# **PROJECT MANAGEMENT PLAN**

Ramkolek: Document Management System for Project Documentation Papers
Submission

ASIA PACIFIC COLLEGE
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2024

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### **COMPANY PROFILE**

Asia Pacific College, empowered by education and industry professionals as faculty and a balanced curriculum, aims to provide business and the information and communications technology industry in the Philippines and in the global community lifelong learning graduates who are anchored on the principles of integrity and professionalism.

#### Vision

Asia Pacific College envisions itself to be the preferred Higher Education Institution bridging academe and industry with its programs founded on the concepts and applications of IT, guided by the core values of integrity, industry and innovation that works.

#### Mission

Asia Pacific College, powered by education and industry professionals as faculty and a balanced curriculum, aims to provide business and the information and communications technology industry in the Philippines and in the global community lifelong learning graduates who are anchored on the principles of integrity and professionalism.

#### **Values**

APC aims to produce graduates with strong sense of industry or hard work, integrity or being honest and having strong moral / ethical principles, and innovation or constantly introducing new and creative methods or ideas.

### 2. BUSINESS CASE

### 2.1 Executive Summary

Asia Pacific College (APC) implements Project-Based Learning in their curriculum. These are capstone projects where students learn and apply it to the output. The current process of submitting project papers lacks a dedicated platform for viewing, managing, and submitting documents. Ramkolek provides a centralized project documentation process.

### 1. Issue

The current process of submission for documents online requires the sending of emails and using Microsoft teams. Asia Pacific College with PBL project documentation has no singular platform to use. This results in oversaturating different emails between proofreaders and students of PBL.

#### 2. Anticipated Outcomes

This project anticipates deploying Ramkolek for Asia Pacific College in 2024. Ramkolek will be a document management system for APC students and faculty aimed at streamlining project document submission and improving overall efficiency in the PBL process.

In the end state of the project, Ramkolek centers on paper submission and proofreading request processes. It will have an option to archive submissions, proofreading requests, and teams must be available in the system. Users can view the dashboard and get auto-generated reports. The system will also include a team module for professors to create groups for students.

#### 3. Recommendation

The current system is recommended to centralize the project documentation process. Storing the documents in a single and organized location is an effective approach in keeping the project documents. This is more accessible for everyone involved. Ramkolek focuses on effectively improving the process of PBL by streamlining the document submission process and improving overall efficiency in the PBL process.

- Ramkolek will provide a system that streamlines the project document submission and proofreading requests. This tracks the updates and the progress of the paper. The proposed system will eliminate the need for emailing or messaging the document the updates.
- The proposed system tackles the challenge of time-consuming manual report creations and data collections for group project documentation. It will implement auto-generation of reports and data-gathering.

### 4. Justification

The reason why this project should be implemented in the first place is because once the students are done with PBL subjects it's off to be proofread, the problem is that only one member which is the leader of the group is the one and only to get the message of the proofreader only using via private message in Teams or Outlook as there is no guarantee way of knowing when the proofreading process is in work-in-progress or completed, especially that emails tend to be oversaturated with different notification, this caused a communication problem to both parties as these causes delays on viewing the PBL projects causing disorganization on sending the papers to the right people.

## 2.2 Business Case Analysis Team

Role	Description	Name	
Team Leader/Project	Manages the project, directs the team,	Jeb Vincent Cajayon	
Manager	and communicates with stakeholders.	Jeb vilicent Cajayon	
Team Member/Scrum	Facilitates meetings and works on	Leila Angela Arcega	
Master	documentation	Lella Aligela Alcega	
Team Member	Works on documentation	Jonlord Mirando	
Team Member	Works on documentation	Daniella Diana Soquiat	
Team Member	Works on documentation	Raina Marie Terania	
Team Member	Works on documentation	Lyka Tesorero	

Table 1 Business Case Analysis Team

#### 2.3 Problem Definition

#### 1. Problem Statement

The current process of submitting project papers lacks a dedicated and organized platform for viewing, managing, and submitting project documentations. Additionally, the process of endorsing complete PBL papers for proofreading to English Cluster Heads suffers from the lack of updates on the side of students, as only one student per group receives notifications, leading to miscommunication among group members and professors, impacting both group and individual PBL participants.

### **Specific Problems**

1. The current process for project submissions along with the proofreading request form makes it difficult to keep track of files and updates because submission is done through email and MS Teams. Managing project submissions and proofreading requests lacks real-time status updates and the file versions are scattered in different locations. Notifications of updates and progress are done within MS Teams and

email but can easily be lost among other messages, hindering the ability of the people involved to keep updated.

2. For the PBL professors and PBL coordinator in the current system it needs them to manually create reports and manually gathered data about a group's project, that can be time-consuming for the faculty involved because they must locate and ask for the documents relating to a group's project from the other PBL professors through email and MS Teams while storing those documents in a team created in MS Teams.

### 2. Organizational Impact

The implementation of Ramkolek will replace the currently used system, which uses Microsoft Teams and Microsoft Outlook as the primary platforms used in submission. It will also automate the process of notifying people in the submission and proofreading process of the current stage that the submission is in. Since the files will not be transferred through email and Teams, individual local copies of files will be avoided. As for the different roles in the current submission process, roles in the Ramkolek system remain largely the same as the current system as well. Having the same roles as the current system will help the system adhere to the business processes of APC and avoid generating confusion for the users.

### 3. Technology Migration

The system will be developed using the Laravel web-development framework. The Ramkolek system, to be more specific, will use the Filament starter kit uses the TALL stack for faster and more efficient development. The system will be hosted using Amazon Web Service as it is the cloud platform used by APC to host their websites. Account information for Ramkolek will be taken from APC's existing information system.

### 2.4 Project Overview

#### 1. Project Description

Ramkolek is a web application that aims to serve as a portal for students to submit their project documentation papers by establishing a centralized and organized environment for uploading the papers and managing the project documents during the submission process. The project will consolidate all the file transfers involved in paper submission into one platform and create a multi-layered submission approval workflow system that will include the actors in the current process for access control. The proofreading request process and submission approval workflow will be based on the process used by the current system, except file transfers and the movement of the submission along the process will be done through the system. The project submission

data will remain updatable before it gets the final approval from the professor to allow the users to make changes during the submission.

As a dedicated platform, it will serve as a hub for students, faculty, and the library to access and manage the submitted papers, streamline the submission process, and reduce the amount of data encoded by the librarian.

### 2. Goals and Objectives

To develop a document management system for APC students and faculty aimed at streamlining project document submission and improving overall efficiency in the PBL process.

### **Specific Objectives**

- To provide a web application that will streamline project documentation submission and proofreading requests, eliminating the need for sending files and updates through emailing or messaging via platforms like MS Teams. This application will also incorporate a status tracking system, enabling users to monitor the status, updates, and progress of each paper throughout the submission process while keeping the files in one system.
- To implement a way to automate report generation and data gathering, by creating a system that allows users to view reports containing a summary regarding the submissions.

### 4. Project Performance

Ramkolek aims to streamline processes, improve data management, ensure security and accessibility, and enhance communication within our academic community. To evaluate the performance of Ramkolek, the following measures could be considered:

- 1. Assess how effectively Ramkolek simplifies project submission and proofreading processes, reducing manual tasks, and improving overall efficiency.
- 2. Evaluate the system's ability to automate report generation and data gathering, providing valuable insights into project submissions and proofreading requests.
- 3. Determine the system's effectiveness in enhancing security and accessibility by centralizing project documentation and providing role-based permissions.
- 4. Measure the system's impact on communication between students, faculty, and librarians, focusing on real-time updates and notifications.

### 4. Project Assumptions

Here are the preliminary assumptions for the proposed system:

1. The users of the system are familiar with basic computer operations and can navigate the web application with minimal guidance.

- 2. Users have access to stable internet connections for seamless use of the web application.
- 3. The APC information system can provide necessary user data for account management and authentication.
- 4. Users adhere to the file format requirements for project documentation submission (Word and PDF).
- 5. Ramkolek will be hosted using APC's AWS subscription.
- 6. APC's Information Technology Resource Office will assist the development group in the deployment of Ramkolek.
- 7. The ITRO (information technology resources office) will also handle the system's maintenance after deployment.

### 5. Project Constraints

Here are the preliminary constraints for the proposed system:

- 1. The system will only accept files up to 50MB in size for submission.
- 2. Project documentation papers must adhere to specific formatting and content guidelines.
- 3. The system will focus exclusively on PBL subjects within this school, limiting its usage to specific courses.
- 4. Users must download files from the system to make changes, which may introduce versioning challenges.
- 5. Access to the system requires valid APC credentials.
- 6. Teams that have completed the project submission process will be archived, limiting ongoing access to historical data.
- 7. Users cannot change their passwords within the system directly, requiring additional administrative steps for password management.

### 6. Major Project Milestones

Major milestones				
Milestone 1 (April 21, 2023)	Project Milestone			
Milestone 2 (May 4, 2023)	First Client Meeting			
Milestone 3 (Nov 23, 2023)	Finalizing the system's design and function.			
Milestone 4 (March 11, 2024)	Prototype Presentation			
Milestone 5 (July 15, 2024)	Development (Software Coding)			

Milestone 6 (September 23, 2024)	Deploy System
Milestone 7 (October 9, 2024)	Project Complete

Table 2 Business Case Major Milestones

### 2.5 Strategic Alignment

Asia Pacific College aims to provide business and the information and communications technology industry in the Philippines and in the global community lifelong learning graduates who are anchored on the principles of integrity and professionalism. The school prides itself on its industry-based learning, which is the core of their project-based learning approach. Ramkolek directly supports APC's strategic plan as the system is built for the purpose of automating some aspects and streamlining the PBL documentation submission process. The system will serve as a platform that will assist users in managing PBL and proofreading documents in a more organized manner, enhancing the experience of handling PBL projects.

# 2.6 Cost Benefit Analysis

#### Benefits:

- 1. This automates report generation and data gathering, providing valuable insights.
- 2. A centralized platform that enhances communication through real-time updates and notifications.
- 3. The system provides a secure platform with role-based permissions, ensuring accessibility for authorized users.
- 4. It streamlines project documentation submission, saving time and effort for students, faculty, and librarians.

#### Costs:

- 1. Overall cost for the entire project is ₱3,095,503.95.
- 2. Hosting of the system will cost ₱ 1,300.79 per month using AWS EC2.
- 3. Maintenance and updates of the system may require additional labor from the ITRO.

### 2.7 Alternatives Analysis

**Outlook.** Outlook is Microsoft's email service provider. Because APC uses Microsoft 365, Outlook is the software used by students, faculty, and library for communication.

**MS Teams.** Teams is a collaboration platform developed by Microsoft. It provides a centralized hub for team communication and collaboration, allowing users to chat, hold video meetings, share files, and work on documents together in real-time. The professor uses Microsoft Teams to post the final copies of the student's paper to the Ramkolek

Teams. This ensures that the document is securely stored in a specific location and easily accessible to all relevant parties involved.

**APC Wikis.** APC Wiki is an open-source system, wherein students can encode the content of every section of their project thesis/paper before submitting the final version of its documentation.

Alternative methods like outlook, MS Teams, and APC Wikis were considered but were found lacking in terms of organization, security, or accessibility, making Ramkolek the preferred solution.

### 2.8 Approvals

Approval for the project will come from Mr. Manuel Sebastian Sanchez, the Project Sponsor, and a key stakeholder for the system.

### 1. PROJECT CHARTER

#### 3.1 EXECUTIVE SUMMARY

Project-Based Learning (PBL) is part of the curriculum in Asia Pacific College that is necessary for students to learn and apply the output of the projects in a form of capstone projects, these subjects include "Introduction to System and Design", "System Analysis and design", "Applied Project System Prototype". But the latter part on proofreading is from "Applied Project System Prototype" to ensure the quality of the written document is up to standards. Currently to get these documents to be proofread there is no dedicated platform on viewing, managing, and submitting project documents, as students and professors will get miscommunications on the updated versions of the paper as this was done using via Emails or Teams but only one member of the PBL team will get the messages and updates leaving the other members announced, for PBL professors and coordinators they have to manually look up on reports on edited documents and any relationships to the documents based on the project. That is why this project will be the creation of a document management system in a form of a website called Ramkolek, this system can create current team members from PBL, generating report and gathering data by letting users to view and download the reports, and giving updates in a form of messages included on the website.

## 3.2 Project Purpose/Justification

### **Business Need/Case**

The purpose of developing a documentation management system for the APC is to have a formal process of submission for project documentations online instead of having to do so through email and Microsoft Teams. Currently, there is no singular platform used by APC to handle PBL project documentations. Microsoft Teams and Outlook are used in notifying and transferring files between students and their professors.

