UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL

(UCI)

A PROJECT MANAGEMENT PLAN FOR THE DEVELOPMENT OF A SCHOLARSHIP MANAGEMENT PROGRAM IN BELIZE

ALLEN ALEXANDER GUERRA

FINAL GRADUATION PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF

THE REQUIREMENTS FOR THE

MASTER IN PROJECT MANAGEMENT (MPM) DEGREE

Belmopan City, Belize

March, 2024

UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL

(UCI)

This Final Graduation Project was approved by the University as partial fulfillment of the requirements to opt for the Master in Project Management (MPM) Degree

_____

Fabio Muñoz Jiménez

TUTOR

_____

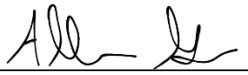
Róger Eduardo Valverde Jiménez

REVIEWER No.1

_____

James Antonio Pérez Céspedes

REVIEWER No.2



Allen Alexander Guerra

STUDENT

DEDICATION

This research project is dedicated to my late grandfather, Narmo Guerra, whose support and wisdom inspire me, and to my parents and siblings, whose encouragement and love have kept me pushing forward. I dedicate this project to the memories of family bonds that inspire us.

ACKNOWLEDGMENTS

My most profound appreciation goes to my friends and colleagues for their encouragement and companionship throughout this program. I also want to thank all staff, lecturers, and tutors whose guidance and expertise have been instrumental in shaping my understanding. Your commitment to excellence has been a constant source of inspiration. This achievement is a testament to these remarkable individuals' collective encouragement and mentorship. This opportunity has been transformative, and I am also immensely thankful to the University for International Cooperation for the support provided. Thank you all for being an integral part of my educational journey.

ABSTRACT

This document outlines a comprehensive Project Management Plan tailored to implement an efficient software solution within the Belize Social Security Board's scholarship program. Currently, the program relies on manual processes for management, a method that has posed significant operational challenges. The pressing need for this project arises from the evident difficulties in managing educational opportunities efficiently within the existing manual framework.

The project's core output is a detailed Project Management Plan that integrates various vital components, including project management plans for integration, scope, schedule, cost, quality, resources, communications, risks, procurement, and sustainable development. This plan is a result of the application of a strategic blend of research methodologies. These methodologies encompass analytical, qualitative, and quantitative research, ensuring a thorough and robust examination of the challenges faced by the scholarship program and the subsequent development of practical solutions. These research methodologies are supplemented by guidelines provided by the Project Management Institute, a recognized authority in project management.

Key Words: project, management, lifecycle, software, impact, operational

INDEX OF CONTENTS

INDEX OF FIGURES

INDEX OF CHARTS

ABBREVIATIONS AND ACRONYMS

BSSB	Belize Social Security Board
CPI	Cost Performance Index
CV	Cost Variance
FGP	Final Graduation Project
PM	Project Manager
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
PMP	Project Management Plan
SPI	Schedule Performance Index
SV	Schedule Variance
TBL	Tripple Bottom Line
WBS	Work Breakdown Structure

EXECUTIVE SUMMARY

The Belize Social Security Board (BSSB) is a prominent institution in Belize dedicated to enhancing the well-being of its citizens through social security services. Beyond this primary role, the BSSB is committed to empowering Belizean youth by championing educational initiatives. The BSSB's commendable effort led to the creation of a scholarship program. However, the management of this program faced notable challenges due to outdated manual processes, which hindered its scalability and operational efficiency. The lack of a technological solution within the management infrastructure necessitated the development of a comprehensive Project Management Plan to address these challenges systematically.

The management of the BSSB's scholarship program primarily relied on manual processes, leading to operational inefficiencies. This manual approach introduced the potential for errors, delays, and unequal educational opportunities. Furthermore, the absence of an integrated system for data tracking and analysis hampered program performance evaluation. The urgent need for a project management plan became evident, as it provided the necessary framework to implement an efficient software solution. This plan guided the project manager, aligning with the Project Management Institute's standards, to achieve project objectives and stakeholder expectations.

This project aimed to create a robust project management plan tailored for the Belize Social Security Board's scholarship program implementation. The PMP guided the project through its life cycle, ensuring efficient initiation, planning, monitoring, control, and closure. Adhering to the Project Management Institute's ten knowledge areas and focusing on sustainability and alignment with BSSB's regenerative and sustainable development mission, the plan addressed the operational challenges faced by the scholarship program. By embracing agile methodologies and sustainable practices, this project optimized resource allocation and operational transparency, fostering equitable educational access and promoting educational excellence among Belizean youth.

The research for this project incorporated analytical, qualitative, and quantitative methodologies, ensuring a comprehensive examination of the scholarship program's operational challenges and their solutions. Data was collected from the stakeholders through interviews, meetings and statistics from previous studies.

The general objective of this project was to develop a project management plan for the Belize Social Security Board's scholarship program, focusing on integrating modern project management methods to optimize educational access. The specific objectives encompassed the development of various management plans, such as integration management, scope management, schedule management, cost management, quality management, resource management, communication management, risk management, procurement management, stakeholder management, and sustainable development management Plans. These plans

aimed to streamline the scholarship program's operations, aligning them with regenerative and sustainable development goals.

By embracing modern project management methodologies, this project aimed to optimize processes, enhance educational access, and contribute to regenerative and sustainable development in Belize. The comprehensive project management plan served as a vital tool for achieving these objectives, fostering a brighter educational future for Belizean youth.

In conclusion, the development of the Project Management Plan for the Belize Social Security Board's scholarship program strategically addressed challenges associated with manual processes. The PMP, in alignment with the Project Management Institute's standards, facilitated the systematic implementation of an efficient software solution, optimizing resource allocation and enhancing operational transparency. To fortify these positive changes, ongoing PMP updates, team training, external collaborations, regular software assessments, and community awareness programs are recommended. These measures ensure the sustained impact and scalability of project management initiatives within the Belize Social Security Board's scholarship program.

1 INTRODUCTION

This section briefly overviews the Belize Social Security Board (BSSB) and its motivation for developing a scholarship program. Additionally, it clarifies the identified problem, the project's purpose, and the anticipated deliverables. The overarching objectives, both general and specific, highlight the aims and methodologies that will steer the execution of the project management plan.

1.1. Background

The Belize Social Security Board serves as the primary institution dedicated to enhancing the well-being and social security of Belizean citizens while safeguarding their social and economic welfare. Through contributions from employees and employers, the BSSB builds a fund that provides various social security benefits, including sickness, maternity, employment injury, retirement, and more (Social Security Board, 2021). The BSSB is also an advocate for the educational development of Belizean youths and has supported initiatives to increase educational access for economically marginalized students by developing a scholarship program. The current scholarship program management system has encountered notable challenges, necessitating a project management plan (PMP) that better aligns with the vision of providing quality education for Belizean youth while optimizing processes and resources, thus charting a path toward regenerative and sustainable development.

1.2. Statement of the problem

The challenge facing the Belize Social Security Board lies in the manual project management procedures which increase process inefficiencies, prolonged decision-making timelines, and limited data access. Consequently, the current system leads to disparities in educational opportunities for eligible scholarship applicants. Enhancing this system would guarantee the fair distribution of opportunities among Belizean youth by reducing the likelihood of oversight due to human error.

A comprehensive software solution that combines traditional and agile methods within the scholarship program management infrastructure is necessary for the BSSB's ability to scale and manage the initiative effectively. The inefficiencies and the need for an integrated system for tracking and analyzing program data raise several operational challenges. These include potential delays in scholarship disbursement, inconsistencies in data management, and a reduced capacity for generating comprehensive reports to assess the program's performance.

To ensure that the scholarship program can continue to fulfill its core mission, it has become evident that an urgent need exists for a strategic project management plan. This PMP must outline the implementation of an optimized software solution, addressing these pressing challenges systematically. The project manager will utilize the PMP to meet the project objectives and stakeholders' expectations (PMI, 2021). Establishing a robust PMP will modernize the scholarship program and catalyze its continued growth and impact within Belizean communities.

1.3. Purpose

This Final Graduation Project (FGP) aims to create a robust Project Management Plan tailored for the Belize Social Security Board's scholarship program implementation. This PMP will guide the scholarship program project through a typical project life cycle, encompassing the initiation, planning, monitoring and control, and closing phases. The ten knowledge areas defined by the Project Management Institute (2017) will be thoughtfully integrated into this plan, considering their sustainability and alignment with the BSSB's regenerative and sustainable development mission.

This project seeks to address the operational challenges of the current scholarship management system by implementing a comprehensive PMP. With a dedicated budget and resources, the BSSB aims to create an optimized operational framework to provide quality education for Belizean youths. The PMP will guide the implementation of a sustainable scholarship program management system, ensuring that educational opportunities remain accessible, irrespective of external challenges. The project will streamline resource allocation and operational transparency by embracing agile methodologies and sustainable practices. This project is pivotal in fostering equitable educational access, enhancing regenerative development, and promoting educational excellence among Belizean students, aligning with the BSSB's overarching objectives and ensuring a brighter educational future.

1.4. General objective

To develop a project management plan to develop the Belize Social Security Board’s scholarship program.

