Transparency, dedication, and mutual respect are the cornerstones of our teamwork.

**2. Communication Guidelines**

- *Meeting Schedule*: We will hold weekly progress meetings and additional ad-hoc meetings as needed.
- *Primary Communication Channels*: Email, project management tools (e.g., Project Libre), and team chats.
- *Responsiveness*: All team members are expected to respond to project communications within 24 hours.

**3. Decision-Making Criteria and Process**

- *Consensus-Based*: Decisions will primarily be made through consensus (general agreement).
- *Final Authority*: If consensus cannot be reached, the Project Manager will have the final say.
- *Documentation*: All decisions, including rationale, will be documented in the project management system.

**4. Conflict Resolution Process**

- *Step 1*: Conflicts should first be addressed directly between involved team members.
- *Step 2*: If unresolved, bring the issue to the Deputy Project Manager for mediation.
- *Step 3*: Further escalation, if necessary, will involve the Project Manager for impartial review and resolution.

**5. Meeting Guidelines**

Meetings will begin and end on time. Each team member is expected to come prepared.

- *Roles*: Project Manager will facilitate, while the Deputy Project Manager will document meeting minutes.
- *Action Items*: Each meeting will end with clear action items and deadlines.

**6. Team Agreements**

- *Attendance and Participation*: Team members are expected to attend all meetings unless previously excused.
- *Quality of Work*: Each team member agrees to uphold high-quality standards for their deliverables.
- *Accountability*: Members will notify the team if they are unable to meet a deadline and suggest alternative solutions.

**7. Performance Reviews**

The Project Manager will review individual contributions regularly to ensure team alignment. At project completion, feedback will be shared with each functional manager/ team member to support ongoing development.

**8. Recognition and Rewards**

Upon successful completion of the project:

- *Celebration Event*: A team get-together with families present to celebrate project success.
- *Certificates and Recognition*: Team members who met deadlines will receive a certificate from the University President.
- *University Newsletter*: Photos of team members who excelled will appear in the university newsletter.
- *Top Performers*: Top performers will receive surprise rewards as appreciation for their work.

This contract will serve as a reference point for team conduct, and we commit to revisiting and updating it as necessary to reflect the project's evolving needs.

## Quality Management

***Overview***

The Quality Management Plan outlines the processes and activities necessary to ensure that the Smart Select Registration System meets the required quality standards. The primary objective is to deliver a reliable, secure, and user-friendly registration system that aligns with the expectations of UTech's stakeholders. This plan details how quality will be assured, monitored, and controlled throughout the project lifecycle.

***Quality Standards***

The following quality standards will guide the development and implementation of the Smart Select Registration System:

- **Performance Benchmarks**: The system must handle peak registration traffic without downtime or noticeable delays, with a response time of less than two seconds.
- **Security Standards**: The authentication module must comply with the latest security protocols to protect user data and ensure role-based access control.
- **Usability Criteria**: The user interface should be intuitive and easy to navigate, based on feedback from end users such as students and faculty.

***Quality Assurance Activities***

Quality assurance focuses on proactive measures to prevent defects and ensure quality throughout the project. Key activities include:

- **Code Reviews**: Conduct regular code reviews to ensure adherence to coding standards and to identify potential issues early. The development team will review each other's code before it is merged into the main branch.
- **Design Validation**: Validate design elements like the database schema and user interface mockups with stakeholders. These sessions will occur bi-weekly, and feedback will be used to improve design components.
- **Stakeholder Feedback**: Solicit feedback at key project milestones, such as after completing the prototype and during user testing phases. This feedback will be used to refine the system before final deployment.