The need for a singular platform for proofreading in PBL is necessary as emails and other messaging platforms tend to be oversaturated with different emails causing a mix-up between the assigned proofreaders and students of PBL.

### **Business Objectives**

Asia Pacific College aims to provide business and the information and communications technology industry in the Philippines and in the global community lifelong learning graduates who are anchored on the principles of integrity and professionalism. The school prides itself on its industry-based learning, which is the core of their project-based learning approach. Ramkolek directly supports APC's mission as the system is built for the purpose of automating some aspects and streamlining the PBL documentation submission process. The system will serve as a platform that will assist users in managing PBL and proofreading documents in a more organized manner, enhancing the experience of handling PBL projects.

#### 3.3 PROJECT DESCRIPTION

The project, Ramkolek, is a web application that aims to serve as a portal for students to submit their project documentations by establishing a centralized and organized environment for uploading the papers and managing the project documents during the submission process. The project will consolidate all the file transfers involved in paper submission into one platform and create a multi-layered submission approval workflow system that will include the actors in the current process for access control. The proofreading request process and submission approval workflow will be based on the process used by the current system, except file transfers and the movement of the submission along the process will be done through the system. The project submission data will remain updatable before it gets the final approval from the professor to allow the users to make changes during the submission. As a dedicated platform, it will serve as a hub for students, faculty, and the library to access and manage the submitted papers and streamline the submission process.

### **Project Objectives and Success Criteria**

To develop a document management system for APC students and faculty aimed at streamlining project document submission and improving overall efficiency in the PBL process.

### **Specific Objectives**

- To provide a web application that will streamline project documentation submission and proofreading requests, eliminating the need for sending files and updates through emailing or messaging via platforms like MS Teams. This application will also incorporate a status tracking system, enabling users to monitor the status, updates, and progress of each paper throughout the submission process while keeping the files in one system.
- 2. To implement a way to automate report generation and data gathering, by creating a system that allows users to view reports containing a summary regarding the submissions.

### Requirements

This project must meet the following list of requirements to achieve success.

- The web application must include the paper submission and proofreading request processes.
- The system must have summary dashboards and be able to generate reports.
- The system must include a team module for professors to create groups for students.
- An option to archive submissions, proofreading requests, and teams must be available in the system.

Additional requirements may be added as necessary, with project sponsor approval, as the project moves forward.

#### Constraints

The following constraints pertain to the Ramkolek project:

Data gathering, system design, and development of the system is limited to only 9
months, which may not be enough time to adjust and implement additional features
and changes.

### Assumptions

Here are the preliminary assumptions for the proposed system:

- The users of the system are familiar with basic computer operations and can navigate the web application with minimal guidance.
- Users have access to stable internet connections for seamless use of the web application.
- The APC information system can provide necessary user data for account management and authentication.
- Users adhere to the file format requirements for project documentation submission (Word and PDF).
- Ramkolek will be hosted using APC's AWS subscription.
- APC's Information Technology Resource Office will assist the development group in the deployment of Ramkolek.
- The ITRO (information technology resources office) will also handle the system's maintenance after deployment.

### Preliminary Scope Statement

The Ramkolek project will include the design, testing, and delivery of a document management system for APC. The development of the system will be done on the development teams' personal devices. Additional computers used for development will be borrowed from APC's open laboratories. APC will also provide the AWS subscription required to host the system and store the project documents. Account information for users will be taken from APC's existing information system.

### 3.4 RISKS

The following risks for the Ramkolek project have been identified. The project manager will determine and employ the necessary risk mitigation/avoidance strategies as appropriate to minimize the likelihood of these risks:

- External threats of attack on the deployed system are possible.
- There might be a learning curve for users when the system is deployed.

### 3.5 PROJECT DELIVERABLES

The following deliverables must be made upon the successful completion of the Ramkolek project. Any changes to these deliverables must be approved by the project sponsor.

- Centralized platform for project documentation submission
- Proofreading requesting process module
- Summary dashboard and reports generation
- Team creation and management module

### 3.6 SUMMARY MILESTONE SCHEDULE

The project Summary Milestone Schedule is presented below. As requirements are more clearly defined this schedule may be modified. Any changes will be communicated through project status meetings by the project manager.

Summary Milestone Schedule					
Project Milestone	Target Date (mm/dd/yyyy)				
Project start	04/21/2023				
First Client Meeting	05/04/2023				
Finalized System Design	11/23/2023				
System Development Start	01/08/2024				
System Presentation	03/11/2024				
System Testing Complete	08/09/2024				
Project Handover	09/20/2024				
Project Complete	09/27/2024				

Table 3 Project Charter Summary Milestone Schedule

### 3.7 SUMMARY BUDGET

The following table contains a summary budget based on the planned cost components and estimated costs required for successful completion of the project.

Summary Budget – List component project costs							
Project Component	I		Duration (Month)	Total Cost (₱)			
Development Team							
Project Manager	35,000.00	1	12	420,000.00			
Web Developer	34,000.00	5	12	2,040,000.00			
Desktops	25,000.00	6	1	125,000.00			
AWS EC2	1,300.79	1	5	6,503.95			
Office Space	37,000.00	1	12	444,000.00			
Electricity	4,000.00	1	12	48,000.00			
Internet	1,000.00	1	12	12,000.00			
Total				<b>₱ 3,095,503.95</b>			

Table 4 Project Charter Summary Budget

### 3.8 Project Approval Requirements

Success for the Ramkolek project will be achieved when a fully tested system, and all technical documentation, is deployed within the time and cost constraints indicated in this charter. The system must meet or exceed the predefined requirements agreed upon with the stakeholders. Equally important is security compliance, mandating adherence to standard regulation, and industry best practices to safeguard sensitive data and ensure privacy. This approach ensures transparency, criteria adherence, and valuable insights for future projects. Success will be determined by the Project Sponsor, Sir Manuel Sebastian Sanchez, who will also authorize the completion of the project.

### 3.9 PROJECT MANAGER

Jeb Cajayon is the project manager for the Ramkolek Project. The project manager's responsibility is to manage all project tasks, scheduling, and communication regarding the

Ramkolek project. His team, consisting of 5 members, excluding the team leader. The project manager will oversee the development and implementation of the document management system project. He is also responsible for managing project expenditures within the approved budget, allocating resources, and maintaining communication with all stakeholders. The project manager's knowledge and expertise in development contribute to the project's success by guiding development and ensuring alignment with organizational goals. Any additional funding must be requested through the project sponsor, Asia Pacific College. The project manager will provide weekly updates to the project sponsor.

# 2. WORK BREAKDOWN STRUCTURE (WBS)

#### 4.1 Introduction

Ramkolek is a web-based document management system that aims to serve as a portal for students to submit their project documentations. To ensure effective project management, a Work Breakdown Structure is included among the documents to be delivered with the system. The WBS defines the scope and outlines the various components throughout the project phases that must be completed.

This WBS follows the Project Management Body of Knowledge (PMBOK) project life cycle. The Ramkolek project's components are divided into the five PMBOK life cycle phases: initiation, planning, execution, control, and closing. Each phase is further broken down into smaller components in tasks and work packages. In addition to the PMBOK life cycle, the execution phase incorporates Agile methodology, using sprints to align with scrum practices for the system's development.

#### **4.2 OUTLINE VIEW**

The outline view of the Ramkolek web application provides a clear and summarized high-level overview of the project's development. As presented below, the components are presented in a structured and indented list. Each item is numbered uniquely for identification and indented to represent the component's relationships as either parent or child.

#### 1. Ramkolek:

- 1.1 Initiation
  - 1.1.1 Study the Current Project Paper Submission Process
  - 1.1.2 Develop the Business Case
  - 1.1.3 Develop the Project Charter
  - 1.1.4 Develop Stakeholder Analysis
  - 1.1.5 Develop Stakeholder Management Strategy

#### 2.1 Planning

- 2.1.1 Develop the Work Breakdown Structure
- 2.1.2 Develop the Scope Management Plan
- 2.1.3 Develop the Schedule Management Plan
- 2.1.4 Develop the Cost Management Plan
- 2.1.5 Develop the Work Packages
- 2.1.6 Develop the Human Resources Plan
- 2.1.7 Develop the Change Management Plan
- 2.1.8 Develop the Communication Management Plan
- 2.1.9 Develop the Quality Management Plan
- 2.1.10 Develop the Risk Management Plan

- 2.1.11 Develop the Procurement Management Plan
- 2.1.12 Develop the Implementation Plan
- 2.1.13 Design System
- 3.1 Execution
  - 3.1.1 Develop System
    - 3.1.1.1 Sprint 01
      - 3.1.1.1.1 User Authentication
      - 3.1.1.1.2 Project Submission Form
      - 3.1.1.1.3 Proofreading Request Form
    - 3.1.1.2 Sprint 02
      - 3.1.1.2.1 Roles and Permissions
      - 3.1.1.2.2 System Notifications
      - 3.1.1.2.3 Submission and Request Form Approval
    - 3.1.1.3 Sprint 03
      - 3.1.1.3.1 User Dashboard
      - 3.1.1.3.2 Report Generation
- 4.1 Control
  - 4.1.1 Project Progress Tracking
  - 4.1.2 User Acceptance Testing
- 5.1 Closeout
  - 5.1.1 Documents Compilation and Finalization
  - 5.1.2 Project Handover and Acceptance
  - 5.1.3 Closure Meeting

### 4.3 HIERARCHICAL STRUCTURE

Like the outline view, the hierarchical structure presents the project's overview but does not use an indented list. Instead, the hierarchical structure uses a table with three columns to represent the level, number code, and name of each component.

Level	WBS Code	Element Name
1	1	Ramkolek
2	1.1	Initiation
3	1.1.1	Study the Current Project Paper Submission Process
3	1.1.2	Develop the Business Case
3	1.1.3	Develop the Project Charter
3	1.1.4	Develop Stakeholder Analysis
2	2.1	Planning
3	2.1.1	Develop the Work Breakdown Structure
3	2.1.2	Develop the Scope Management Plan
3	2.1.3	Develop the Schedule Management Plan
3	2.1.4	Develop the Cost Management Plan
3	2.1.5	Develop the Work Packages
3	2.1.6	Develop the Human Resources Plan
3	2.1.7	Develop the Change Management Plan
3	2.1.8	Develop the Communication Management Plan
3	2.1.9	Develop the Quality Management Plan
3	2.1.10	Develop the Risk Management Plan
3	2.1.11	Develop the Procurement Management Plan
3	2.1.12	Develop the Implementation Plan
3	2.1.13	Design System
2	3.1	Execution
3	3.1.1	Develop System
4	3.1.1.1	Sprint 01
5	3.1.1.1.1	User Authentication
5	3.1.1.1.2	Project Submission Form
5	3.1.1.1.3	Proofreading Request Form
4	3.1.1.2	Sprint 02
5	3.1.1.2.1	Roles and Permissions
5	3.1.1.2.2	System Notifications
5	3.1.1.2.3	Submission and Request Form Approval
4	3.1.1.3	Sprint 03
5	3.1.1.3.1	User Dashboard
5	3.1.1.3.2	Report Generation
2	4.1	Control
3	4.1.1	Project Progress Tracking
3	4.1.2	User Acceptance Testing
2	5.1	Closeout
3	5.1.1	Documents Compilation and Finalization
3	5.1.2	Project Handover and Acceptance
3	5.1.3	Closure Meeting

Table 5 Work Breakdown Structure Hierarchal View

# 4.4 TABULAR VIEW

The tabular view, like the hierarchical structure, uses a table to provide the overview of the project. This table divides the project according to the level of the component, which makes it easier to view the components of the same level grouped together in relation to the parent component.