1.5. Specific objectives

1. To develop an Integration Management Plan to outline how project elements will be coordinated, integrated, and managed to ensure alignment with overall project objectives.
2. To develop the Scope Management Plan to define how project scope will be defined, documented, verified, and controlled throughout the project to prevent scope creep and ensure focus.
3. To develop the Schedule Management Plan, which will define project scheduling, including activities, milestones, dependencies, and resources to prevent setbacks and manage efficient time allocations.
4. To create a Cost Management Plan outlining how project costs will be estimated, budgeted, managed, and controlled to achieve financial efficiency and prevent cost overruns.
5. To develop a Quality Management Plan which will define quality standards, metrics, processes, and procedures to ensure project deliverables meet quality expectations.
6. To create a Resource Management Plan to outline how project roles and responsibilities will be managed and met to facilitate efficient project execution.
7. To create a Communication Management Plan that defines communication channels and processes to maintain effective communication and collaboration among stakeholders.

8. To develop a Risk Management Plan that facilitates the identification of project risks and defining mitigation and response strategies for managing project risks to ensure proactive risk management and project success.
9. To create a Procurement Management Plan to define procurement processes, vendor criteria, and contract management processes to ensure efficient acquisitions and support the project's goals.
10. To design a Stakeholder Management Plan that identifies stakeholders, determines their interests and expectations, and defines stakeholder engagement and communication strategies to foster positive and effective relationships, ensuring project success.
11. To formulate a Sustainable Development Management Plan to assess and enhance the project's contribution to regenerative and sustainable development, aligning project activities with environmental and social sustainability objectives.

2 THEORETICAL FRAMEWORK

This section will thoroughly explore the company framework and BSSB's background. It will delve into the organization's mission and vision statements, organizational structure, and project management concepts as well as incorporate additional relevant theories. The intention is to provide a deeper understanding of the applications employed in developing this plan.

2.1 Company/Enterprise framework

2.1.1 Company/Enterprise background

The Belize Social Security Board (BSSB) plays a crucial role in ensuring the well-being of Belizean citizens by providing social security services. Established in 1981 (Social Security Board, 2021), the BSSB has evolved into an indispensable institution committed to safeguarding the welfare of Belizeans. Over the years, it has expanded its services to include initiatives beyond social security, such as the Scholarship Program, which aims to empower Belizean students through educational support.

2.1.2 Mission and vision statements

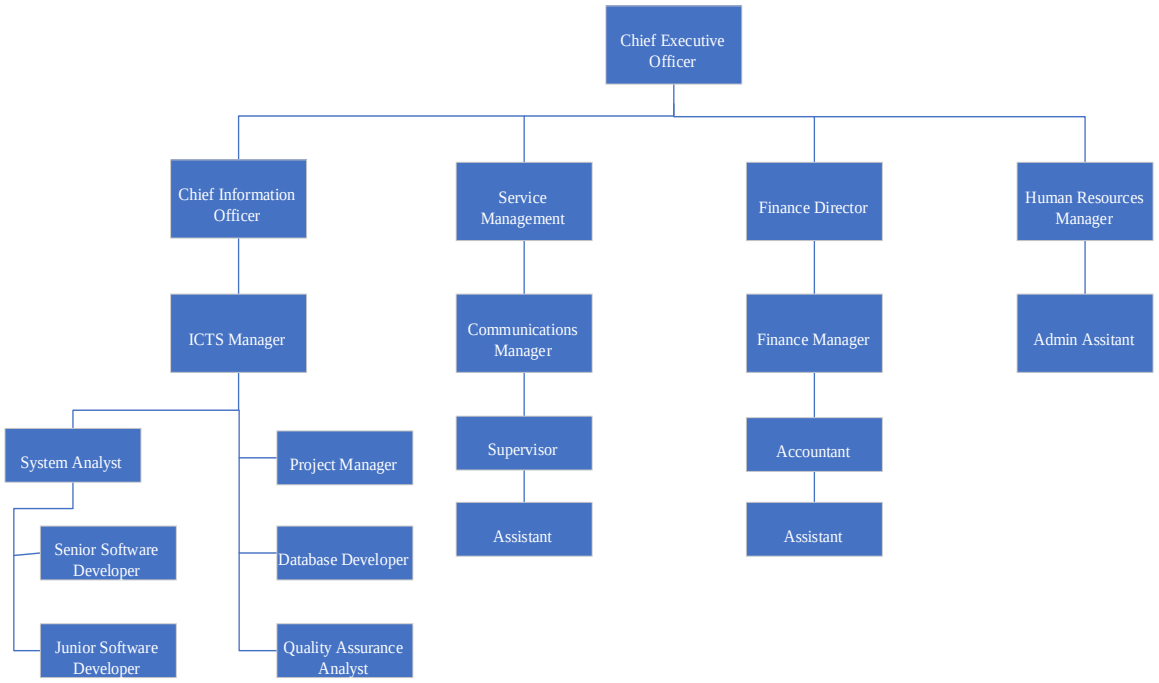
The BSSB's mission is to "be accountable, and people-centered. To deliver relevant, resilient, sustainable and dynamic social protection", reflecting its dedication to promoting social and economic security. Its vision, "A Social Security system with inclusive, fair, and dependable coverage for our beneficiaries," underscores its aspiration to be a catalyst for positive change in Belize. The Scholarship Program aligns with these statements, as it seeks

to enhance educational access and empower Belizean youth, ultimately fulfilling the mission and vision.

2.1.3 Organizational structure

Figure 1 below illustrates the BSSB's organizational structure.

Figure 1 Organizational Structure



Note. Belize Social Security Board's Organizational Structure. Own work.

2.1.4 Products offered

The BSSB primarily offers sickness, maternity, funeral grants, invalidity and retirement benefits for all its insured persons. However, one of its noteworthy offerings as

part of the social and educational program is the Scholarship Program. This program provides educational opportunities to economically marginalized Belizean students, emphasizing the importance of education in achieving social and economic security. The FGP aims to enhance the management of this program, ensuring its continued impact.

2.2 Project Management concepts

2.2.1 Project management principles

Project management is guided by fundamental principles that provide a solid foundation for effective execution. These principles, as defined in the PMBOK (2021), are essential in understanding the discipline of project management and its relevance to developing a PMP for the BSSB's scholarship program.

The PMBOK (2021) outlines 12 key project management principles:

1. Be a Diligent, Respectful, and Caring Steward
2. Create a Collaborative Project Team Environment
3. Effectively Engage with Stakeholders
4. Focus on Value
5. Recognize, Evaluate, and Respond to System Interactions
6. Demonstrate Leadership Behaviors
7. Tailor Based on Context
8. Build Quality into Processes and Deliverables
9. Navigate Complexity
10. Optimize Risk Responses

11. Embrace Adaptability and Resiliency
12. Enable Change to Achieve the Envisioned Future State

These principles will serve as a guide during the development of the FGP while creating the PMP for the scholarship program at the BSSB. They emphasize the importance of stakeholder engagement, value delivery, adaptability, and leadership behaviors, which are crucial in ensuring the project's success. By aligning with these principles, the FGP aims to create a comprehensive and practical PMP that addresses the unique needs of the scholarship program, promotes efficient scholarship management, and enhances educational access for deserving students.

2.2.2 Project management domains

The discipline of project management encompasses several essential domains, each contributing to the overall success of a project. According to the PMI (2021), these domains serve as essential areas of focus for effective project management and include:

1. Stakeholders: Stakeholders are individuals, groups, or organizations who can impact or be impacted by the project. The stakeholders will be identified and engaged to ensure their needs and expectations are met, mainly focusing on students, project facilitators, and the Belize Social Security Board.
2. Team: The team domain encompasses project team roles, responsibilities, and interactions. A dedicated project team will be assigned, roles will be defined, and effective communication and collaboration will be encouraged to ensure successful plan development.

3. Development Approach and Life Cycle: This domain concerns the chosen project approach and life cycle. The project's lifecycle will encompass phases from its inception to its conclusion. The charter and scope statement will clearly outline the project's objectives, deliverables, and constraints. A hybrid approach integrating predictive and adaptive methodologies will suit the program's unique needs while ensuring adaptability to changing circumstances.
4. Planning: Planning involves defining project objectives, scope, and activities. Meticulous planning will outline the development of the scholarship program's management software, including scope, schedule, and resource allocation.
5. Project Work: This domain covers the execution of planned project activities. In the FGP, project work will be implemented as planned, including all stakeholder collaborations and all other relevant project activities.
6. Delivery: Delivery encompasses the completion and delivery of project outputs. Successful delivery will entail the completion of the FGP for the scholarship program management software, ensuring it meets predefined quality and scope criteria.
7. Measurement: Measurement involves monitoring and controlling project performance and outcomes. Measurement processes will continuously assess the software development progress, ensuring alignment with project goals.
8. Uncertainty: This domain deals with managing uncertainty and risks throughout the project. A risk management plan will be established to identify, assess, and mitigate potential risks, ensuring the project stays on track despite uncertainties.

These domains will play a pivotal role in guiding the development of a comprehensive PMP for the BSSB's scholarship program, ensuring that the scholarship program's management is comprehensive, adaptable, and aligned with best practices.