***Quality Control Measures***

Quality control ensures that deliverables meet the quality requirements through testing and inspections. The following measures will be implemented:

- **Unit Testing**: Each component, such as the authentication system and registration features, will undergo unit testing to ensure they work as expected. The test results will be documented and reviewed by the Quality Assurance Specialist.
- **Integration Testing**: Test the integration of different system components to ensure they work seamlessly together. This will focus on data flow between the front-end and back-end, ensuring consistency and reliability.
- **User Acceptance Testing (UAT)**: End users, including students and faculty, will participate in testing to validate system usability and functionality. Feedback will be collected, and necessary changes will be made before full deployment.
- **Load Testing**: Simulate peak registration loads to ensure the system can handle high traffic without performance degradation. Load tests will be conducted using appropriate tools, and results will be analyzed to make performance improvements if needed.

### *Roles and Responsibilities*

Quality management involves collaboration among multiple roles. Key responsibilities include:

- **Project Manager**: Oversees all quality-related activities and ensure adherence to the Quality Management Plan. The Project Manager will be consulted and informed about testing, manage stakeholder feedback sessions, and review quality reports.
- **Quality Assurance (QA) Specialist**: Conduct code reviews, oversees testing, and ensures that all quality standards are met. The QA Specialist will document and report on any issues (as well as issues reported by other team members regarding quality), and work with developers to resolve them promptly.
- **Developers**: Responsible for performing unit testing on the code and addressing any defects identified during testing. They will also participate in code reviews and ensure their work adheres to the established standards.
- **Stakeholders**: Provide feedback during design validation and UAT phases, ensuring the system meets user needs.

A more detailed description of each team member's roles and responsibilities can be found above in the Human Resource Management section.

### *Quality Metrics*

To measure the success of the Quality Management Plan, we will use the following metrics:

| Metric | Description | Target |
|---|---|---|
| **Error Rate** | Track the number of defects found per 1,000 lines of code. | The goal is to maintain an error rate of less than 1%. |
| **System Performance** | Measure response times under various load conditions. | The system must respond within two seconds during peak loads. |
| **User Satisfaction** | Collect feedback from UAT participants. | Aiming for a satisfaction score of 90% or higher. |
| **Defect Resolution Time** | Monitor the time taken to resolve defects. | Address critical defects within 24 hours and non-critical defects within 72 hours. |

### *Organizational Chart*

The Organizational Chart for the Smart Select Registration System project outlines the hierarchy and roles of the team members involved in quality and overall project management. At the top is the Project Manager, who oversees all aspects of the project, including quality assurance and control. The chart can be found above after the Human Resource Management section. One of its goals is to emphasize collaboration and accountability among these groups to achieve project goals efficiently and effectively.

### *Reporting and Documentation*

Quality issues and their resolutions will be thoroughly documented and communicated to the project team. The QA Specialist will generate reports summarizing testing results, performance metrics, and any corrective actions taken. These reports will be reviewed by the Project Manager and used to inform decision-making throughout the project.

## Procurement Management

### *Purpose of the Procurement Management Plan*

The purpose of this procurement plan is to outline the approach and process for acquiring necessary resources, services, and materials to ensure the successful completion of the Smart Select project. This plan includes identifying suppliers, managing procurement schedules, monitoring contract compliance, and establishing quality standards for all procured items.

### *Procurement Objectives*

- Secure high-quality goods and services within the project budget and timelines.
- Establish reliable contracts to support project requirements, including software, hardware, and technical support.
- Ensure compliance with university and project-specific procurement standards and regulations.

### *Procurement Requirements*

- Software Licenses and Subscriptions: Software needed for development, testing, and deployment (e.g., IDEs, security tools).
- Hardware: Servers, backup storage, and network infrastructure.
- Professional Services: UX/UI design services, testing experts, and cybersecurity consultants.
- Training Materials: Production of user manuals, video tutorials, and other materials for stakeholder training.

***Supplier Selection Criteria***

- Quality Standards: Suppliers must meet or exceed the university's technical requirements.
- Cost Efficiency: Proposals are evaluated based on cost-effectiveness within the project's investment and baseline budget.
- Reliability: Vendors must demonstrate experience, positive references, and the ability to meet delivery timelines.
- Post-Delivery Support: Preference for suppliers who offer extended support for maintenance and troubleshooting.