Level 1	Level 2	Level 3	Level 4	Level 5
1 Ramkolek	1.1 Initiation	1.1.1 Study the Current Project Paper Submission Process 1.1.2 Develop the Business Cas 1.1.3 Develop the Project Charter 1.1.4 Develop Stakeholder Analysis 1.1.5 Develop Stakeholder Management Strategy	;	
	2.1 Planning	2.1.1 Develop the Work Breakdown Structure 2.1.2 Develop the Scope Management Plan 2.1.3 Develop the Schedule Management Plan 2.1.4 Develop the Cost Management Plan 2.1.5 Develop the Work Packages 2.1.6 Develop the Human Resources Plan 2.1.7 Develop the Change Management Plan 2.1.8 Develop the Communication Management Plan 2.1.9 Develop the Quality Management Plan 2.1.10 Develop the Risk Management Plan 2.1.11 Develop the Procuremen Management Plan 2.1.12 Develop the Implementation Plan 2.1.13 Design System	t	

3.1 Execution	3.1.1	Develop System	3.1.1.1	Sprint 01	3.1.1.3.2	User
3.1 Execution			3.1.1.2	Sprint 02		Authentication
			3.1.1.3	Sprint 03	3.1.1.3.3	Project
				3		Submission
						Form
					3.1.1.3.4	Proofreading
						Request Form
					3.1.1.1.1	Roles and
						Permissions
					3.1.1.1.2	System
						Notifications
					3.1.1.1.3	Submission
						and Request
						Form Approval
					3.1.1.1.1	User
						Dashboard
					3.1.1.1.2	Report
						Generation
4.1 Control	4.1.1	Project Progress Tracking				
	4.1.2	User Acceptance Testing				
5.1 Closeout	5.1.1	Documents Compilation				
		and Finalization				
	5.1.2	Project Handover and				
		Acceptance				
	5.1.3	Closure Meeting				

Table 6 Work Breakdown Structure Tabular View

### 4.5 Tree Structure View

Moving away from lists and tables, the tree structure view is the project plan overview in the form of a visual representation to make the understanding of the project components and relationships more intuitive. Each component is represented by a node. High level components are placed higher on the tree and connect to the lower levels through branches.

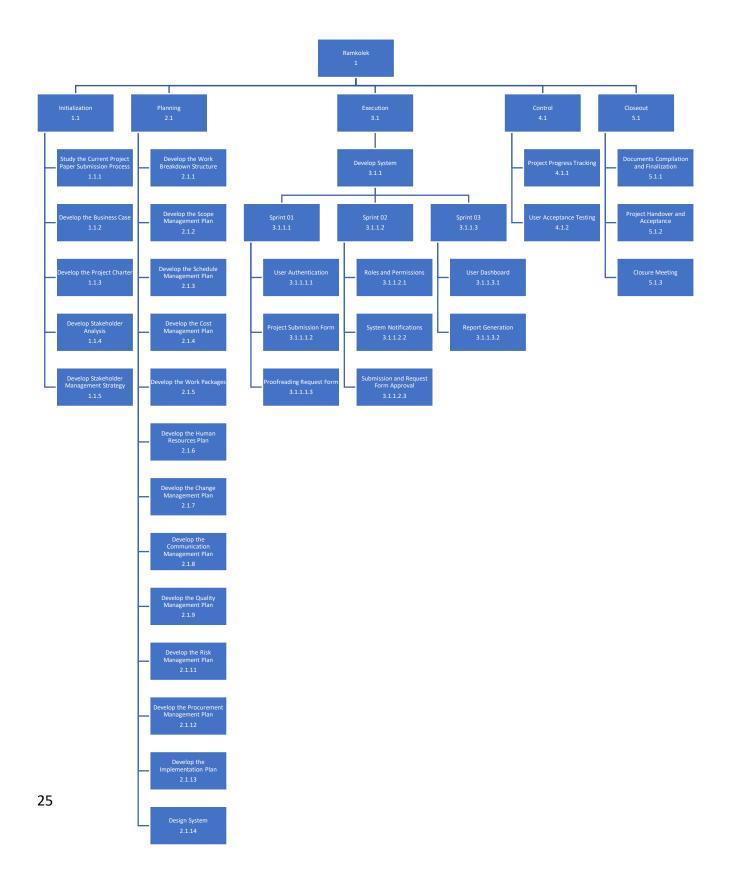


Figure 1 Work Breakdown Structure Tree Structure View

### **4.6 WBS DICTIONARY**

The WBS Dictionary contains all the details of the WBS which are necessary to successfully complete the project. Most importantly it contains a definition of each Work Package which can be thought of as a mini scope statement.

Level	WBS	Element Name	Definition
	Code		
1	1	Ramkolek Web Application	All work to implement a new
			document management system.
2	1.1	Initiation	The work to initiate the project.
3	1.1.1	Study the Current Project Paper	Investigate the current process being
		Submission Process	used for project documentation
			submission by interviewing the
			stakeholders and the client.
3	1.1.2	Develop the Business Case	
3	1.1.2	Develop Project Charter	Project Manager to develop the
			Project Charter.
3	1.1.3	Deliverable: Submit Project	Project Charter is delivered to the
		Charter	Project Sponsor.
3	1.1.4	Project Sponsor Reviews Project	Project sponsor reviews the Project
		Charter	Charter.
3	1.1.5	Project Charter	The Project Sponsor signs the Project
		Signed/Approved	Charter which authorizes the Project
			Manager to move to the Planning
			Process.
2	1.2		The work for the planning process for
		Planning	the project.
3	1.2.1	Create Preliminary Scope	Project Manager creates a Preliminary
		Statement	Scope Statement.
3	1.2.2		The Project Manager determines the
			project team and requests the
		Determine Project Team	resources.

3	1.2.3		The planning process is officially
			started with a project kickoff meeting
			which includes the Project Manager,
		Drainet Toom Kickeff Manting	Project Team and Project Sponsor
3	1.2.4	Project Team Kickoff Meeting	(optional).
3	1.2.4		Under the direction of the Project
		Dovolon Project Plan	Manager the team develops the project plan.
3	1.2.5	Develop Project Plan	Project Manager submits the project
3	1.2.5	Submit Project Plan	, ,
3	1.2.6	Submit Project Plan	plan for approval.
3	1.2.0		The project plan is approved and the Project Manager has permission to
		Milastona: Project Plan	
		Milestone: Project Plan	proceed to execute the project
2	1.2	Approval	according to the project plan.
3	1.3	Execution	Work involved to execute the project.
3	1.3.1		Project Manager conducts a formal
			kick off meeting with the project
		Desired Wieler (Charling	team, project stakeholders and
_	4.2.2	Project Kickoff Meeting	project sponsor.
3	1.3.2		The original user requirements is
			reviewed by the project manager and
			team, then validated with the
			users/stakeholders. This is where
		Verify & Validate User	additional clarification may be
		Requirements	needed.
3	1.3.3		The technical resources design the
_	_	Design System	new widget management system.
3	1.3.4		The procurement of all hardware,
			software and facility needs for the
		Procure Hardware/Software	project.
3	1.3.5		Team installs a development system
			for testing and customizations of user
		Install Development System	interfaces.
3	1.3.6		The system is tested with a select set
		Testing Phase	of users.
3	1.3.7		The actual system is installed and
		Install Live System	configured.

3	1.3.8		All users are provided with a four
			hours training class. Additionally,
			managers are provided with an
			additional two hours class to cover
		User Training	advanced reporting.
3	1.3.9	Go Live	System goes live with all users.
2	1.4		The work involved for the control
		Control	process of the project.
3	1.4.1		Overall project management for the
		Project Management	project.
3	1.4.2	Project Status Meetings	Weekly team status meetings.
3	1.4.3		Risk management efforts as defined in
		Risk Management	the Risk Management Plan.
3	1.4.4		Project Manager updates the Project
		Update Project Management	Management Plan as the project
		Plan	progresses.
2	1.5	Closeout	The work to close-out the project.
3	1.5.1		An audit of all hardware and software
			procured for the project, ensures that
			all procured products are accounted
			for and in the asset management
		Audit Procurement	system.
3	1.5.2		Project Manager along with the
			project team performs a lessons
			learned meeting and documents the
		Document Lessons Learned	lessons learned for the project.
3	1.5.3		All files and records are updated to
			reflect the widget management
		Update Files/Records	system.
3	1.5.4		The Project Sponsor formally accepts
			the project by signing the acceptance
			document included in the project
		Gain Formal Acceptance	plan.
3	1.5.5	·	All project related files and
		Archive Files/Documents	documents are formally archived.
Level	WBS		Definition
	Code	Element Name	
1	1		A document management system for
-		Ramkolek	project paper submission.
L			In a Paragraph of the second o

2	1.1	Initiation	Work involved in initiating the project
3	1.1.1	Study the Current Project Paper	Research on the business processes
		Submission Process	for paper submission.
3	1.1.2	Develop the Business Case	Development of the Business case.
3	1.1.3	Develop the Project Charter	Development of the project charter
3	1.1.4	Develop Stakeholder Analysis	Analysis the stakeholders.
2	2.1	Planning	Work involved to planning the project.
3	2.1.1	Develop the Work Breakdown	Creation of the WBS on open project
		Structure	and as a document.
3	2.1.2	Develop the Scope	Development of the scope
		Management Plan	management plan
3	2.1.3	Develop the Schedule	Development of the schedule
		Management Plan	management plan.
3	2.1.4	Develop the Cost Management	Development of the cost management
		Plan	plan.
3	2.1.5		Development of the work packages
		Develop the Work Packages	document.
3	2.1.6	Develop the Human Resources	Development of the human resources
		Plan	plan.
3	2.1.7	Develop the Change	Development of the change
		Management Plan	management plan.
3	2.1.8	Develop the Communication	Development of the communication
		Management Plan	management plan.
3	2.1.9	Develop the Quality	Development of the quality
		Management Plan	management plan.
3	2.1.10	Develop the Risk Management	Development of the risk management
		Plan	plan.
3	2.1.11	Develop the Procurement	Development of the procurement
		Management Plan	management plan.
3	2.1.12	Develop the Implementation	Development of the implementation
		Plan	plan.
3	2.1.13		Designing the architecture and UI of
		Design System	the system.
2	3.1	Execution	Work involved to execute the project.
3	3.1.1	Develop System	Development of the system.
4	3.1.1.1	Sprint 01	The first sprint for development.
5	3.1.1.1.1	User Authentication Login and account authentication.	
5	3.1.1.1.2	Project Submission Form	Form to submit project papers.

5	3.1.1.1.3		The form for requesting proofreading
		Proofreading Request Form	for project papers.
4	3.1.1.2	Sprint 02	The seconds sprint for development.
5	3.1.1.2.1	Roles and Permissions	Access restriction for features.
5	3.1.1.2.2		User notifications for changes in the
		System Notifications	submissions and requests.
5	3.1.1.2.3	Submission and Request Form	The approval process for the forms.
		Approval	
4	3.1.1.3	Sprint 03	The third sprint for development.
5	3.1.1.3.1	User Dashboard	A dashboard with analytics widgets.
5	3.1.1.3.2		The report generation feature of the
		Report Generation	system.
2	4.1		The work involved for the control
		Control	process of the project.
3	4.1.1		Monitoring of the project's milestones
		Project Progress Tracking	and schedule adherence.
3	4.1.2		Users test the final version of the
		User Acceptance Testing	system.
2	5.1	Closeout	The work to close-out the project.
3	5.1.1	Documents Compilation and	Organizing and final checking of
		Finalization	documents.
3	5.1.2	Project Handover and	Transferring custody of project
		Acceptance	resources to the client.
3	5.1.3		A meeting to discuss the project and
		Closure Meeting	review the outcomes.

Table 7 Work Breakdown Structure Dictionary

### 4.7 GLOSSARY OF TERMS

Level of Effort: Level of Effort (LOE) is how much work is required to complete a task.

WBS Code: A unique identifier assigned to each element in a Work Breakdown

Structure for the purpose of designating the elements' hierarchical location

within the WBS.

Work Package: A Work Package is a deliverable or work component at the lowest level of

its WBS branch.

WBS Component: A component of a WBS which is located at any level. It can be a Work

Package or a WBS Element as there's no restriction on what a WBS

Component is.

WBS Element: A WBS Element is a single WBS component, and its associated attributes

located anywhere within a WBS. A WBS Element can contain work, or it

can contain other WBS Elements or Work Packages.

### 3. PROJECT MANAGEMENT PLAN

### 5.1 STAKEHOLDER MANAGEMENT STRATEGY

### 5.1.1 Introduction

This Stakeholder Management Strategy outlines a comprehensive approach to identify, engage, and collaborate with all parties involved in the project management system. Our core objective lies actively in engaging and managing the expectations of all stakeholders throughout the project lifecycle.

Effective stakeholder management is pivotal for a project success because it allows us to do the following:

- **Secure project buy-in:** By understanding stakeholders' priorities, we can build a strong support for the system's implementation
- **Navigate challenges:** Having a good stakeholder management strategy helps with anticipating future disputes or opposing views. We can then develop plans and strategies to mitigate these challenges and ensure all voices are heard.
- **Optimize project outcomes:** By understanding each stakeholder's needs, we can tailor the system's capabilities to deliver the most value for all parties involved.

With this strategy, stakeholders will profit from a system that meets their individual demands, and the project will thrive with their active involvement and support. Our goal with this strategy is to create a system that will satisfy all stakeholders.