2.2.3 Predictive, adaptative and hybrid projects

1. Predictive: Predictive project management, also known as "traditional" or "conventional" project management, is used when the scope of work and requirements for the project are clear and justify detailed upfront planning (Iqbal, 2023). Some popular predictive approaches include waterfall and PRINCE2.
2. Adaptive: Adaptive project management also referred to as "responsive" or "iterative," is used when the scope of work and requirements for the project are difficult to define, creating a rapidly changing environment (Iqbal, 2023). It requires an Agile approach, which clarifies requirements in short iterations. Some frameworks used to implement Agile include Scrum, Kanban, and XP.
3. Hybrid: A hybrid approach combines predictive and adaptive project management elements. It involves using a predictive approach for well-known project phases and an adaptive approach for more uncertain phases (Iqbal, 2023). Complex projects with many stakeholders may benefit from a hybrid approach.

By adopting a hybrid approach, the FGP acknowledges the diverse nature of the scholarship program, balancing the need for precise planning and adaptability in an evolving educational landscape. It aims to harness the advantages of both approaches to deliver a

robust and flexible PMP for the BSSB's scholarship program, enhancing educational access and outcomes for students.

2.2.4 Project management

The PMI (2017) states that project management is "the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements." Galante (2022) further explains that project management uses processes, skills, tools, and knowledge to help a team complete a planned project and achieve its goals or solve a problem. The Association for Project Management (n.d) expands on the definition by stating that project management "involves the successful planning, execution, and closure of a series of tasks that must be completed to achieve specific goals and objectives within defined constraints." Project management underscores the need for a systematic approach to achieve project objectives. Project management uses information, procedures, and tools to plan, execute, and close projects successfully. It offers the foundation for attaining project objectives, ensuring that the FGP adheres to the highest standards of project management practices, and ensuring success.

2.2.5 Project management knowledge areas and processes

The development of the FGP will be guided by the PMI's definition of knowledge areas and processes, as explained in PMI's (2017) guidelines.

According to PMI (2017), the project management knowledge areas consist of the following ten domains, each serving a specific function within the project management framework:

1. Integration: This area focuses on coordinating various project elements, ensuring they work harmoniously to achieve objectives.
2. Scope: The scope knowledge area revolves around defining, documenting, and controlling the project's scope, including its boundaries and deliverables.
3. Schedule: It encompasses processes to manage project scheduling involving activities, milestones, dependencies, and resource allocation.
4. Cost: Cost management involves estimating, budgeting, and controlling project expenditures to meet financial objectives.
5. Quality: Quality management establishes standards, metrics, and procedures to maintain and enhance project deliverable quality.
6. Resources: Managing resources efficiently, including human resources and materials, is crucial for successful project execution.
7. Communications: Effective communication management ensures that the project team and stakeholders receive the necessary information for collaboration and decision-making.
8. Risk: Risk management involves identifying, assessing, and mitigating potential project risks while leveraging opportunities for project benefit.
9. Procurement: This area encompasses acquiring necessary products, services, or results to support project completion.
10. Stakeholders: Managing stakeholders involves identifying, analyzing, and engaging with individuals or groups affected by the project to meet their needs and interests.

Furthermore, a sustainable development plan will be developed within the FGP project, aligning with PMI's overarching principles.

PMI (2017) defines project management processes grouped into five Project Management Process Groups, each serving a distinct purpose in the project lifecycle:

1. Initiating Process Group: These processes define new projects or phases and obtain the necessary authorization to commence work.
2. Planning Process Group: These processes establish project scope, refine objectives, and chart the course of action to achieve project goals.
3. Executing Process Group: Processes in this group focus on completing project work in line with the project management plan.
4. Monitoring and Controlling Process Group: This group oversees project progress and performance and identifies areas requiring changes to adhere to the plan.
5. Closing Process Group: These processes formally conclude projects, phases, or contracts, ensuring all necessary activities are completed.

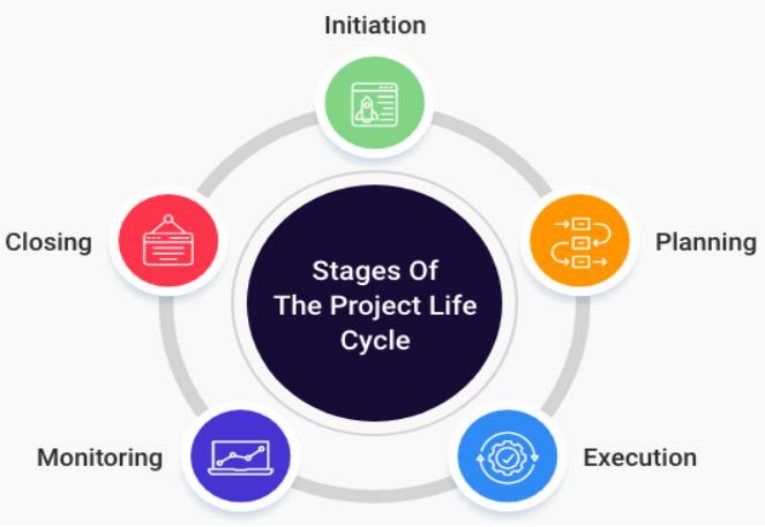
2.2.6 Project life cycle

The life cycle is a collection of logically related project activities that culminate in completing one or more deliverables and can be sequential, iterative, or overlapping (PMI, 2017, p.547). Miller (2023) explains that project life cycles are also known as project management life cycles and refer to all the phases and actions necessary to successfully satisfy a project's goals. Aston (2023) expands on this definition by describing the project life cycle as the sequence of processes and phases used in delivering projects, which

describes the high-level workflow of delivering a project and the steps you take to make things happen. The PMI (2017) establishes 5 phases for a generic project management life cycle: initiation, planning, execution, monitoring, and closure.

The life cycle will be integrated into the Final Graduation Project to ensure that all critical project activities are well-organized and effectively executed. The FGP will follow the structured approach established by the PMI, following the five established phases. It will commence with the initiation phase, where project objectives and critical parameters will be defined. Subsequently, the planning phase will meticulously outline project goals, deliverables, and strategies. During the execution phase, the actual project work will occur, with continuous monitoring to ensure alignment with objectives and timely adjustments. Finally, the FGP will be formally completed in the closure phase to meet all objectives and project deliverables.

Figure 2 Project Life Cycle



Note. 5 Phases of the Project life cycle. Reprinted from *Project Life Cycle: What Is It, Its*

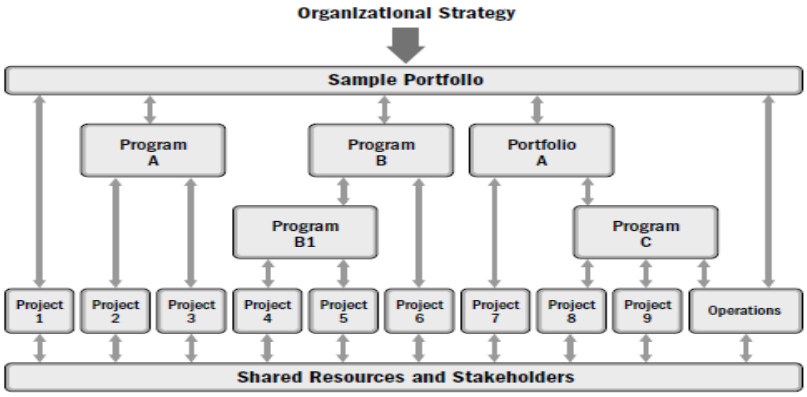
Phases & Why It's Important in *ProProfsProject*, June, 20, 2023, from https://www.proprofsproject.com/blog/project-life-cycle-and-its-phases/. Copyright 2022 by ProProfsProject.

2.2.7 Company strategy, portfolios, programs and projects

PMI (2021 p.35) states that projects and all needs are related to the business strategy to achieve value. Projects can exist as standalone entities or be integral components within a broader portfolio or program. As PMI (2021, p. 4) outlined, Portfolios encompass a comprehensive assembly of projects, programs, subsidiary portfolios, and ongoing operations managed collectively to accomplish strategic objectives.

As described by PMI (2021, p. 4), a program represents a collection of related projects, subsidiary programs, and program activities treated as a unit. This approach to management seeks to realize benefits that may only be achievable when managing these components in collaboration. The BSSB's strategy is translated into portfolios, programs, and projects. Figure 3 below depicts this hierarchy, demonstrating how individual projects, such as the FGP, contribute to achieving the organization's strategic objectives.

Figure 3 Strategy, Portfolios, Programs, Projects



Note. Organizational strategy, portfolios, programs and projects. Reprinted from the book *A Guide to the Project Management Body of Knowledge (PMBOK Guide)* (6th edition, PMI, 2017, p.12), by PMI, 2017. Copyright 2017, Project Management Institute, Inc. All rights reserved.

2.3 Other applicable theories/concepts related to the project topic and context

2.3.1 Current situation of the problem or opportunity in study

The BSSB's scholarship program is crucial in enhancing educational access for Belizeans in need. The Statistical Institute of Belize (SIB) (2021) reports that in 2021, around 89% of children aged 5 – 12 were enrolled in school, and around 56% of children aged 13 – 16 were enrolled in secondary school. The data displays an apparent lack of educational opportunities in secondary school. The SIB also reports that approximately 40% of citizens under the age of twenty-four live in poverty. The program empowers students to access higher education by providing scholarships, opening doors to better

career prospects, and improving quality of life. However, to maximize its impact and reach a broader audience, the program requires a more efficient and scalable approach, which can be achieved by implementing a Project Management Plan to design and implement the scholarship program.