***Procurement Process***

- Requirements Analysis: Determine the specifics of required goods and services based on project milestones.
- Vendor Identification and Evaluation: Shortlist vendors through a request for proposal (RFP) process. Evaluate bids against pre-established criteria.
- Contract Negotiation: Ensure that contracts cover all project needs, including deadlines, quality requirements, and support agreements.
- Purchase Orders: Issue purchase orders for approved vendors.
- Delivery and Inspection: Ensure quality checks upon receipt to verify compliance with contract terms.
- Payment Processing: Payments will follow successful delivery and inspection in alignment with university financial policies.

***Procurement Schedule***

- Vendor Selection By: October 16, 2024
- Contract Finalization By: November 5, 2024
- Initial Hardware and Software Delivery By: November 22, 2024
- Ongoing Services Procurement: As required per project milestones

***Procurement Roles and Responsibilities***

- Project Manager: Oversees procurement planning, vendor selection, and ensures alignment with project goals.
- Deputy Project Manager: Assists in vendor evaluations, coordinates contract documentation, and handles communication with suppliers.
- Business Analyst: Manages the procurement process, maintains documentation, and ensures compliance with procurement policies.
- Business Analyst: Processes payments and monitors budget adherence.
- Quality Assurance Specialist: Conducts inspections and quality assessments for procured items upon delivery.

***Monitoring and Performance Metrics***

- Timely Delivery: All deliveries should meet the scheduled timeline with minimal deviations.
- Quality Compliance: All goods and services must pass initial inspection with less than 1% defect rate.
- Budget Adherence: Regular cost tracking against the project budget to avoid overruns.

***Risk Management***

- Supplier Risks: Identify backup suppliers for critical items in case of delays.
- Budget Overruns: Regular review and adjustments to avoid budget deviations.
- Contractual Risks: Ensure clear terms in contracts to minimize potential disputes.

## Scope Management


### Collect Requirements

Inputs:

1. Project Charter
2. Stakeholder Register

Tools & Techniques:

1. Interviews
2. Focus Groups
3. Facilited Workshops
4. Group decision making
5. Questionnaires and Survey
6. Observation
7. Prototypes

Outputs:

1. Requirement document
2. Requirement management plan
3. Requirement Traceability Matrix

### Define Scope

Inputs:

1. Project Charter
2. Requirement Document

Tools & Techniques:

1. Expert System
2. Product analysis
3. Facilitated Workshop

Outputs:

1. Project Scope Statement
2. Project Document Updates

### Control Scope

Inputs:

1. Project Management Plan
2. Work Performance Information
3. Requirement Documentation
4. Requirement Traceability Matrix

Tools & Techniques:

1. Variance analysis

Outputs:

1. Project document update
2. Work performance measurements
3. Plan management plan update
4. Change request

### Create WBS

Input:

1. Project Scope Statement
2. Requirement document
3. Organizational Process assets

Tools & Techniques:

1. Decomposition

Outputs:

1. WBS
2. WBS Dictionary
3. Scope baseline
4. Project document update

### Verify Scope

Inputs:

1. Project management Plan
2. Requirement document
3. Verified Deliverables
5. Work performance information

Tools & Techniques

1. Inspection

Outputs:

1. Accepted Deliverables
2. Change request
3. Project Document updates

# Team Contributions

| *Team Member Number* | *Name* | *Contribution(s)* |
|---|---|---|
| ***1*** | Raheim Burkett | Procurement Management |
| ***2*** | Garrett Grant | Quality Management |
| ***3*** | T'Yondre Leslie | Scope Management |
| ***4*** | Iyana Taylor | HR Management |
| | | Project Organizational Chart |
| | | RACI Chart |
| | | Team Contract |