#### 5.1.2 IDENTIFY STAKEHOLDERS

The team identified the different stakeholders of this project by understanding the flow of how the current system works, while also finding the current issues and inefficiencies in it. This was achieved by conducting different sessions of interviews with them through meetings and consultations. We aimed to understand not only the flow of the current system but also the interests and influence of each stakeholder. Our goal is to ensure that all stakeholders' needs and expectations are effectively managed throughout the project. Therefore, we engaged with stakeholders regularly through various channels such as meetings and consultations. It was essential to recognize that stakeholders have a personal stake in the project and will be impacted by its implementation or success.

 The identified stakeholders we found that will benefit from this project are, the developers, PBL Coordinator, Head Librarian, Executive Director, The Head of ITRO (Information technology resources office), English Cluster Head, and the students of

- APC. This list of stakeholders was established after pinpointing the vital people in the project paper submission and proofreading requesting processes.
- To understand the influence of the identified stakeholders the team needs to gauge their interest in how they feel and use the current system and process while the team gathers data on what improvements they would want to see.
- To effectively manage the stakeholders' needs and expectations with this project, we created different needs statements when the team was consulting with them about their issues with the current system so we could identify their pain points. Because of that, the team created a list of objectives they wanted to achieve along with a backlog of features that can be implemented into the system to meet their needs.

### 5.1.3 KEY STAKEHOLDERS

The success of Ramkolek depends on understanding the needs of key stakeholders in APC's PBL program. The project's key users are students, the PBL coordinator, and professors. Ramkolek will meet their needs by streamlining the submission process for students, improving project monitoring for coordinators, and integrating proofreading features for academics.

Additionally, the Executive Director and the English cluster head have also been identified as a key stakeholder as they have an important role in the system especially in the proofreading request process. It is crucial to involve these stakeholders in the decision-making process and ensure their input and thoughts are considered throughout the project.

### **5.1.4** STAKEHOLDER ANALYSIS

Conducting a stakeholder analysis is an essential element of the stakeholder management plan for the Document Management System. This analysis involves identifying and categorizing stakeholders based on their level of power, interest, and engagement in the project. By understanding the stakeholders' perspectives and requirements. This enables the team to manage expectations efficiently and effectively throughout the project. The table below outlines the stakeholders for the project, indicating those who have a high or low level of interest and power in the development process.

Name	Position	Internal/External	Project Role	Contact Information
Team	Team	Internal	Development	dhsoquiat2@student.apc.
Dasalgorithm	members of		Team	edu.ph
	operations			Ibarcega@student.apc.ed
				<u>u.ph</u>
				rterania@student.apc.edu
				<u>.ph</u>
				<u>Ictesorero@student.apc.e</u>
				<u>du.ph</u>
				<u>igcajayon@student.apc.ed</u>
				<u>u.ph</u>
				jamirando@student.apc.e
				<u>du.ph</u>
Sir Manuel	PBL	External	External User	manuels@apc.edu.ph
Sebastian	Coordinator			
Sanchez				
Ms. Maylene	Head Librarian	External	External User	maylenem@apc.edu.ph
Mallari				
Ms. Rhea-Luz	Executive	External	External User	rhear@apc.edu.ph
Valbuena	Director			
Sir Jojo Castillo	Head of ITRO	External	Consultant	jojoc@apc.edu.ph
Sir Leonardino	English Cluster	External	External User	leonardinol@apc.edu.ph
Lapira	Head			

# Stakeholder Analysis

Name	Power/Interest	Current	Potential Management Strategies
		Engagement	
Team	Low/High	Supportive	Development Team
Dasalgorithm			
Mr. Manuel	High/High	Supportive	Sir Sanchez works closely with the team
Sebastian Sanchez			throughout the development of the
			system and gave us the information on
			the current system used in handling PBL
			documentations' submission. He is

Ms. Maylene Mallari	Medium/Medium	Neutral	approachable and is accessible through messaging, email, and both online and face-to-face meetings.  Ms. Mallari gave us information on the data needed by the library from our
			system. She also gives us information on the library's own system of storing and accepting papers.
Ms. Rhea-Luz Valbuena	Medium/Medium	Neutral	Ms. Valbuena gave us more insight on the process for PBL submission and analytics that may be needed from the system.
Mr. Leonardino Lapira	Medium/Medium	Neutral	Mr. Lapira gave us the information on the proofreading process in APC's English cluster that we will need to follow for our system.
Mr. Jojo Castillo	Medium/High	Supportive	Mr. Castillo advices us on how we can transfer the current users into our system. He also gives us insight on what technologies we can utilize for our project.

Table 8 Stakeholder Analysis

### **5.2 SCOPE MANAGEMENT PLAN**

#### 5.2.1 INTRODUCTION

The Scope Management Plan details how the project scope will be defined, developed, and verified. It clearly defines who is responsible for managing the projects' scope and acts as a guide for managing and controlling the scope.

Project Scope Management follows a five-step process; Collect Requirements, Define Scope, Create WBS, Verify Scope, and Control Scope.

- 1) Collect Requirements This step involves gathering information from all the stakeholders involved in Ramkolek: Document Management System for Project Documentation Papers Submission.
- 2) Define Scope Once the requirements are collected, the second step is to analyze and to use the requirement to define the scope.
- 3) Create WBS This process breaks project deliverables down into progressively smaller and more manageable components which, at the lowest level, are called work packages.
- 4) Verify Scope This step involves formal approval on the defined scope. This is to ensure that all stakeholders approve Ramkolek: Document Management System for Project Documentation Papers Submission of its goals and deliverables.
- 5) Control Scope: This is the process of monitoring/controlling the project/product scope and managing any changes in the scope baseline.

# **5.2.2 SCOPE MANAGEMENT APPROACH**

The project manager handles and manages the scope management. The scope management involves defining, identifying, and controlling the scope, creating the work breakdown structure (WBS). The web application's scope statement is defined by aiming to streamline project document submission and improving overall efficiency in the PBL process. The scope used was defined using Work Breakdown Structure (WBS). The scope was measured and verified also with Scope Baseline. The scope changes its process with the authorization, and the approval from the project sponsor. The project sponsor will also be accepting the final project deliverable and approves acceptance of project scope.

### **5.2.3** ROLES AND RESPONSIBILITIES

This section provides information on the Roles and Responsibilities for the Scope Management Document. Project Manager, Scrum Master, Team Members, Stakeholders and other key persons involved in managing the project's scope.

**Project Sponsor** – The Project Sponsor defines the project's objectives and the scope. All the project's deliverables are to be approved by the Project Sponsor.

**Project Adviser** - They offer strategic guidance with their deep understanding of similar projects. They also provide project insights that better define the project.

**Product Owner** – The responsibility of the product owner is to collaborate with the stakeholders and manage the product backlog. They are also in charge of a strategic plan that outlines how the project will evolve.

**Scrum Master** – Scrum Master leads and facilitates meetings such as product backlog refinement, sprint planning, retrospectives that point out areas to improve and to promote effective collaboration within the team.

**Project Manager** – They lead the team through the project. They are generally the one in charge of the project's execution and are the primary communicator for the project sponsor and stakeholders.

**Developer** – The responsibility of a developer is creating deliverables. This involves documentation and submitting project increments from the sprint planning meeting. **Stakeholders** – They provide insightful feedback on the project to maximize its value. Their comments and concerns are highly valuable to the project to make sure that the project will meet all stakeholders' needs.

### **5.2.4 Scope Definition**

Ramkolek aims to provide a system that will serve as a platform that will assist users in managing PBL and proofreading documents in a more organized manner, enhancing their experience of handling PBL projects. This scope of Ramkolek will be serving as a portal for students to submit their project documentations by establishing a centralized and organized environment for uploading the papers and managing the project documents during the submission process.

### **5.2.5 Project Scope Statement**

The project aims in streamlining project document submission and improving overall efficiency in the PBL process.

The following are list of requirements to achieve success:

• Ramkolek should feature paper submission and proofreading request processes.

- The system must have summary dashboards and be able to generate reports.
- It should include a team module for professors to create groups for students.
- An option to archive submissions, proofreading requests, and teams must be available in the system.

Additional requirements may be added as necessary, with project sponsor approval, as the project moves forward.

The following are deliverables that Ramkolek will provide:

- Centralized platform for project documentation submission
- Proofreading requesting process module
- Summary dashboard and reports generation
- Team creation and management module

# **Project Deliverables**

The following are project exclusions from the project deliverable:

- The project excludes other departments, except for only the school of computing and IT, which is why only the PBL subjects: NTSDEV, SYADD, and CSPROJ will be used.
- The system will not be available to non-APC individuals without APC accounts.
- Files cannot be edited within the system. And because of that the file needs to be downloaded from the system to make changes within the document.
- The system can't change the account's password, that needs to be done with the ITRO because those are Microsoft accounts that the system doesn't have access to.

The following constraints pertain to the Ramkolek project:

Data gathering, system design, and development of the system is limited to only 9
months, which may not be enough time to adjust and implement additional features
and changes.

The following are the project assumptions from working under to complete the project:

- The users of the system are familiar with basic computer operations and can navigate the web application with minimal guidance.
- Users have access to stable internet connections for seamless use of the web application.
- The APC information system can provide necessary user data for account management and authentication.
- Users adhere to the file format requirements for project documentation submission (Word and PDF).

- Ramkolek will be hosted using APC's AWS subscription.
- APC's Information Technology Resource Office will assist the development group in the deployment of Ramkolek.
- The ITRO (information technology resources office) will also handle the system's maintenance after deployment.

### 5.2.6 WORK BREAKDOWN STRUCTURE

This WBS follows the Project Management Body of Knowledge (PMBOK) project life cycle. The Ramkolek project's components are divided into the five PMBOK life cycle phases: initiation, planning, execution, control, and closing. Each of these phases is further broken down into smaller components in the form of tasks and work packages. In addition to the PMBOK life cycle, the execution phase incorporates Agile methodology, using sprints to align with scrum practices for the system's development.

Level	WBS Code	Element Name			
1	1	Ramkolek			
2	1.1	Initiation			
3	1.1.1	Study the Current Project Paper Submission Process			
3	1.1.2	Develop the Business Case			
3	1.1.3	Develop the Project Charter			
3	1.1.4	Develop Stakeholder Analysis			
2	2.1	Planning			
3	2.1.1	Develop the Work Breakdown Structure			
3	2.1.2	Develop the Scope Management Plan			
3	2.1.3	Develop the Schedule Management Plan			
3	2.1.4	Develop the Cost Management Plan			
3	2.1.5	Develop the Work Packages			
3	2.1.6	Develop the Human Resources Plan			
3	2.1.7	Develop the Change Management Plan			
3	2.1.8	Develop the Communication Management Plan			
3	2.1.9	Develop the Quality Management Plan			
3	2.1.10	Develop the Risk Management Plan			
3	2.1.11	Develop the Procurement Management Plan			
3	2.1.12	Develop the Implementation Plan			
3	2.1.13	Design System			
2	3.1	Execution			
3	3.1.1	Develop System			
4	3.1.1.1	Sprint 01			
5	3.1.1.1.1	User Authentication			
5	3.1.1.1.2	Project Submission Form			
5	3.1.1.1.3	Proofreading Request Form			
4	3.1.1.2	Sprint 02			
5	3.1.1.2.1	Roles and Permissions			
5	3.1.1.2.2	System Notifications			
5	3.1.1.2.3	Submission and Request Form Approval			
4	3.1.1.3	Sprint 03			
5	3.1.1.3.1	User Dashboard			
5	3.1.1.3.2	Report Generation			
2	4.1	Control			
3	4.1.1	Project Progress Tracking			
3	4.1.2	User Acceptance Testing			
2	5.1	Closeout			

3	5.1.1	Documents Compilation and Finalization			
3	5.1.2	Project Handover and Acceptance			
3	5.1.3	Closure Meeting			

Figure 2 Scope Management Plan Work Breakdown Structure Table

### **5.2.7 Scope Verification**

The project team will use various techniques for scope verification to guarantee that Ramkolek: Document Management System for Project Documentation deliverables satisfy the original scope. These methods include:

- 1. **Documentation** It helps ensure that Ramkolek: Document Management System for Project Documentation is delivered on time and within budget. This ensures features align with what was originally planned.
- 2. **System Demonstration** Showcasing the functionalities of Ramkolek: Document Management System for Project Documentation Papers Submission allows the stakeholders to see the system in action and verify that it meets their expectations according to the scope.
- 3. **Sign-off Criteria** This provides a formal record of stakeholder approval, ensuring they are satisfied with what was delivered within the agreed scope.
- **4. Stakeholder Meeting and documentation** The formal meetings with the stakeholder ensure that the project meets the established scope requirement. Documentations of the meeting such as minutes of the meeting records the formal acceptance of deliverables.