The current situation regarding the problem is characterized by the BSSB's scholarship program operating without an efficient software solution. This has led to several issues in the management of scholarships, including delays, data inconsistencies, and scalability challenges. Manual processes have been the norm, hindering the program's effectiveness and equitable distribution of educational opportunities. The PMP will incorporate elements of hybrid project management methodologies. Additionally, the PMP will integrate sustainability principles, aligning with the BSSB's mission to promote regenerative development. The result of implementing these improvements is expected to be a more streamlined scholarship program that effectively manages applications, decisions, and fund disbursements. It should significantly reduce data inconsistencies and reporting discrepancies, thereby improving transparency and stakeholder satisfaction. Moreover, adopting sustainable practices may positively impact the program's long-term viability and its contribution to societal betterment.

2.3.2 Previous research done for the topic of study

Minimal research has been conducted on the topic of study. However, the preliminary research conducted for this project encompasses various aspects relevant to project management, sustainability, agile methodologies, and scholarship program management. Sources like Coursera (2023) and the Project Management Institute (PMI,

2021) make it evident that adhering to project management principles is fundamental. PMI's delineation of project management domains, including stakeholders, team, development approach, and measurement, provides a broader context for project management that will be considered when tailoring the project management plan for the BSSB's scholarship program.

The research also highlighted the importance of project management approaches, particularly predictive, adaptive, and hybrid methodologies (Iqbal, 2023). For the BSSB scholarship program, the hybrid approach is a suitable strategy for addressing the program's unique challenges. As discussed by Iqbal (2022), Agile principles offer valuable insights into enhancing project adaptability and responsiveness, especially in areas where requirements are subject to change.

Sustainable project management practices, detailed in sources like the PMI (2021), align with the BSSB's mission to promote sustainable development. Integrating sustainability principles into the project management plan is vital for contributing to long-term program success and societal betterment. Furthermore, the research emphasizes the importance of scope management and strategies to avoid scope creep, as Ray (2021) outlined. These insights will inform the project management plan, ensuring the scholarship program stays on course.

Lastly, understanding the BSSB's organizational strategy and how the scholarship program contributes to the objectives provides critical context (Social Security Board, 2021). It allows for tailoring the FGP to meet the organization's specific needs, aligning with its objectives, and recognizing the significance of the scholarship program in

improving educational access for Belizeans in need. In conclusion, the research provides a strong foundation for developing the FGP.

2.3.3 Other theories related to the topic of study

Change Management: Change management theories, such as Kotter's Eight-Step Change Model, can be instrumental in implementing and sustaining changes the FGP mentions. These theories provide structured approaches for managing organizational transitions, particularly relevant when introducing a scholarship program that may require shifts in institutional processes and culture (Management Study Guide, n.d).

Sustainability: Beyond sustainability in project management, broader sustainability theories like the Triple Bottom Line (TBL) theory can be relevant to the FGP. TBL considers economic, social, and environmental impacts, aligning with the regenerative development goals of the scholarship program (Miller, 2023). Doughnut economics can also be used to guide the FGP's sustainable and regenerative objectives. Doughnut economics defines a lower and upper boundary, the lower boundary representing the basic needs of the general population, and the upper boundary representing Earth's planetary boundaries, which we must not exceed (Doughnut Economics Action Lab, n.d.).

Motivation: Theories of motivation, such as Self-Determination Theory (Cherry, 2022) or Maslow's Hierarchy of Needs (Mcleod, 2023), can shed light on how to encourage scholarship recipients to excel academically. Understanding the psychological needs for autonomy, competence, and relatedness can inform strategies for motivating students to maximize their educational opportunities.

3 METHODOLOGICAL FRAMEWORK

This chapter explains the strategy and rationale driving the research project, aiming to provide readers with a clear understanding of the identified problem and its proposed solution. It also establishes a connection between the chosen research type and the subject under investigation. The methodological framework assumes significance by articulating the reasoning behind adopting a specific research approach.

3.1 Information sources

Information sources are resources that provide data, facts, or evidence to support research or investigation. They are essential for gathering information and evidence from various perspectives. Information sources can be classified into two main categories: primary and secondary (Streefkerk, 2018).

3.1.1 Primary sources

Primary sources are original materials that provide direct evidence or firsthand information about a subject of study. They offer unfiltered and uninterpreted data, allowing researchers to analyze and interpret the information themselves (Streefkerk, 2018). Examples of primary sources include:

1. Interview transcripts
2. Newspapers and Magazines
3. Statistical data
4. Original Research
5. Government Documents

6. Speeches

3.1.2 Secondary sources

Secondary sources provide analysis, interpretation, evaluation, or synthesis of primary sources. They are created by researchers who analyze and interpret primary source materials to provide additional insights and perspectives (Streefkerk, 2018). Examples of secondary sources include:

- **Books**
- **Scholarly articles**
- **Reviews**
- **Documentaries**
- **Essays**

Chart 1 Information Sources

Objectives	**Information sources**	
	Primary	**Secondary**
1. To develop an Integration Management Plan to outline how project elements will be coordinated, integrated, and managed to ensure alignment with overall project objectives.	Interviews/Meetings with the stakeholders (students, school administrators, Communications Department), Research data , Company legislation and regulation.	PMBOK Guide (6th edition), Journals, Internet resources, Lecture notes

Objectives	Information sources	
	Primary	**Secondary**
2. To develop the Scope Management Plan to define how project scope will be defined, documented, verified, and controlled throughout the project to prevent scope creep and ensure focus.	Interviews/Meetings with the stakeholders (Communications Department, ICTS Team), Research data, Lessons learned from similar projects	PMBOK Guide (6th edition), Journals, Internet resources, Lecture notes
3. To develop the Schedule Management Plan which will define project scheduling, including activities, milestones, dependencies and resources to prevent setbacks and manage efficient time allocations.	Interviews/Meetings with stakeholders (ICTS Team and HR), research data, lessons learned from similar projects.	PMBOK Guide (6th edition), Journals, Internet resources, Lecture notes
4. To create a Cost Management Plan that will outline how project costs will be estimated, budgeted, managed and controlled to achieve financial efficiency and prevent cost overruns.	Interviews/Meetings with stakeholders (ICTS Team and HR), lessons learned from similar projects, Company legislation and regulation	PMBOK Guide (6th edition), Journals, Lecture notes

Objectives	Information sources	
	Primary	**Secondary**
5. To develop a Quality Management Plan which will define quality standards, metrics, processes, and procedures to ensure project deliverables meet quality expectations.	Interviews/Meetings with the stakeholders (Communications Department, ITCS Team), Company Standards	PMBOK Guide (6th edition), Journals, Internet resources, Lecture notes
6. To create a Resource Management Plan to outline how project roles and responsibilities will be managed and met to facilitate efficient project execution.	Interviews/Meetings with the stakeholders (Communications Department, ICTS Department), Lessons learned from similar projects	PMBOK Guide (6th edition), Journals, Internet resources, Lecture notes
7. To create a Communication Management Plan which defines communication channels and processes to maintain effective communication and collaboration among stakeholders.	Interviews/Meetings with the stakeholders (Communications Department, ITCS Team), Lessons learned from similar projects	PMBOK Guide (6th edition), Journals, Internet resources, Lecture notes
8. To develop a Risk Management Plan which facilitates the identification of project risks as well	Interviews/Meetings with the stakeholders (Communications Department, ITCS Team), Lessons	PMBOK Guide (6th edition), Journals, Internet resources, Lecture notes

Objectives	Information sources	
	Primary	**Secondary**
as defining mitigation and response strategies for managing project risks to ensure proactive risk management and project success.	learned from similar projects	
9. To create a Procurement Management Plan to define procurement processes, vendor criteria, and contract management processes to ensure efficient acquisitions and support the project's goals.	Interviews/Meetings with the stakeholders (Communications Department, ITCS Team), Company legislation and regulation, Lessons learned from similar projects	PMBOK Guide (6th edition), Journals, Internet resources, Lecture notes
10. To design a Stakeholder Management Plan that identifies stakeholders, determines their interests and expectations, and defines stakeholder engagement and communication strategies to foster positive and effective relationships, ensuring project success.	Interviews/Meetings with the stakeholders (Communications Department, HR Department)	PMBOK Guide (6th edition), Journals, Internet resources, Lecture notes

Objectives	Information sources	
	Primary	**Secondary**
11. To formulate a Sustainable Development Management Plan to assess and enhance the project's contribution to regenerative and sustainable development, aligning project activities with environmental and social sustainability objectives.	Sustainable Project Management: The GPM Reference Guide	Journals, Internet resources, Lecture notes

Note. Primary and secondary information sources for the FGP. Own work.

3.2 Research methods

Research Methods are the strategies, procedures, and processes researchers use to gather, analyze, and interpret data to answer research questions or evaluate hypotheses (Hassan, 2023).

3.2.1 Analytical Research

Satter (2023) defines *analytical research* as a type that requires critical thinking skills and the examination of relevant facts and information. It involves gathering, analyzing, and interpreting information to make inferences and reach conclusions (Satter, 2023). This research method is used in various fields, including psychology, medicine, and education.