### 5.2.8 SCOPE CONTROL

Scope control is the process of monitoring the status of the scope of Ramkolek: Document Management System for Project Documentation. This section also details the change process for making changes to the scope baseline.

- 1. **Identifying the Change**. Any stakeholder or team member can identify a need for a change request. This provides the proposed change, and its impact on Ramkolek: Document Management System for Project Documentation.
- **2. Review and Evaluation.** The evaluation of the change request will review its impact on the project scope, deliverables, and goals.
- **3.** Change Request Documentation. This documents the change request. The document includes details about the change request, and its effect upon implementation.
- **4. Change Process Approval.** This step involves the project manager whether to approve the change request.

- **5. Implementing Approved Changes.** This step involves the changes Ramkolek: Document Management System for Project Documentation and its documentation to be updated.
- **6. Communication about the update.** It is important that all team members and stakeholders communicate on the update on the system and the document. This will clear confusion about the project.
- 7. The rejected change request will keep the original goals and objectives of the project.

# 5.3 COST MANAGEMENT PLAN

### 5.3.1 Introduction

Throughout the project's lifecycle this document will define the cost management plan of the Ramkolek. The document will contain information on the person responsible of setting the costs, the method of which the project costs are measured, and how the costs will be controlled.

# 5.3.2 COST MANAGEMENT APPROACH

The cost management approach will be explained in the following:

### Planning:

To ensure that the system will be delivered on time and on budget, the team will be using Open Project as the project management software. The project will utilize the Work Breakdown Structure (WBS) based on Project Management Body of Knowledge (PMBOK) these cycles will help breakdown the work packages based on layers levels of system features that are a priority on creating Ramkolek as project lifecycles. This will allow the team to monitor the progress and costs of the project.

### • Cost estimations:

The cost of Ramkolek's budget will be reflected on the human resources and hardware requirements for both the creation and operation on the website, as each update on features of the website will add the cost, as the team keep on track on the project's schedule and budget on par with the project's expected outcome. These estimations are based on the standard rates for each unit.

### **5.3.3 Measuring Project Costs**

In this section, this will explain how the WBS structure works in creating system features, as each will be explained in different layers of levels.

The PMBOK focuses on Earned Value Management for measuring and controlling a project's costs. Earned Value Management is the best tool used that provides comprehensive data that we can use in our project. Four Measurements; Schedule Variance (SV), Cost Variance (CV), Schedule Performance Index (SPI) and Cost Performance Index (CPI) will provide insight effective management without overburdening the Project Manager with Earned Value calculations and measurements.

Schedule Variance (SV) is a measurement of the schedule performance for a project. It's calculated by taking the Earned Value (EV) and subtracting the Planned Value (PV). This tells us if Ramkolek is behind or ahead of schedule. If SV is zero, then the project is perfectly on schedule. If SV is greater than zero, the project is earning more value than planned thus it's ahead of schedule. If SV is less than zero, the project is earning less value than planned thus it's behind schedule. This means that the team should identify the cause of the delay.

Cost Variance (CV) is a measurement of the budget performance for a project. CV is an indicator of how we maintain the project in Ramkolek. CV is calculated by subtracting Actual Costs (AC) from Earned Value (EV). EV is the actual value earned in the project. AC is the actual costs incurred to date, thus when we subtract what our actual costs from the EV, we have a good measurement which tells us if we are above or below budget. If the CV is zero, then the project is perfectly on budget. If the CV is positive, then it means we are underbudget. The project has earned more than the planned cost. If the CV is negative, it is overbudget. It has earned less than planned.

Schedule Performance Index (SPI) measures the progress achieved against that which was planned. SPI is calculated as EV/PV. If EV is equal to PV, the value of the SPI is 1. If EV is less than the PV then the value is less than 1, which means the project is behind schedule. If EV is greater than the PV the value of the SPI is greater than one, which means the project is ahead of schedule. A well performing project should have its SPI as close to 1 as possible, or maybe even a little under 1.

Cost Performance Index (CPI) measures the value of the work completed compared to the actual cost of the work completed. CPI is calculated as EV/AC. If CPI is equal to 1 the project is perfectly on budget. If the CPI is greater than 1 the project is under budget, if it's less than 1 the project is over budget.

### **5.3.4 REPORTING FORMAT**

Since the stakeholders can be easily reported on it will be contacted on a weekly basis via spreadsheet showing the cost elements, the baseline costs, and the units. With each report being addressed this will be part of the cost management plan as it will give the team the information on the action necessary to address the client and the stakeholder's concerns on Ramkolek.

### 5.3.5 COST VARIANCE RESPONSE PROCESS.

The Control Thresholds for this project is a CPI or SPI of less than 0.8 or greater than 1.2. If the project reaches one of these Control Thresholds a Cost Variance Corrective Action Plan is

required. The Project Manager will present the Project Sponsor with options for corrective actions within five business days from when the cost variance is first reported. Within three business days from when the Project Sponsor selects a corrective action option, the Project Manager will present the Project Sponsor with a formal Cost Variance Corrective Action Plan. The Cost Variance Corrective Action Plan will detail the actions necessary to bring the project back within budget and how the effectiveness of the actions in the plan will be measured. Upon acceptance of the Cost Variance Corrective Action Plan it will become a part of the project plan and the project will be updated to reflect the corrective actions.

# **5.3.6 COST CHANGE CONTROL PROCESS**

The cost change control process will follow the established project change request process. If any change in the cost and budget are to be done to the project, the group will have to communicate that to the project sponsor. Official changes can only occur after the project sponsor has reviewed the request for change and approval is given.

### **5.3.7 PROJECT BUDGET**

The summary budget is presented below.

Summary Budget – List component project costs					
Project Component	Component Cost (₱)	Units	Duration (Month)	Total Cost (₱)	
Development Team					
Project Manager	35,000.00	1	12	420,000.00	
Web Developer	34,000.00	5	12	2,040,000.00	
Desktops	25,000.00	6	1	125,000.00	
AWS EC2	1,300.79	1	5	6,503.95	
Office Space	37,000.00	1	12	444,000.00	
Electricity	4,000.00	1	12	48,000.00	
Internet	1,000.00	1	12	12,000.00	
Total			*	<b>∌</b> 3,095,503.95	

Table 9 Cost Management Plan Project Budget

# 5.4 SCHEDULE MANAGEMENT PLAN

#### 5.4.1 Introduction

The schedule management plan plays an important part in project management. This document covers the approach used by the team in schedule management, how the team will respond to changes, and the procedure by which the team will manage the project timeline. This plan will ensure that the project will be finished within the set timeline and how the team may react to deviations in events.

# 5.4.2 SCHEDULE MANAGEMENT APPROACH

For this project, the schedule will be managed using the project management software, Open Project. Open Project will help the team schedule and set the duration of tasks as work packages. The tool can also be utilized to visualize the schedule as a Gantt chart, making it easier to keep track of the individual work packages. Development of the schedule will be the responsibility of all members of the team. The project manager will lead scheduled meetings and individual members will give their input and feedback during the meeting to gain the insight of all members.

# **5.4.3 SCHEDULE CONTROL**

As the project follows a mixture of PMBOK and Agile methodology, control on the project schedule varies depending on the phase that the project is in. During initialization and planning, the team more closely follows a PMBOK practice so long-term schedules are set at the beginning of each phase based on the timeline set by the project sponsor. On the other hand, the execution phase follows Agile methodology more, which is why the team uses Scrum sprint practices. Schedules are set for short term periods, specifically three-week sprints. The schedules for each sprint are set at the beginning of the sprint during the sprint planning meeting. Schedules are reviewed at the end of each sprint during the sprint review and sprint retrospective meetings where feedback from the members is taken. Updates on the schedules are then done at the next sprint planning meeting with the feedback in mind from the review and retrospectives.

Role	Responsibilities	
Project Manager	Facilitates scheduling meetings and	
	communicates with the stakeholders.	
Development Team	Gives their insight and feedback on the	
	schedules set. They can also change	
	schedules and durations of tasks on the Open	
	Project schedule.	

Stakeholders	Can give the development team their
	feedback on the project's development and
	schedules.

Table 10 Schedule Management Plan Roles

### **5.4.4 Schedule Changes and Thresholds**

The project's planned schedule is designed to adhere to the timeline set by the project sponsor, the schedule may be subject to change. For example, if unexpected events were to occur or if a false estimation may have been made during the initial planning. In such cases, great changes to the schedule must first be requested of the project sponsor. After the request has been acknowledged and permission for change has been granted, only then is the team allowed to update the set dates on the schedule.

### 5.4.5 SCOPE CHANGE

As the project's scope may be subject to change for one reason or another, re-baselining of the schedule will follow the modification. Once the scope has been altered with approval from the project sponsor, the team will follow the following steps and adjust the schedule accordingly:

### 1. Estimation of Effort

The amount and difficulty of any additional work to be done will be quantified for ease of understanding within the team. Estimation will be done in a team meeting involving active and open discussion with the members. Factors like complexity and available resources will be considered for the new tasks.

# 2. Estimation of Time

Once the difficulty of the work has been assessed and communicated, the team will then create an estimate of the amount of time needed to complete the task. This will be done with the team's currently active tasks and skill level in mind to set a realistic goal for the new task.

# 3. Schedule Fitting

After the difficulty and estimated duration of any new tasks have been set, changes into the schedule may now begin. The team will integrate the additional tasks into the schedule and adjust it as needed.

### 4. Sponsor Approval

The new schedule will be presented to the project sponsor for validation. Only after approval will the new tasks be finalized in the project schedule and hence officially be part of the latest schedule.

# 5.5 HUMAN RESOURCES MANAGEMENT PLAN

# 5.5.1 Introduction

The Human Resource Plan provides a roadmap of managing individuals that are involved in the progress of the project, Ramkolek: Document Management System for Project Documentation Papers Submission. This outlines the roles and responsibilities involved in the project. This plan will help the team to understand their individual responsibilities and avoid miscommunication. This will also help our Project Manager to delegate the tasks and track the progress of the members.

### **5.5.2** ROLES AND RESPONSIBILITIES

This section provides information on the roles and responsibilities of team members and stakeholders. Team members have the following levels of authority and responsibility.

# **Stakeholder Roles and Responsibilities**

This table provides information about the stakeholders, their authority, and responsibility to

progress the project.

Name	Department / Company	Position	Authority	Responsibility
Sir Manuel Sebastian Sanchez	SOCIT	PBL Coordinator	High	Provides information, approves deliverables
Sir Leonardino Lapira	English Cluster	English Cluster Head	Medium	Provides information about proof reading process
Sir Jojo Castillo	ITRO	Executive Director	Medium	Provides information, supports development, and has a high influence on ITRO department
John Angelo		Student	Medium	Provides information on documentation submission

Ms. Maylene Mallari	Library	Head Librarian	High	Provides information about the archival process for documents
Ms. Rhea-Luz Valbuena	SOCIT	Executive Director	High	Provides information on areas to improve
Adrian Thomas Badong		Student	Medium	Provides information on documentation submission

Table 11Stakeholder Roles and Responsibilities

# **Team Member Roles and Responsibilities**

This table provides information on the responsibilities of each role in the project, providing their expertise in a particular area relevant to the project.

Role	Description	Authorit	Competency
		у	
Product Owner/	Manages the	High	Project Management and Time Management
Developer	project, directs		
	the team, and		
	communicates		
	with		
	stakeholders.		
Scrum	Facilitates	High	Project Management and Time Management,
Master/Project	meetings and		Research Skills, Critical Thinking and Problem-
Manager/	works on		Solving
Developer	documentation		
Developer	Works on	High	Research Skills, Critical Thinking and Problem-
	deliverables		Solving

Table 12Team Member Roles and Responsibilities

# 5.5.3 PROJECT ORGANIZATIONAL CHARTS

The Organizational Breakdown Diagram is how responsibilities are assigned by department.

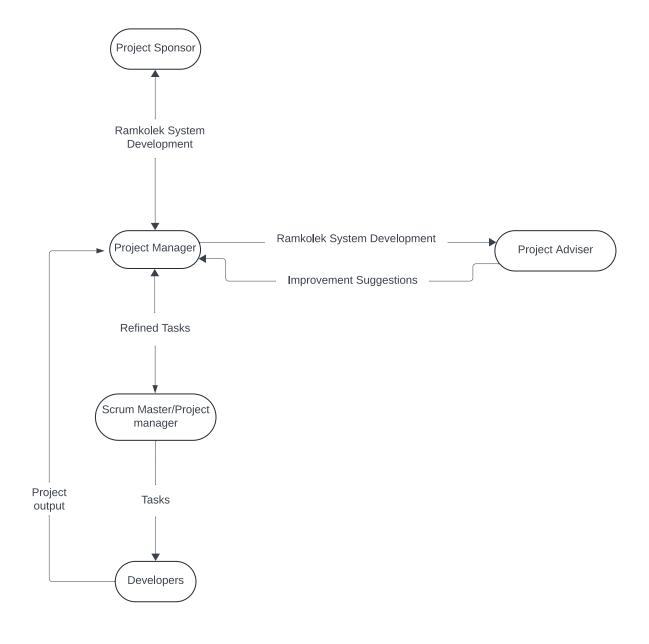


Figure 3 Organizational Chart

### 5.5.4 STAFFING MANAGEMENT

1. **Human Resource Requirements.** This phase is the initiation in which provides the project team's requirements to define project goals, objectives, and bring deliverables.

Roles	Requirements		
Product Owner	Creates the backlog items, communicates with stakeholders		
Scrum Master	Communicates with stakeholders, and monitors tasks by guiding team meetings		
Project Manager	Develop a detailed project plan outlining tasks, timelines, and budget		
	Creates deliverables (documentation, project output) for the project to progress,		
Developer	Developers write and execute tests to ensure their code functions as intended.		

Table 13 Human Resource Requirements

2. **Human Resource Planning.** This section provides planning information on ways of acquiring human resources to ensure achieving the project's goal.

# **Resource Management**

This is for when the project needs more talent to progress. This plans how to handle and support individuals that have the right skill for the project.

- 1. **Brand the project to be Employable.** This is to market Job Posting through Linkedin, indeed, and Glassdoor.
- 2. **Hiring Process**. The Project Manager will source potential candidates from the Job Postings.
- 3. **Screening Process**. This is to identify and assess the candidates by interviews and their skills and experience should align to the responsibilities for their roles.
- 4. **Training**. This entails the new talent to be introduced to their role and responsibilities. It is also included that they should be trained in the project tools and application needed to their role.
- 3. **Regulating Candidates.** This is to ensure that the team members stay on the project's goal and ambition.
  - **1. Status Weekly Reports.** This is the weekly progress report that highlights what they have finished, plan to do, and their blockers.
  - Team Meetings. This includes scrum meetings, product backlog refinement meeting, sprint review meetings, and sprint planning meeting to identify blockers, updates on the project.

- 4. **Evaluation.** In this phase finalizes the performance of the candidate where the candidate is fit to the project's goal and to the team members' culture.
  - **1. Deliverables.** The candidate has provided their project output that contributes to the project.
  - **2. Peer Evaluation.** This offers insights from the employee in terms of communicating with others. This also provides feedback on areas to improve.

# 5.6 CHANGE MANAGEMENT PLAN

### INTRODUCTION

To set the standards and procedures for managing changes for the project, Ramkolek, the change management plan was developed. The change management plan goes into detail about the team's approach on change management, the different roles and responsibilities in the context of change management, the members of the change control board, and overall process for change management for the project.

# **Change Management Approach**

The project's change management approach is outlined in this section and is relevant throughout the project's lifecycle. It guarantees that changes are managed consistently, minimizing disruptions and maximizing the project's success. The team can effectively handle and monitor changes by following this defined structure, maintaining project consistency with its goals and objectives.

This approach is structured around three key phases:

- Identifying Changes and Prioritization: This phase involves regularly monitoring the
  project landscape for potential changes. The team may then prioritize the most
  significant adjustments by evaluating the identified changes based on their possible
  impact and urgency.
- 2. Rapid Assessment of Impact: As soon as a change is identified, a thorough and rapid assessment is carried out to determine how it will affect the project's resources, timeline, scope, and overall objectives.
- 3. Repeated Implementation and Review: Changes that are approved are implemented in a phased and repetitive manner. Every iteration involves careful planning, execution, and assessment to assess the impact of the change and identify any unexpected consequences, ensuring that the project stays on course.

Communication and collaboration are crucial to this approach. Stakeholders are kept informed and engaged throughout the entire change process. Keeping everyone informed about upcoming changes, their rationale, and their possible effects is made possible by regular communication. Being transparent reduces resistance to change and develops trust.

### **Definitions of Change**

Throughout the project's lifecycle, adjustments may be proposed or be necessary to ensure its successful completion. These adjustments may be the result of unforeseen issues, new opportunities, or shifting expectations from stakeholders. Types of changes include:

- Technical Changes: These changes involve updates or modifications to the project's technological components like software, hardware, or infrastructure. They are necessary to adapt to advancing technology, fix compatibility issues, or to enhance system performance.
- 2. Process Enhancements: These changes might be made to the project's workflow, procedures, or strategies to increase productivity, eliminate bottlenecks, or simplify operations. New tools are introduced, current processes are improved, or best practices are adopted as part of these changes.
- 3. Reallocation of Resources: To handle unexpected constraints on resources, maximize resource use, or account for adjustments in project scope, the project's allocation of resources may need to be changed. This may involve changing spending strategies, acquiring more resources, or reassigning personnel.
- 4. Changes Driven by Stakeholders: Stakeholders may propose changes to better align the project with their evolving demands and expectations. The changes might involve improving communication strategies, incorporating stakeholder feedback, or updating the deliverables of the project.

# **Change Management Process**

The following process outlines the steps to manage changes within the project.

- 1. **Change Request Submission** can start a change request by submitting a formal written request.
- 2. **Evaluation of the Change Request** The change control board or CCB reviews each change request analyzing its impact on the project.
- 3. **Request Approval** The CCB can either approve or reject the change request by communicating it with the requester. If the request is rejected, the CCB provides a detailed explanation of the reasons for rejection.
- 4. **Change planning and implementation** An implementation plan is developed after approval outlining the steps, resources, time constraints, and dependencies needed to carry out the change. The implementation plan is communicated to all relevant stakeholders to ensure transparency. The change will be implemented according to the implementation plan.

# CHANGE CONTROL BOARD

The Change Control Board (CCB) is the one responsible for approving or rejecting the proposed changes to the project. They evaluate each change request, assessing its impact on the project scope, timeline, budget and objectives. They keep the stakeholders informed about the change request status, decisions, and the progress of the implementation.

Name	Position	CCB Role
Mr. Manuel Sebastian Sanchez	Project Sponsor	CCB Chair
Jeb Vincent Cajayon	Project Manager	CCB Co-Chair
Leila Angela Arcega	Web Developer	CCB Co-Chair
Jonlord Mirando	Web Developer	CCB Member
Daniella Diana Soquiat	Web Developer	CCB Member
Raina Marie Terania	Web Developer	CCB Member
Lyka Tesorero	Web Developer	CCB Member

Table 14 Change Control Board

### **ROLES AND RESPONSIBILITIES**

The following are the roles and responsibilities for all change management efforts related to the project:

# **Project Sponsor**

As the project sponsor, they may require the team to make changes throughout the project. Their feedback and comments are valuable to the development of Ramkolek. The project sponsor will also review change requests and decide whether they are the right choice for the project. They ultimately be the ones to decide whether a change request will be accepted or denied.

# **Project Manager**

The project manager communicates with the stakeholders and the project sponsor, providing them with updates on the project. If the stakeholders or project sponsors have feedback on the project, the project manager will receive the information and relay it onto the rest of the development team. In the reversal of the situation whereas the development team will request for a change in the project, the project manager will handle relaying the change request to the project sponsor.

# **Development Team**

The development team puts change requests into application in the project as agreed upon with the project sponsor. They may also create change requests for the project to be proposed by the project manager to the project sponsor for review and acceptance.

### **CHANGE CONTROL PROCESS**

The systematic approach used to carefully assess, approve, and monitor any project changes is through a change control process. In case that the project's scope, schedule, budget, or resources change, it ensures that we make well-informed decisions. This process reduces delays, minimizes risks, and ensures that the project will be successful.

- 1. Change Request Submission A formal change request is submitted by any stakeholder, identifying and documenting the proposed change. By doing this, it is ensured that everyone understands the nature and scope of the proposed change.
- 2. Review of Change Request The CCB receives the change request and makes a thorough review.
- 3. Change Impact Analysis The CCB will assess the impact of the change on the project's objectives, schedule, budget, resources and quality. They evaluate whether the changes can be implemented within the project's limitations.
- 4. Approval Decision The approval decision will be based on the evaluation and impact analysis, the CCB can then decide to approve or reject the change request. It will be documented and communicated to the requester.
- 5. Implementation If the change is approved, a detailed implementation plan is developed. It is implemented according to the plan and is regularly monitored.
- 6. Documentation After the change is implemented, The CCB can verify that it has been implemented as planned to confirm that it has achieved its intended outcomes and does not negatively impact other aspects of the project.
- 7. Closure The change is formally closed, and the project documentation is updated to reflect the changes.

# 5.6 COMMUNICATION MANAGEMENT PLAN

### 5.6.1 Introduction

The communication management plan is a vital part of project management that lays out the communication strategy and protocols for Ramkolek. This includes communication within the team as well as communication between the team and the project's stakeholders.

# 5.6.2 COMMUNICATIONS MANAGEMENT APPROACH

For the project, Ramkolek, the group will utilize a flexible strategy for communication, primarily using a digital communication-based approach. The project will leverage MS Teams and Outlook as the primary platforms for communicating between members and the stakeholders. MS Teams and Outlook are easily available to Asia Pacific College students and faculty as the school provides Microsoft 365 subscriptions while they are affiliated to the school. This approach embraces the flexible and accessible nature of online communication channels, particularly emails, messaging, and online meetings. The secondary form of communication to be used for the project is through face-to-face meetings with the members, stakeholders, and the project sponsor.

### 5.6.3 COMMUNICATIONS MANAGEMENT CONSTRAINTS

As with any project, communication is the key to success. However, like all parts of project management, communication also faces limitations, which is why it is important to plan for such cases. Before planning for contingency can occur, identification of constraints must first be done. For Ramkolek, these are the identified communication management constraints found:

- 1. Connectivity Issues The first and most glaring constraint for a digital communication-based approach is going to be internet problems. While communication through the internet can be revolutionary in connecting people from great distances it also has its weaknesses. If an individual loses their internet connection, they are essentially cut off from the rest of the team. Losing connection during an online meeting can also be disruptive for the rest of the attendees.
- **2. Confidentiality Issues** As communication almost primarily occurs through online means, messages, video calls, and files are at risk of being disclosed outside of the people involved with the project that has access to this information. This is a serious security concern and must be taken in mind when using digital-based communication.
- **3. Information Overload and Distractibility** The last identified constraint relies more on the fact that digital communication uses digital devices, which can be difficult to work with if the communication is buried other responsibilities. This can be a missed email, message, or video call, leading to a cut in communication. Another issue is that digital devices can cause distractions for the individual. While it is useful and convenient to

have open access to information and entertainment, it may lead to distraction from replying to emails or messages.

# 5.6.4 STAKEHOLDER COMMUNICATION REQUIREMENTS

Stakeholders hold weight in the project's direction, which is the reason why effective communication must be observed with the stakeholder group. To achieve this, the requirements of each stakeholder must be considered. For Ramkolek, these are the stakeholder communication requirements identified:

- 1. Regular Updates Stakeholders and project sponsors need regular updates on the project's progress. It can be delivered through emails summarizing progress or a consultation through an online video call.
- **2. Transparency** Clear and honest information regarding the system avoids misinformation and maintains integrity within the project.
- **3. Active Involvement in Major Decisions** As stakeholders, these individuals have the power to guide the project in certain directions. For major decisions regarding the project, stakeholders must first be informed and confirmation from them must be acquired before making final changes to the project.
- **4. Confidentiality** Information and files must never be disclosed to other individuals unless given permission to do so. Access to all information pertaining to the project and the people involved must be established before sharing.

# **5.6.5** ROLES

### **Project Sponsor**

The project sponsor is the one to authorize the project by signing the project charter. This person is responsible for the project's funding and for its success. Since the Project Sponsor is at the executive level communications should be presented in summary format unless the Project Sponsor requests more detailed communications.

# **Key Stakeholders**

Normally Stakeholders include all individuals and organizations who are impacted by the project. For this project we are defining a subset of the stakeholders as Key Stakeholders. These are the stakeholders with whom we need to communicate and are not included in the other roles defined in this section. The Key Stakeholders includes executive management with an interest in the project and key users identified for participation in the project.

# **Project Manager**

The Project Manager is responsible for executing the project. The Project Manager manages day-to-day resources, provides guidance, and reports on the projects metrics as defined in the Project Management Plan. As responsible for the project's execution, the Project Manager is the primary communicator for the project distributing information according to this Communications Management Plan.

#### **Product Owner**

The Product Owner manages the product backlog for the project. They make sure that the development team understands with clarity the value, requirements, and goals of the project.