3.2.2 Qualitative Method

Qualitative research methods involve the collection and analysis of non-numerical data. Hassan (2023) states that they are most valuable when the goal is to delve into the significance of phenomena, grasp individuals' experiences, or gain insights into intricate social processes. Qualitative research techniques encompass interviews, focus groups, and content analysis.

3.2.3 Quantitative Method

Quantitative research methods entail the gathering and analysis of numerical data. They prove beneficial when the aim is to test a hypothesis, establish cause-and-effect relationships, or quantify the occurrence of specific phenomena (Hassan, 2023). Quantitative research tools encompass surveys, experiments, and the analysis of pre-existing data.

Chart 2 Research Methods

Objectives	**Research methods**		
	Analytical	Qualitative	Quantitative
1. To develop an Integration Management Plan to outline how project elements will be coordinated, integrated, and managed to ensure alignment with overall project objectives.	Information will be analyzed from previous studies to support the creation of the Integration Management Plan.	Information from interviews and focus groups will be analyzed to support the creation of the Integration Management Plan.	Information from surveys and pre-existing data sets will be analyzed to support the creation of the Integration Management Plan.

Objectives	Research methods		
	Analytical	Qualitative	Quantitative
2. To develop the Scope Management Plan to define how project scope will be defined, documented, verified, and controlled throughout the project to prevent scope creep and ensure focus.	Information will be analyzed from previous studies to support the creation of the Scope Management Plan.	NA	NA
3. To develop the Schedule Management Plan which will define project scheduling, including activities, milestones, dependencies and resources to prevent setbacks and manage efficient time allocations.	Information will be analyzed from previous studies to support the creation of the Schedule Management Plan.	Information from interviews and focus groups will be analyzed to support the creation of the Schedule Management Plan.	Information from surveys and pre-existing data sets will be analyzed to support the creation of the Schedule Management Plan.
4. To create a Cost Management Plan that will outline how project costs will be estimated, budgeted, managed and controlled to achieve financial efficiency and prevent cost overruns.	Information will be analyzed from previous studies to support the creation of the Cost Management Plan.	NA	Information from surveys and pre-existing data sets will be analyzed to support the creation of the Cost Management Plan.
5. To develop a Quality Management Plan which will define quality standards, metrics, processes, and procedures to ensure project deliverables	NA	Information from interviews will be analyzed to support the creation of the Quality	Information from pre-existing data sets will be analyzed to support the creation of the

Objectives	Research methods		
	Analytical	Qualitative	Quantitative
meet quality expectations.		Management Plan.	Quality Management Plan.
6. To create a Resource Management Plan to outline how project roles and responsibilities will be managed and met to facilitate efficient project execution.	NA	Information from interviews will be analyzed to support the creation of the Resource Management Plan.	NA
7. To create a Communication Management Plan which defines communication channels and processes to maintain effective communication and collaboration among stakeholders.	NA	Information from interviews will be analyzed to support the creation of the Communications Management Plan.	Information from surveys and pre-existing data sets will be analyzed to support the creation of the Communications Management Plan.
8. To develop a Risk Management Plan which facilitates the identification of project risks as well as defining mitigation and response strategies for managing project risks to ensure proactive risk management and project success.	Information will be analyzed from previous studies to support the creation of the Cost Management Plan.	Information from interviews will be analyzed to support the creation of the Risk Management Plan.	Information from surveys and pre-existing data sets will be analyzed to support the creation of the Risk Management Plan.
9. To create a Procurement Management Plan to define procurement processes, vendor criteria, and contract	Information will be analyzed from previous studies to support the creation of the	NA	NA

Objectives	Research methods		
	Analytical	Qualitative	Quantitative
management processes to ensure efficient acquisitions and support the project's goals.	Procurement Management Plan.		
10. To design a Stakeholder Management Plan that identifies stakeholders, determines their interests and expectations, and defines strategies for stakeholder engagement and communication to foster positive and effective relationships ensuring project success.	Information will be analyzed from previous studies to support the creation of the Stakeholder Management Plan.	Information from interviews will be analyzed to support the creation of the Stakeholder Management Plan.	NA
11. To formulate a Sustainable Development Management Plan to assess and enhance the project's contribution to regenerative and sustainable development, aligning project activities with environmental and social sustainability objectives.	Information will be analyzed from previous studies to support the creation of the Sustainable Development Management Plan.	Information from interviews and focus groups will be analyzed to support the creation of the Sustainable Development Management Plan.	NA

Note. Research methods for the FGP. Own work.

3.3 Tools

The PMI (2017) defines a tool as "something tangible, such as a template or software program, used in performing an activity to produce a product or result". The tools

employed in the creation of the FGP can be grouped into several categories, including data analysis, data visualization, decision-making, communication skills, interpersonal and teamwork skills, as well as a miscellaneous category. An overview of these tools is presented in Chart 3.

- Project Charter Template: Document authorizing a project and providing the project manager with authority for project activities.
- Expert Judgment: Involves obtaining input from individuals or groups with specialized knowledge or skills.
- Data Gathering: Process of collecting relevant information and data for the project through methods like surveys and interviews.
- Meetings: Facilitate communication, collaboration, and decision-making among project team members and stakeholders.
- Scope Management Plan Template: Outlines how project scope will be defined, documented, verified, and controlled.
- Work Breakdown Structure (WBS) Template: Hierarchical decomposition of the total scope of work for project organization.
- Work Breakdown Structure Dictionary Template: Provides detailed information about each element in the work breakdown structure.
- Schedule Management Plan Template: Describes how project scheduling, activities, milestones, and resources will be managed.
- Precedence Diagramming Method: Technique used in scheduling to show relationships between project activities.

- Project Management Information System (MS Project): Software tool for planning, executing, and managing projects.
- Schedule Network Analysis: Technique to identify early and late start and finish dates for project activities.
- Critical Path Method: Method to identify the minimum time needed for project stages.
- Cost Management Plan Template: Outlines how project costs will be estimated, budgeted, managed, and controlled.
- Quality Management Plan Template: Defines quality standards, metrics, processes, and procedures for project deliverables.
- Resource Management Plan Template: Outlines how project roles and responsibilities will be managed.
- Communication Management Plan Template: Defines communication channels and processes among stakeholders.
- Risk Management Plan Template: Facilitates the identification of project risks and defines mitigation and response strategies.
- Procurement Management Plan Template: Defines procurement processes, vendor criteria, and contract management.
- Stakeholder Management Plan Template: Identifies stakeholders, determines interests, and defines strategies for engagement.
- Sustainable Project Management: The GPM Reference Guide Tools: Tools aligned with sustainable project management principles from the GPM Reference Guide.

Chart 3 Tools

Objectives	Tools
1. To develop an Integration Management Plan to outline how project elements will be coordinated, integrated, and managed to ensure alignment with overall project objectives.	● Project Charter Template ● Expert judgement ● Data gathering ● Meetings
2. To develop the Scope Management Plan to define how project scope will be defined, documented, verified, and controlled throughout the project to prevent scope creep and ensure focus.	● Scope Management Plan Template ● Expert judgement ● Data Analysis ● Work Breakdown structure template ● Work Breakdown structure dictionary template ● Meetings
3. To develop the Schedule Management Plan, which will define project scheduling, including activities milestones, dependencies, and resources to prevent setbacks and manage efficient time allocations	● Schedule Management Plan template ● Expert judgement ● Meetings ● Precedence diagramming method ● Project management information system (MS Project) ● Schedule network analysis ● Critical path method

Objectives	Tools
4. To create a Cost Management Plan outlining how project costs will be estimated, budgeted, managed, and controlled to achieve financial efficiency and prevent cost overruns.	• Cost Management Plan Template • Expert judgement • Estimating • Meetings
5. To develop a Quality Management Plan which will define quality standards, metrics, processes, and procedures to ensure project deliverables meet quality expectations.	• Quality Management Plan Template • Expert judgement • Data analysis • Test and inspection planning • Meetings
6. To create a Resource Management Plan to outline how project roles and responsibilities will be managed and met to facilitate efficient project execution.	• Resource Management Plan Template • Expert judgement • Data analysis • Meetings • Negotiation
7. To create a Communication Management Plan that defines communication channels and processes to maintain effective communication and collaboration among stakeholders.	• Communication Management Plan Template • Expert judgment • Communication technology • Communication methods

Objectives	Tools
	• Interpersonal and team skills • Meetings
8. To develop a Risk Management Plan that facilitates the identification of project risks and defining mitigation and response strategies for managing project risks to ensure proactive risk management and project success.	• Risk Management Plan Template • Expert judgement • Data analysis • Risk categorization • Meetings
9. To create a Procurement Management Plan to define procurement processes, vendor criteria, and contract management processes to ensure efficient acquisitions and support the project's goals.	• Procurement Management Plan Template • Expert judgement • Data gathering • Source selection analysis • Meetings
10. To design a Stakeholder Management Plan that identifies stakeholders, determines their interests and expectations, and defines stakeholder engagement and communication strategies to foster positive and effective relationships, ensuring project success.	• Stakeholder Management Plan Template • Expert judgement • Data analysis • Power/Interest/Influence/ Impact grids • Meetings
11. To formulate a Sustainable Development Management Plan to	• Sustainable Project Management: The GPM

Objectives	Tools
assess and enhance the project's contribution to regenerative and sustainable development, aligning project activities with environmental and social sustainability objectives.	Reference Guide tools

Note. Tools for the FGP. Own work.