### Scrum Master

The Scrum Master is responsible for guiding the development team through their sprints. This includes facilitating the different Scrum ceremonies throughout the project's duration such as the daily Scrum standups, sprint planning meetings, product backlog refinement meetings, sprint reviews, and the sprint retrospectives.

# **Development Team**

The Development Team is comprised of the developer members who have a role performing work on the project. The Development Team needs to have a clear understanding of the work to be completed and the framework in which the project is to be executed. Since the Development Team is responsible for completing the work for the project, they played a key role in creating the Project Plan, including defining its schedule and work packages. The Project Team requires a detailed level of communication which is achieved through day-to-day interactions with the Project Manager and other team members along with weekly team meetings.

#### 5.6.7 PROJECT TEAM DIRECTORY

The following table presents contact information for all persons identified in this communications management plan. The email addresses and phone numbers in this table will be used to communicate with these people.

Role	Name	Title	Organization/	Email
			Department	
Project	Jeb Cajayon		Dasalgorithm	jgcajayon@student.apc.edu.ph
Manager/Product				
Owner				
Scrum	Leila Arcega		Dasalgorithm	lbarcega@student.apc.edu.ph
Master/Developer	_			

Development	Daniella		Dasalgorithm	dhsoquiat2@student.apc.edu.ph
Team	Soquiat,		J	rterania@student.apc.edu.ph
	Raina			lstesorero@student.apc.edu.ph
	Terania,			jamirando@student.apc.edu.ph
	Lyka			
	Tesorero,			
	Jonlord			
	Mirando			
<b>Project Sponsor</b>	Manuel	PBL	School of	manuels@apc.edu.ph
	Sebastian	Coordinator	Computing	
	Sanchez		and	
			Information	
			Technology	
Stakeholder	Maylene	Head	Library	maylenem@apc.edu.ph
	Mallari	Librarian		
Stakeholder	Rhea-Luz	Executive	School of	rhear@apc.edu.ph
	Valbuena	Director	Computing	
			and	
			Information	
			Technology	
Stakeholder	Jojo Castillo	Head of	Information	jojoc@apc.edu.ph
		ITRO	Technology	
			Resource	
			Office	
Stakeholder	Leonardino	English	English Cluster	leonardinol@apc.edu.ph
	Lapira	Cluster		
		Head		

Table 15 Communication Management Plan Team Directory

# 5.6.8 COMMUNICATION METHODS AND TECHNOLOGIES

For successful communication with the team, the stakeholders, the project sponsor, and other individuals relating to the project, individuals involved in Ramkolek must understand the capabilities and limitations of the communication methods and technologies to be used. As such, this section will identify what the team considered when choosing the communication methods and technologies to be used in the project.

**1. Technical Proficiency** – As the client and stakeholders are already familiar with using Microsoft Teams and Outlook, these platforms have been chosen as the primary tools for email, messaging, and online meetings.

- 2. Stakeholder Preference The various stakeholders of Ramkolek have their own preferences for communication methods and technologies. Some prefer to use email or messaging and others stick to online video meetings. There are also some that stick to face-to-face meetings and as such, the team makes changes according to this information.
- **3. Type of Information** More sensitive and confidential information require a platform with higher security to prevent unauthorized access.

# 5.6.9 COMMUNICATIONS MATRIX

The following table identifies the communications requirements for this project.

Channel	From	То	Туре	Frequency	Format Used	Delivery Media
Daily Scrum Standup	Scrum Master	Project Manager and Development Team	Meeting or Deliverable	Daily	Informal or form	Online Meeting or Teambox
Sprint Planning	Scrum Master	Project Manager and Development Team	Meeting	Every Sprint	Informal	Teams Meeting
Product Backlog Refinement	Product Owner	Project Manager and Development Team	Meeting	Every Sprint	Informal	Teams Meeting
Sprint Review	Scrum Master	Project Manager and Development Team	Meeting	Every Sprint	Informal	Teams Meeting
Sprint Retrospective	Scrum Master	Project Manager and Development Team	Meeting	Every Sprint	Informal	Teams Meeting
Business Process Refinement	Project Manager	Project Sponsor and Stakeholders	Meeting or Interview	Beginning of the Project	Formal	Onsite Meeting, Teams Meeting, Email
Project Updates	Project Manager and Development Team	Project Sponsor	Meeting	Once a Week	Formal	Teams Meeting

Table 16 Communications Matrix

# 5.6.10 GUIDELINES FOR MEETINGS

Meetings are a vital form of communication for Ramkolek within the team, the stakeholders, and with the project sponsor. As such, guidelines are necessary to make certain the clarity, productiveness, and efficiency of meetings for the project. The following are the guidelines followed by the team for the project:

- 1. Invitation Invitations to meetings are sent to all participants at least a day before the actual meeting. This is done after availability for key individuals is confirmed for the schedule specified.
- **2. Attendance** Team members are required to attend meetings set up with stakeholders and the project sponsor unless they have valid reasons not to attend. If key participants are unable to attend, the meeting may be cancelled or moved.
- **3. Agenda** The meeting's main agenda is stated in the invitation and when confirming availability to let participants understand its purpose. A more detailed agenda is declared at the beginning of the meeting to remind all participants of the purpose and general outline of the meeting.
- **4. Recording** Online meetings may be recorded for documentation. All participants are informed and asked for consent before the meeting may be recorded. All recorded material cannot be shared with individuals outside the development team unless given explicit permission to do so. Meetings are also recorded through written means by a member of the team as the minutes of the meeting.
- **5. Timeliness** Meetings start and end according to the set schedule. Meetings may be extended if all participants agree to do so if more time is needed.

### 5.6.11 COMMUNICATION STANDARDS

Communication standards are set for the project to provide consistency and clarity for all forms of communication. The team puts the following standards into practice as Ramkolek's project management communication standards:

- Communication Platforms Ramkolek primarily uses Microsoft Outlook for emails and Microsoft Teams for online meetings and messaging. Communication with the stakeholders and project sponsor is done through their APC accounts if online and through scheduled meetings or interviews in the APC building for onsite communication.
- **2. Project Management Tools** The team uses Open Project and Jira as project management tools to plan out the project and keep track of progress.
- **3. Document Templates** The team uses a standardized set of PMBOK project management document templates for all documentation to keep all documents consistent. A standardized naming convention is also used for file naming.

# 5.6.12 COMMUNICATION ESCALATION PROCESS

In the case of an escalation in the project due to a conflict within the team or with the stakeholders' interests, there are several steps to be taken for resolution. Issues such as these must be resolved quickly to avoid further problems. These are the steps of Ramkolek's communication escalation process:

- 1. Identify the Problem The first step in finding a solution is to first the details of the problem itself. Identify the people involved and their perspectives on the issue to gain a holistic understanding of the issue before making any decisions. Gouge the severity and react accordingly to complexity and time constraints.
- 2. Solve within the Team If the problem is minimal, then it's best to be solved within the development team. The issue will only be escalated to the project manager level if the problem can be solved only by the team.
- 3. Inform Higher Authority If the problem was not solved by the development team, the project manager will step in to decide on the next step. The team may try again to come up with a solution before the project manager brings the issue up to a higher authority.
- **4. Document the Incident** Whether or not the issue was resolved, the incident must be recorded for documentation. Document the problem and the solution or the lack thereof.

# 5.7 QUALITY MANAGEMENT PLAN

### 5.6.1 INTRODUCTION

The existence of a Quality Management Plan is to describe the project's life cycles ensuring a smooth transition on the creation of RAMKOLEK, it is noted that the system should be of the highest quality for Asia Pacific College.

# **Quality Objectives:**

- The quality standards should be on par with the system's requirements to be operational in terms of functionality.
- Identify the risk within the system to make sure that the data transitions smoothly to avoid potential data leak.
- Continuous update on the website to appeal to the stakeholders needs and concern on the integration of Ramkolek.

# 5.6.2 QUALITY MANAGEMENT APPROACH

The following table will provide the information about the roles and responsibilities of the task at hand:

Role	Description
Project manager	The project manager's responsibility is working in managing the team's progress, connecting the stakeholder's and client's information on what is needed for the product, they ensure a final product must be delivered.
Project sponsor	Giving the necessary support that algin's the project's objective and goals to maintain a high-quality product.
Project team	These consist of people that operate in different roles that they play in the development of the system's life cycle.

Table 17 Quality Management Plan Roles

The quality approach will be explained as:

- Quality planning: The team will be following the development of Ramkolek using the guidance of stakeholders as each of those people will give recommendations and necessary features to be implemented in the system.
- Continuous development: The system will continue to evolve from different phases of the cycles, ranging from stakeholder recommendations, to team collaborations to deliver the project on time.

- Communication: It is important to have continuous connections from project teams, stakeholders and clients as they provide information on the implementation of the system and how it should operate.
- Product quality: To make sure that the project is in full gear on releasing the product the team must make sure that the system follows the requirements necessary from the stakeholders and the client's needs.

# 5.6.3 QUALITY REQUIREMENTS / STANDARDS

The purpose of Ramkolek is to be a replacement on the PBL submission process so both the editor and the team are aware of the changes; to meet the standards of the system it should be noted that not only it has to be a 100% in working conditions it has to be exclusively only in operation within the university of Asia Pacific College, as non-members of APC are not allowed to access the website in compliance to the data privacy laws.

# **5.6.4 QUALITY ASSURANCE**

To make sure to meet those standards the team must follow the project's cycle in phases in the form of packages, not only will it serve as a list of tasks intended to finish but also showing progression of schedule to implementation with the help of project manager's role as they have the responsibility to give guidance on the task at hand especially the project manager has to keep track on the schedule to be on time on the deadline, and checking on project documentations.

# 5.6.5 QUALITY CONTROL

To monitor the results of the features implemented it will be checked based on WBS since it has different layers of levels representing the highest priority of the features needed to be implemented at the system as of course it needs to be tested before releasing the product, meetings with advisors and other stakeholders are needed to gain information and feedback to ensure a functional system that appeals to the members of APC. Continuous monitoring is required to check not only the system's function but also following the schedule so the project team may move on to the next step to implement the necessary features.

# **5.6.6 QUALITY CONTROL MEASUREMENTS**

Regularly checking the milestones and testing the system will be used to guarantee a successful creation of the system. This will ensure that the project is up to standard, and the progress will be tracked in the form of a backlog.

The backlogs components will include:

- Team performance review
- Code review
- Documentation review
- Team roles and responsibilities given task

### **5.8 RISK MANAGEMENT PLAN**

### 5.7.1 Introduction

Risks exist in any project due to various uncertainties. That is why a risk management plan is essential, as it helps identify potential problems that could threaten the project's success. Effective risk management allows us to foresee the issues, prepare for them, and reduce their impact. However, before we can start managing risks, we need to have a clear understanding of the project, its objectives, and the environment in which it operates.

# **5.7.2** TOP THREE RISKS

- 1. Risk in user learning, user might struggle to adapt to the new system, leading to fewer people using it.
- 2. Risk in development and delays, the tight schedule for system design, development, and deployment poses a risk of delays due to unforeseen technical challenges, resource limitations, or scope changes.
- 3. Risk in external security threats. The system may be vulnerable to cyber-attacks such as hacking, data breaches, and unauthorized access, which could compromise sensitive project documents and user data.

### 5.7.3 RISK MANAGEMENT APPROACH

A structured approach to manage risks in the Ramkolek project will follow. First, is to identify potential risks through discussions with those who are knowledgeable in that field and by reviewing past projects. Each identified risk will then be evaluated based on its likelihood and impact. Prioritizing the risks and developing strategies to mitigate them. While regular monitoring will ensure that any changes in risk status are promptly addressed.

# 5.7.4 RISK IDENTIFICATION

The risks for the Ramkolek project were identified through analyzing and conducting. Analyzing previous projects with similar scope and objectives to identify common risks and their outcomes. And conducting sessions with the project team and key stakeholders to brainstorm and document potential risks, ensuring a comprehensive identification process.

# 5.7.5 RISK QUALIFICATION AND PRIORITIZATION

For each risk, we need to assess its likelihood and impact. The following criteria will be used to qualify and prioritize risks for the Ramkolek project:

Likelihood: The likelihood of the risk happening, expressed as either high, medium, or low. Impact: A risk's potential repercussions are rated as high, medium, or low depending on their severity.