3.4 Assumptions and constraints

Per the PMI (2017) guidelines, an assumption is a factor in the planning process that is accepted as true, accurate, or specific without requiring proof or demonstration. Similarly, PMI (2017) defines a *constraint* as a limiting factor that impacts the execution of a project, program, or process. Chart 4 provides an overview of the assumptions and constraints associated with the FGP's topic and objectives.

Chart 4 Assumptions and Constraints

Objectives	Assumptions	Constraints
1. To develop an Integration Management Plan to outline how project elements will be coordinated, integrated, and managed to ensure alignment with overall project objectives.	It is assumed that stakeholders and company information will be readily available.	The timeframe for the development of the integration management plan is not flexible.

Objectives	Assumptions	Constraints
2. To develop the Scope Management Plan to define how project scope will be defined, documented, verified, and controlled throughout the project to prevent scope creep and ensure focus.	It is assumed that all necessary details are known by the stakeholders.	The project scope must be adhered to.
3. To develop the Schedule Management Plan to define project scheduling, including activities, milestones, dependencies, and resources to prevent setbacks and manage efficient time allocations.	It is assumed that the scheduling software is available.	Strict deadlines must be adhered to.
4. To create a Cost Management Plan outlining how project costs will be estimated, budgeted, managed, and controlled to achieve financial efficiency and prevent cost overruns.	It is assumed that the budget is available and realistic for the project requirements.	The allocated budget must be adhered to.
5. To develop a Quality Management Plan which will define quality standards, metrics, processes, and procedures to ensure project deliverables meet quality expectations.	It is assumed that the development team is aware of all relevant quality standards.	All defined quality standards must be met.
6. To create a Resource Management Plan to outline how project roles and responsibilities will be managed and met to facilitate efficient project execution.	It is assumed that the necessary resources are available.	Limited staff available due to other ongoing projects.
7. To create a Communication Management Plan that defines communication channels and processes to maintain effective communication and collaboration among stakeholders.	It is assumed that all stakeholders have access to and are competent in the use of the selected communication methods.	Dependent on third party Internet service providers.

Objectives	Assumptions	Constraints
8. To develop a Risk Management Plan that facilitates the identification of project risks and defining mitigation and response strategies for managing project risks to ensure proactive risk management and project success..	It is assumed that all major risks will be identified and planned for.	Limited human resources may lead to incomplete risk identification.
9. To create a Procurement Management Plan to define procurement processes, vendor criteria, and contract management processes to ensure efficient acquisitions and support the project's goals.	It is assumed that timely decisions will be made by stakeholders. It is assumed that the necessary software/hardware is readily available.	Project budget must be adhered to.
10. To design a Stakeholder Management Plan that identifies stakeholders, determines their interests and expectations, and defines stakeholder engagement and communication strategies to foster positive and effective relationships, ensuring project success.	It is assumed that stakeholders will be willing to cooperate and contribute. It is assumed that the necessary information about stakeholders is available.	Differing stakeholder interests and expectations.
11. To formulate a Sustainable Development Management Plan to assess and enhance the project's contribution to regenerative and sustainable development, aligning project activities with environmental and social sustainability objectives.	It is assumed that key stakeholders will remain committed to the principles of sustainable development.	Sustainability efforts must remain within the allotted budget.

Note. FGP assumptions and constraints. Own work.

3.5 Deliverables

Per the PMI (2017) guidelines, a deliverable is "any distinct and confirmable product, outcome, or the capability to provide a service that is necessary to be generated to conclude a process, stage, or project." Chart 5 outlines the relevant deliverables for all objectives of the FGP.

Chart 5 Deliverables

Objectives	Deliverables
1. To develop an Integration Management Plan to outline how project elements will be coordinated, integrated, and managed to ensure alignment with overall project objectives.	An Integration Management Plan, which encompasses the integration processes and strategies, such as project charter, project management plan, and integrated change control procedures.
2. To develop the Scope Management Plan to define how project scope will be defined, documented, verified, and controlled throughout the project to prevent scope creep and ensure focus.	A Scope Management Plan, incorporating key elements like the requirements traceability matrix, Work Breakdown Structure (WBS), WBS dictionary, and the scope statement.
3. To develop the Schedule Management Plan to define project scheduling, including activities, milestones, dependencies, and resources to prevent setbacks and manage efficient time allocations.	A Schedule Management Plan, which outlines essential components like the activity list, sequence of activities, activity durations, schedule model, and the schedule baseline.
4. To create a Cost Management Plan outlining how project costs will be estimated, budgeted, managed, and controlled to achieve financial efficiency and prevent cost overruns.	A Cost Management Plan, incorporating cost estimation methods, budgeting techniques, cost control measures, and the project's financial baseline.

Objectives	Deliverables
5. To develop a Quality Management Plan which will define quality standards, metrics, processes, and procedures to ensure project deliverables meet quality expectations.	A Quality Management Plan, encompassing quality standards, metrics, quality control, quality assurance procedures, and processes to ensure deliverables meet predefined quality criteria.
6. To create a Resource Management Plan to outline how project roles and responsibilities will be managed and met to facilitate efficient project execution.	A Resource Management Plan, including strategies for acquiring, developing, and managing project resources, such as roles, responsibilities, and resource allocation.
7. To create a Communication Management Plan that defines communication channels and processes to maintain effective communication and collaboration among stakeholders.	A Communication Management Plan, detailing communication channels, methods, frequency, and stakeholders' engagement strategies to ensure effective project communication.
8. To develop a Risk Management Plan that facilitates the identification of project risks and defining mitigation and response strategies for managing project risks to ensure proactive risk management and project success.	A Risk Management Plan, encompassing risk identification, assessment, mitigation strategies, and a risk response plan to manage uncertainties and potential project disruptions.
9. To create a Procurement Management Plan to define procurement processes, vendor criteria, and contract management processes to ensure efficient acquisitions and support the project's goals.	A Procurement Management Plan, outlining procurement processes, vendor selection criteria, contract management procedures, and procurement-related guidelines.
10. To design a Stakeholder Management Plan that identifies stakeholders, determines their interests and expectations, and defines stakeholder engagement and communication	A Stakeholder Management Plan, including stakeholder identification, analysis, and strategies for engaging, communicating, and managing

Objectives	Deliverables
strategies to foster positive and effective relationships, ensuring project success.	stakeholders' expectations throughout the project.
11. To formulate a Sustainable Development Management Plan to assess and enhance the project's contribution to regenerative and sustainable development, aligning project activities with environmental and social sustainability objectives.	A Sustainable Development Management Plan defines the project's regenerative and sustainable development approach, including environmental and societal impact assessments and strategies for promoting sustainability throughout the project lifecycle.

Note. FGP Deliverables. Own work.

4 RESULTS

This section delves into extensive details of the various management plans, each serving a distinct purpose and offering unique support to the project manager. These comprehensive plans provide essential information for effective project management, including building designs, implementation timelines, cost considerations, quality metrics, and key stakeholders.

4.1 Integration Management Plan

This section encompasses a Project Charter for developing a Belize Social Security Board scholarship management system. This section is critical in unifying the components of the Belize Social Security Board's Scholarship Program project.

4.1.1 Project Charter

Chart 6 Project Charter

● **PROJECT CHARTER** ● **For the development of a scholarship management system**	
● **Date**	● **Name of Project**
● 14th November, 2023	● Belize Social Security Board Scholarship Program
● **Type of Project**	● Hybrid
● **Knowledge areas/process groups**	● **Application area (Sector/Activity)**
● **Knowledge areas:** ● Project integration management ● Project scope management ● Project schedule management ● Project cost management ● Project quality management ● Project resource management ● Project communication management	● Education, Social Development

- Project risk management
- Project procurement management
- Project stakeholder management

Process groups:

- Initiation
- Planning
- Execution
- Monitoring, & Controlling, Closure
-

● **Tentative start date:**	● **Tentative completion date:**	● **Duration:**
● **October**	● **March**	● **4 months**

● **Project objectives (general and specific)**

General objective:

1. To streamline the scholarship application process, enhance administrative efficiency, and foster transparency in scholarship management to increase access to higher education for economically marginalized students.

Specific objectives

1. To create a user-friendly online portal for scholarship applicants to submit their applications and track their progress.
2. To design an internal portal for BSSB staff, allowing them to manage and review scholarship applications efficiently.
3. Enable staff to monitor and process applications from initial submission to completion, allowing for a streamlined and effective process.
4. To incorporate a user-friendly interface for staff to manage disbursements to scholarship recipients.
5. To allow staff to generate reports on scholarship program performance, application status, and disbursement records to facilitate transparency and provide statistical reports for continuous improvement.
6. To provide real-time data analytics to inform decision-making and improve the overall management of the scholarship program.

Justification or Purpose

The purpose of the Belize Social Security Board (BSSB) scholarship program is to advance Belizean youth's well-being and educational development by ensuring equitable access to quality education. This program is a strategic investment in the nation's future, aligning with the BSSB's mission to promote regenerative and sustainable development.

By offering educational opportunities, the program empowers Belizean youth to realize their potential, achieve their dreams, and become active contributors to the nation's prosperity. Investments in education result in a highly skilled and productive workforce, driving economic growth and reducing the reliance on social welfare programs. Additionally, the scholarship program directly aligns with several Sustainable Development Goals (SDGs), including Goal 4 (Quality Education), Goal 1 (No Poverty), Goal 5 (Gender Equality), and Goal 8 (Decent Work and Economic Growth). It actively supports global sustainability objectives by promoting education, gender equality, and employability, fostering a brighter and more prosperous future for Belize.

Description of the product or service that the project will generate - Final project deliverables

The final project deliverables for the Belize Social Security Board scholarship program encompass a comprehensive and user-friendly online portal system. This system will consist of two main components:

User Portal:

1. An interactive and intuitive portal for scholarship applicants to submit their applications and track the progress of their submissions.
2. Secure user accounts with personalized dashboards, providing a seamless experience for applicants to manage their scholarship journey.
3. A user-friendly interface that allows applicants to upload required documents, receive notifications, and access relevant information about scholarship opportunities.

Internal Portal for SSB Staff:

1. A dedicated portal for BSSB staff to efficiently manage the entire scholarship program lifecycle.
2. Robust functionality for staff to review, evaluate, and process scholarship applications seamlessly within the system.
3. Progress tracking features to monitor the status of applications, from initial review through to completion and disbursement.
4. An integrated reports module to generate comprehensive analytics and insights, aiding in decision-making and program optimization.

Assumptions

It is assumed that:

1. The necessary staff will be available for the duration of the project.
2. The staff is trained and familiar with the technologies to be used.
3. The necessary technologies are readily available.
4. The project will be delivered within the 4-month timeline.
5. The project will be executed within the allocated budget, including all development and unforeseen expenses.
6. Internal staff will have a stable internet connection to perform their duties.

Constraints

1. Technological limitations may arise because the technological infrastructure for the BSSB is entirely Microsoft-based.
2. Adherence to security measures may limit certain functionalities and flexibility to ensure data protection.
3. There needs to be more skilled personnel.
4. The project's scope must be adhered to strictly.
5. The project's timeline must be adhered to strictly.

Preliminary identification of Risks

1. Potential resistance or difficulties in user adaptation to the new online portal, leading to slower adoption rates and potential dissatisfaction among stakeholders.
2. Limited availability of skilled resources such as developers and quality assurance analysts may lead to project delays.
3. Potential scalability challenges if the user volume increases faster than estimated.

General Resources and Budget

Human Resources	Software Developers, Database Administrator, Quality Assurance Analyst, Project Manager	$18,000
Software Resources	Software Development tools, Database management systems, hosting services, testing tools	$3,000
Infrastructure	Web server, database server	$1,000
Contingency	10%	$2,200
	TOTAL	$24,200

Milestones Schedule	
Milestone name	**End dates**
Initiation of project/kickoff	March 11th 2024
Requirements gathering and documentation	March 29th 2024
UI/UX Design	April 12th 2024
Software Development Environment setup	April 12th 2024
Database Design	April 12th 2024
Portal development	June 7th 2024
QA testing	June 14th 2024
Training and documentation	June 21st 2024
Project evaluation & approval	June 24th 2024

Relevant historical information

The Belize Social Security Board has a history of actively contributing to Belizean citizens' well-being and social security. The BSSB has played a vital role in safeguarding the social and economic welfare of the nation since its inception. Over the years, the BSSB has evolved to address the populace's needs, extending its mission beyond traditional social security benefits to become an advocate for educational development.

Recognizing the transformative power of education, the BSSB took a commendable initiative to establish a scholarship program. This reflects the BSSB's dedication to enhancing educational access for economically marginalized Belizean youths, aiming to make a positive contribution to the nation's future. As the program evolved, challenges arose that prompted the need for modernization by implementing an online portal to streamline user applications and management.

Identification of (stakeholders)

- Board of Directors for the Belize Social Security Board
- Project Managers
- Software Developers
- Database Administrator
- Quality Assurance Analyst
- BSSB Users
- Scholarship applicants

4.2 Scope Management Plan

The Scope Management Plan is the project's compass, facilitating the process of detecting, defining, and managing deliverables, risks, and benefits for the project team. It serves as a strategic framework, ensuring clarity on project objectives. This plan meticulously outlines the project scope, deliverables, risks, and benefits associated with the modernization of the BSSB's scholarship program. From roles and responsibilities to the work breakdown structure, the plan systematically addresses key elements, streamlining the project for optimal efficiency.

4.2.1 Roles and Responsiblities

The project team consists of key team members with integral roles in the execution and maintenance of the project scope. Chart 6 below elaborates on the roles and responsibilities of each team member.

Chart 7 Roles and Responsibilities

Name	Role	Responsibilities
Social Security Board	Project Sponsor	● Approve or reject requests ● Accept deliverables
Allen Guerra	Project Manager	● Develop and execute a comprehensive project management plan covering all aspects ● Facilitate clear and effective communication among team members, stakeholders, and any external parties involved ● Address and resolve any issues or conflicts that may arise during the project, promoting quick and effective solutions

Name	Role	Responsibilities
		● Regularly monitor project progress, generate reports, and provide updates to stakeholders ● Adapt to changes in project scope, schedule, or objectives, and guide the team through transitions
Raphael Chan Jamir Lamb	Software Developers	● Develop and execute a comprehensive project management plan covering all aspects ● Facilitate clear and effective communication among team members, stakeholders, and any external parties involved ● Address and resolve any issues or conflicts that may arise during the project, promoting quick and effective solutions ● Regularly monitor project progress, generate reports, and provide updates to stakeholders ● Adapt to changes in project scope, schedule, or objectives, and guide the team through transitions.
Daniel Alvarez	Database Administrator	● Collaborate with software developers and stakeholders to design and implement an efficient and scalable database structure. ● Conduct routine maintenance tasks, such as updates, patches, and optimizations. ● Create and maintain comprehensive documentation for the database structure.
Christian Pinelo	Quality Assurance Analyst	● Develop a detailed test plan outlining the testing approach

Name	Role	Responsibilities
		● Evaluate the software's user interface, navigation, and overall user experience ● Work closely with software developers, project managers, and other stakeholders to address and resolve identified issues ● Conduct user training
BSSB Users	System Users	● Actively engage with the scholarship program software to perform tasks related to managing and processing scholarship applications. ● Collaborate with other BSSB staff and relevant stakeholders. ● Provide constructive feedback
Scholarship Applicants	System Users	● Utilize the scholarship program to complete and submit applications

Note. Roles and Responsibilities. Own work.

4.2.2 Scope Definition

The scope definition has been established through a requirements collection process, which involved thorough analysis and assessment of the current operational challenges faced by the scholarship program. The process incorporates inputs from various stakeholders, including scholarship program administrators, educators, applicants, and technical experts. The project description and deliverables will be intricately linked to the identified requirements, addressing issues such as process inefficiencies, prolonged decision-making timelines, and limited access to accurate data. Expert judgment will provide insights and recommendations on the most effective ways to meet the requirements for successfully implementing the scholarship program's software solution.

4.2.3 Scope Statement

The Project Scope Statement is a comprehensive guide for the Belize Social Security Board's Scholarship Program, outlining its objectives, deliverables, assumptions, constraints, and exclusions. This document ensures a clear understanding of the project's boundaries and defines what is and is not part of the project scope.

Deliverables

The final project deliverables for the BSSB Scholarship Program consist of an advanced online portal system, integrating two main components:

User Portal:

1. An interactive and intuitive portal for scholarship applicants to submit applications and monitor their progress.
2. Secure user accounts with personalized dashboards, facilitating a seamless experience for managing the scholarship journey.
3. User-friendly interface for document uploads, notifications, and accessing scholarship information.

Internal Portal for SSB Staff:

4. A dedicated portal for BSSB staff to efficiently manage the scholarship program lifecycle.
5. Robust functionality for reviewing, evaluating, and processing scholarship applications seamlessly within the system.

6. Progress tracking features for monitoring application status, from initial review to completion and disbursement.
7. Integrated reports module for generating comprehensive analytics and insights to aid decision-making and program optimization.

Assumptions

1. Necessary staff will be available throughout the project.
2. Staff is trained and familiar with the technologies to be used.
3. Necessary technologies are readily available.
4. The project will be delivered within the 4-month timeline.
5. The project will be executed within the allocated budget, including all development and unforeseen expenses.
6. Internal staff will have a stable internet connection to perform their duties.

Constraints

1. Technological limitations due to the BSSB's Microsoft-based infrastructure.
2. Adherence to security measures may limit certain functionalities for data protection.
3. Limited availability of skilled personnel.
4. Strict adherence to the project scope
5. Strict adherence to the project timeline.