We could apply the following formula to get a Risk Score after we determine each risk's likelihood and impact rating:

# Risk Score = Likelihood x Impact

Risks that need greater attention and mitigation effort have higher risk scores. Risk assessment matrix for the identified risks of Ramkolek project based on their likelihood and impact:

Risk Description	Likelihood	Impact	Risk Score	
User adoption issues	Medium	Medium	Medium x Medium	
Development delays	High	High	High x High	
External security	Medium	High	Medium x High	
threats				

Development delays rank highest among possible risks according to matrix. This is because of the high possibility of running into unexpected technical issues or resource constraints, which might result in missed deadlines and higher expenses. While external security risks seem unlikely, careful consideration is necessary due to the possible impact on user and project data. Lastly, even if problems with user acceptance are less threatening overall, making sure that users are successfully accepted through training and support will remain important for achieving project success.

### **RISK MONITORING**

Monitoring risks means keeping track of them, evaluating them, and putting the right safeguards in place as needed. To properly assess risks for the Ramkolek project, the following actions will be taken:

- Project team meetings will be held weekly to discuss the status of each identified risks
- Weekly submission of summarized status of risks
- Regular review of project documents that can help identify new risks

Stakeholders will get updates from the project manager regularly, and the risk register will serve as a single repository for all risk data. Throughout the project lifespan, proactive risk mitigation, improved collaboration, and well-informed decision-making are guaranteed by this approach.

#### 5.7.6 RISK MITIGATION AND AVOIDANCE

To mitigate the identified risks, the team will:

- Resource allocation: Provide risk mitigation and avoidance efforts with sufficient staff, time, and funding
- Continuous assessment: To find new risks, regularly evaluate project risks at various stages of the project's lifespan.
- Contingency planning: Prepare backup plans in case there are few choices for mitigating high-priority risks.
- Clear communication: Direct channels of communication are necessary for the rapid detection and mitigation of risks.

# 5.7.7 RISK REGISTER

The project team will keep a record for potential risks, or risks, in a risk register. This record will contain:

- A list of every risk that has been recognized
- The chance of each risk happening
- Each risks' status

This document will be updated by the team to reflect any changes made during the project. They will be better able to identify and handle possible issues.

Risk ID	Risk Rank	Description	Category	Probability	Impact	Status
R001	Medium	User Difficulty with new system	User Adoption issues	Medium	Medium	Open
R002	High	Data Security Breach	External Security Threats	Medium	High	In Progress
R003	Low	Insufficient Testing	Development Delays	Low	Medium	Open

Table 18 Risk Management Plan Risk Register

# 5.9 PROCUREMENT MANAGEMENT PLAN

### 5.8.1 Introduction

This plan acts as a roadmap for acquiring everything our project needs, from start to finish. It outlines procurement requirements for Ramkolek and how it will be managed from developing procurement documentation through contract closure. It also details the type of contracts we will use, potential risks involved, and how to mitigate them.

- Items to be procured with justification statements and timelines
- Type of contract to be used
- Risks associated with procurement management
- How procurement risks will be mitigated through contract performance metrics, insurance, or other means
- Determining costs and if/how they're used as evaluation criteria

# **5.8.2 PROCUREMENT RISKS**

This section is to identify any potential risks associated with procurement for the project. Depending on the contract type such as document history, or uncertainties in the project's scope, schedule, or budget, potential risks may require more detailed planning and mitigation strategies.

Significant risks and mitigation are as follows:

- 1. **Human Resource**. Sourcing a Candidate with insufficient experience in developing educational technology platforms or web applications.
- 2. **Planning and Budgeting.** Project requirements may change during development, leading to increased costs and delays.
- 3. Miscommunication between team members and the project sponsor can lead to project delays and missed deadlines.

### 5.8.3 PROCUREMENT RISK MANAGEMENT

This section describes how risks related specifically to procurement activities will be managed. This will serve as a risk mitigation plan. This will include the involvement of all team members and stakeholders involved in Ramkolek.

# **Mitigating Risks**

- **1. Human Resources.** Source Candidates with due diligence, checking references and past projects with similar scope and complexity. The Team Leader/Product Owner should consider candidates with experience in developing documentation systems.
- **2. Planning and Budgeting.** There is a step guide in the scope management system where changes in the document will go through 7 processes with the change request:
  - 1) Identifying the Change. Any stakeholder or team member can identify a need for a change request. This provides the proposed change, and its impact on Ramkolek: Document Management System for Project Documentation.
  - 2) Review and Evaluation. The evaluation of the change request will review its impact on the project scope, deliverables, and goals.
  - 3) Change Request Documentation. This documents the change request. The document includes details about the change request, and its effect upon implementation.
  - 4) Change Process Approval. This step involves the project manager whether to approve the change request.
  - 5) Implementing Approved Changes. This step involves the changes Ramkolek: Document Management System for Project Documentation and its documentation to be updated.
  - 6) Communication about the update. It is important that all team members and stakeholders communicate on the update on the system and the document. This will clear confusion about the project.
  - 7) The rejected change request will keep the original goals and objectives of the project.
- 3. **Miscommunication.** The scrum master should facilitate, utilize project management tools and schedule regular meetings to track progress and address issues promptly. This clears confusion among team members and stakeholders involved in the project.

### 5.8.4 COST DETERMINATION

The purpose of this section is to describe how costs will be determined and if/how it will be used as part of the selection criteria. Costs are almost always used as part of the procurement decision criteria but may be prioritized differently depending on the organization.

**Hardware Costs**. Starting with the initiation phase, these are equipment that team members will use. There is a maximum amount for 6 units.

**Office Supplies.** Equipment that will be used in the office. There is a maximum of 6 units. **Office Space.** This will be during development. The monthly rent for a space in Makati. This accommodates team members that will develop the project.

**Electricity & Internet.** The monthly payment for development of project within the office space.

**Transportation.** The allowance given for team members can be used to get to the workplace. **Food Allowance.** It is standard policy for a workplace to provide food allowance to the individuals in the workforce. This has a maximum unit of 6.

# **5.8.5 PROCUREMENT CONSTRAINTS**

The purpose of this section is to describe any constraints which must be considered as part of the project's procurement management process. These constraints may be related to schedule, and cost. As constraints are identified, it must be considered every step of the way as procurement activities are planned and conducted. Every effort must be made to identify all constraints prior to any project or procurement planning as constraints identified later in the project lifecycle can significantly impact the project's likelihood of success.

**Budget Constraint.** Our group has a predetermined budget within the Open Project. The Product Owner must ensure that the cost of development should not exceed. For the project might have changes, budget would need adjustments.

**Schedule.** As the project progresses there will be changes. These changes could get the project to be out of track, delaying the development. The scrum master must ensure that the schedule of tasks should be refined and organized. Developers follow this schedule so that tasks are not behind.

# **5.8.6 CONTRACT APPROVAL PROCESS**

The purpose of this section is to define the process through which contracts must be approved:
Scope Management Plan
Schedule Management Plan
Cost Management Plan
Resource Management Plan
Quality Management Plan
Risk Management Plan
Communication Management Plan
Change Management Plan

Implementation Plan

### 5.8.7PERFORMANCE METRICS FOR PROCUREMENT ACTIVITIES

This section describes the metrics to be used for procurement activities associated with the project.

**Schedule Variance** (SV) is a measurement of the schedule performance for a project. It's calculated by taking the Earned Value (EV) and subtracting the Planned Value (PV). This tells us if Ramkolek is behind or ahead of schedule. If SV is zero, then the project is perfectly on schedule. If SV is greater than zero, the project is earning more value than planned thus it's ahead of schedule. If SV is less than zero, the project is earning less value than planned thus it's behind schedule. This means that the team should identify the cause of the delay.

**Cost Variance** (CV) is a measurement of the budget performance for a project. CV is an indicator of how we maintain the project in Ramkolek. CV is calculated by subtracting Actual Costs (AC) from Earned Value (EV). EV is the actual value earned in the project. AC is the actual costs incurred to date, thus when we subtract what our actual costs from the EV we have a good measurement which tells us if we are above or below budget. If CV is zero, then the project is perfectly on budget. If the CV is positive, then it means we are underbudget. The project has earned more than the planned cost. If the CV is negative, it is overbudget. It has earned less than the plan.

**Schedule Performance Index** (SPI) measures the progress achieved against that which was planned. SPI is calculated as EV/PV. If EV is equal to PV the value of the SPI is 1. If EV is less than the PV then the value is less than 1, which means the project is behind schedule. If EV is greater than the PV the value of the SPI is greater than one, which means the project is ahead of schedule. A well performing project should have its SPI as close to 1 as possible, or maybe even a little under 1.

**Cost Performance Index** (CPI) measures the value of the work completed compared to the actual cost of the work completed. CPI is calculated as EV/AC. If CPI is equal to 1 the project is perfectly on budget. If the CPI is greater than 1 the project is under budget, if it's less than 1 the project is over budget.

# 5.10 IMPLEMENTATION PLAN

# **5.10.1** EXECUTIVE SUMMARY

Ramkolek requires a detailed implementation plan for a smooth transition of the project resources from the development team to the custody of Asia Pacific College. Ramkolek is a document management system created by Dasalgorithm with Asia Pacific College as the client. The system is meant for project paper submission and proofreading requesting. The project started on April 2, 2023, and is estimated to be completed on September of 2024. At completion of the system, all resources related to Ramkolek will be handed over to the client, APC and formal acceptance will be requested from the project sponsor.

### 5.10.2 Transition Team Organization

The successful implementation of the project will rely on these key individuals as laid out in the table below.

Role	Responsibility		
Project Manager	Coordinates with the ITRO staff about the		
	plan for transition and implementation.		
	The project manager also guides the team		
	through the transition period.		
Development Team	Passes on their expertise on the system to		
	the ITRO staff who will receive the project		
	after implementation. Works with the ITRO		
	staff through the transition period to		
	ensure the proper implementation of the		
	project and system.		
Information Technology Resource Office	Will receive the system and handle it after		
(ITRO) Staff	the transition. Ensures the availability and		
	performance of the system after		
	implementation.		

Table 19 Transition Team Organization Roles

# **5.10.3** Workforce Transition

After the implementation of Ramkolek, maintenance and further development of the system will be handed over to the ITRO staff of APC. The project manager will communicate and coordinate with the head of the ITRO to plan out the transition process to guarantee a smooth transition of the project from the development team to the ITRO. The specific members to manage the system will be assigned by the head of the ITRO. All necessary

documentation related to the system will also be given over to the ITRO. Any additional staff to be hired for the system's maintenance will be up to the ITRO and APC.

# 5.10.4 WORK EXECUTION DURING TRANSITION

A smooth transition will require a lot of work on both the development team and the client's side. This section will delve into the various tasks to be performed during the transition period.

- **1. Document Compilation and Finalization** All documentation will be finalized and compiled to confirm that all documents have been completed and are up to standard.
- **2. User Training** The team will give training sessions on how to use the system and how the system is to be operated.
- **3. Handover and Acceptance** Documents and deliverables are transferred over to the client for their review. The formal acceptance of all deliverables marks the completion of the handover and the project.

### 5.10.5 Property Transition

# Intellectual Property

At the completion of the project, all documentation and intellectual property pertaining to the project will be transferred to the client's ownership. This includes user manuals, project plans, systems documentations, system designs and diagrams, and the developed system itself.

### **User Accounts and Passwords**

Administrative and test accounts used during the system's development and testing will be given to the client with their respective passwords. Whether the test accounts will be deactivated and archived will be up to the client. For safety reasons, the team will advise the client to change the passwords of the transferred accounts if they will not deactivate them.

# 5.10.6 KNOWLEDGE TRANSFER

**Documentation** - All documents such as the project documentation, user manuals, and system documentation will be handed over to the client by the development team upon the completion of the project. Copies of the user manuals and system documentation will also be given to the ITRO staff for the system's maintenance.

**Training** - The development team will demonstrate the various use cases of the developed system to the client and stakeholders. Training sessions covering system navigation, roles

and permissions, project submission processes, proofreading requesting processes, and report generation will also be conducted to impart the practical skills and knowledge required to operate the system.

# 5.10.7SCHEDULE

The figure below is the project's closeout phase taken from the project's Gantt chart. It contains the work packages necessary for the project's handover.

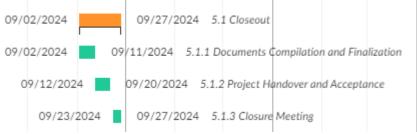


Table 20 Implementation Plan Schedule

# 5.10.8 HANDOVER AND ACCEPTANCE

Project handover and acceptance falls under the last phase of the project plan, the closure phase. Upon completion of all project documents, all acceptance criteria have been met, the system has been implemented, and operational knowledge of the system has been passed onto the client's operational team, all necessary documents and deliverables will be compiled. After confirming the quality of all documents a final time, the development team will conduct a handover meeting with the client. The client will be informed of the resources that will be given over to be clear about the resources to be transferred. The deliverables are then given over to the client for their own review before acceptance. Once formal acceptance has been given for the deliverables, the project is considered completed.