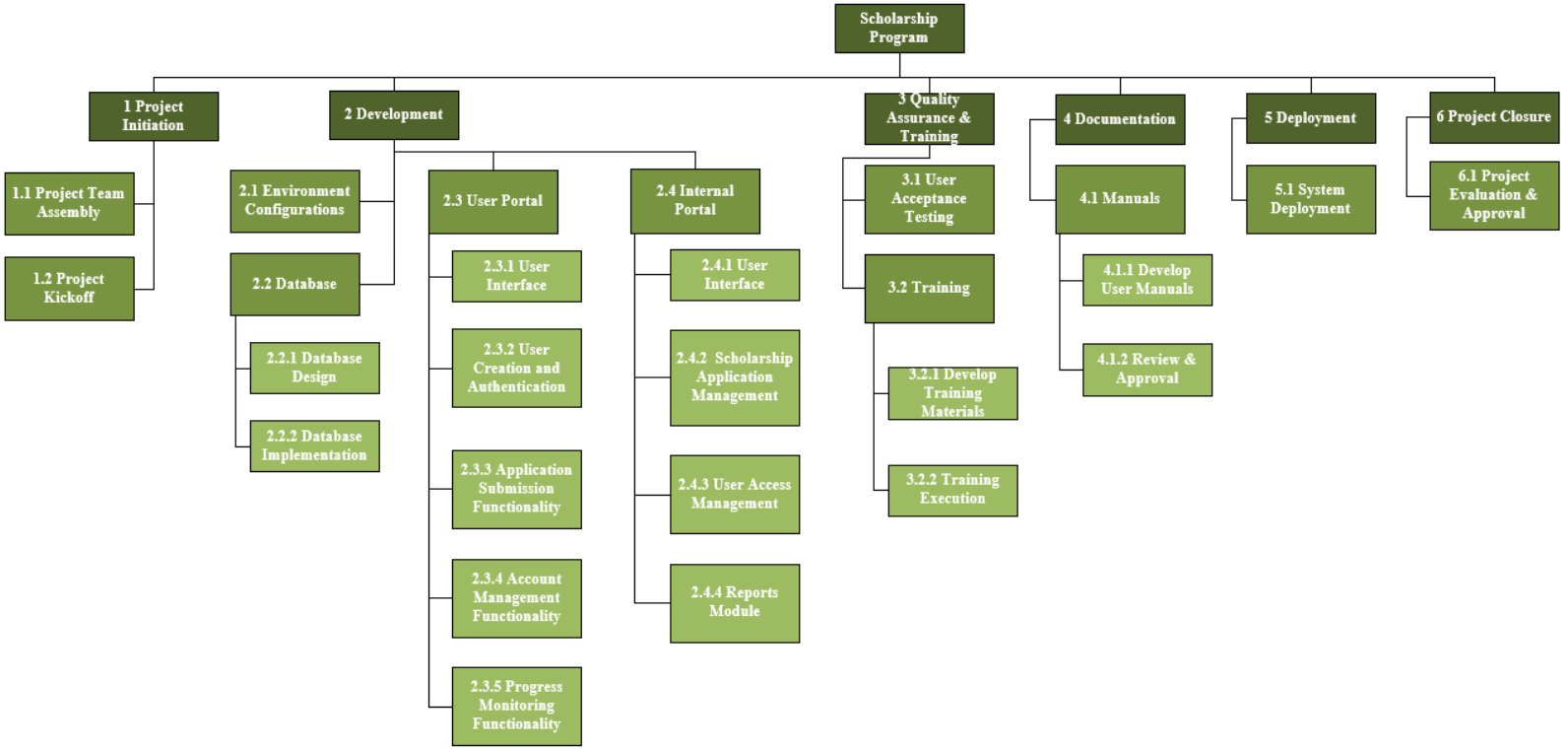
Exclusions

Policy Development - The project does not encompass developing or modifying organizational policies. Any policy-related decisions or adjustments are considered external to this project.

4.2.4 Work Breakdown Structure

The Work Breakdown Structure (WBS) serves as a foundational framework that organizes and defines the tasks and components for the Belize Social Security Board's Scholarship Program. This structured decomposition of the initiative into manageable work elements offers a comprehensive view of the endeavor's scope, facilitating efficient planning, execution, and control. Each level of the WBS is designed to provide a clear understanding of the program's hierarchical structure, ensuring that every aspect, from portal development to testing, deployment, and training, is systematically accounted for and aligned with the initiative's overarching objectives.

Figure 4 BSSB Scholarship Program Work Breakdown Structure



Note. Work Breakdown Structure. Own Work.

4.2.5 Work Breakdown Structure Dictionary

The WBS dictionary describes tasks, associated costs, and required resources for each element within the project. The project team will rely on the WBS Dictionary as a roadmap for executing tasks aligned with each WBS element. For additional details, refer to Chart 7 below.

Chart 8 WBS Dictionary

Level	WBS Code	Element	Description	Budget	Resources
1	1	Project Initiation	Project related activities	$1,000	Laptop, Internet, & other project documents and applications
2	1.1	Project Team Assembly	Assemble Project Team		Project Manager
2	1.2	Project Kickoff	Official Launch of the project		Project Manager, Project Team
1	2	Development	Development Activities for the Scholarship Program	$15,000	Software Developers, Database Administrator, Servers, Visual Studio, SQL Server
2	2.1	Environment Configuration	Configuration of the development, testing and production development environments		Servers, Laptops, SQL Server

Level	WBS Code	Element	Description	Budget	Resources
2	2.2	Database	Development of a database structure to house the raw data to be stored		Database Administrator, SQL Server
3	2.2.1	Database Design	Design database structure based on requirements		Database Administrator
3	2.2.2	Database Implementation	Deployment of Database for development		Database Administrator, System Administrator
2	2.3	User Portal	Creation of the user portal		Software Developers, Visual Studio, SQL Server
3	2.3.1	User Interface	User interface/experience design		Software Developers, Figma
3	2.3.2	User Creation and Authentication	Develop a functionality for users to create accounts		Software Developers, Visual Studio, SQL Server
3	2.3.3	Application Submission Functionality	Develop the ability for users to submit all relevant information for their applications		Software Developers, Visual Studio, SQL Server
3	2.3.4	Account Management Functionality	Develop the ability for users to manage their account credentials		Software Developers, Visual Studio, SQL Server
3	2.3.5	Progress Monitoring Functionality	Develop a functionality for users to track their		Software Developers,

Level	WBS Code	Element	Description	Budget	Resources
			progress in the scholarship cycle		Visual Studio, SQL Server
2	2.4	Internal Portal	Development of the portal to be used by BSSB staff		Software Developers, Visual Studio, SQL Server
3	2.4.1	User Interface	User interface/experience design		Software Developers, Figma
3	2.4.2	Scholarship Application Management Functionality	Development of the functionality for BSSB users to manage the scholarship applications from review to disbursement processes		Software Developers, Visual Studio, SQL Server
3	2.4.3	User Access Management	Implement Access Management for Features		Software Developers, Visual Studi, SQL Server
3	2.4.4	Reports Module	Reporting ability for BSSB users to generate required reporting requirements		Software Developers, Visual Studio, SQL Server
1	3	Quality Assurance & Training	Process to ensure the product meets requirements and the facilitating of user training	$3,500	QA Analyst, BSSB Staff
2	3.1	User Acceptance Testing	Process to determine the product performs functions as expected		QA Analyst, BSSB staff
2	3.2	Training	Training Activities		QA Analyst, BSSB Staff,

Level	WBS Code	Element	Description	Budget	Resources
					Software Developers
3	3.2.1	Develop Training Materials	Preparation of materials to train users		QA Analyst, MS Word, MS Excel, Laptop
3	3.2.2	Training Execution	Carrying out training for BSSB Staff		QA Analyst
1	4	Documentation	Creation of system documentation	$500	Software Developers
2	4.1	Manuals	Activities related to manual creation		Software Developers
3	4.1.1	Develop User Manuals	Creation of user manuals		Software Developers
3	4.1.2	Review & Approval	Review of manuals		QA Analyst, Project Manager
1	5	Deployment	Release of the program to the public	$1,000	Software Developers, System Administrator
2	5.1	System Deployment	Process of releasing the scholarship program for public use		Software Developers, System Administrator
1	6	Project Closure	Process of closing the project	$1,000	Project Manager, Stakeholders
2	6.1	Project Evaluation & Approval	Documentation review to close the project		Project Manager, Stakeholders

Note. WBS Dictionary. Own Work.

4.2.6 Scope Verification

As the scholarship program project progresses, the Project Manager will undertake scope verification by confirming the initial project deliverables against the defined scope in the scope statement, Work Breakdown Structure, and WBS Dictionary. Upon ensuring that the deliverables align with the established requirements in the project plan, the PM will arrange a formal meeting with the client for the official approval of the deliverable. During this session, the PM will present the deliverable to the client for formal acceptance. The client's acknowledgment of the deliverable will be formalized by signing a project deliverable acceptance document. This meticulous scope verification process aims to consistently maintain project work within the defined scope throughout the project's lifecycle.

4.2.7 Scope Control

The scholarship program's Project Manager and the project team will collaboratively control the project's scope. The team will actively utilize the WBS Dictionary as a statement of work for each Work Breakdown Structure element. The project team will focus on executing only the tasks explicitly defined for each WBS element and delivering the specified outcomes.

The Project Manager will assume the responsibility of overseeing the project team's activities and the project's sequencing to guarantee the effective implementation of the scope control process. If a change to the project scope becomes necessary, a systematic

procedure for proposing such changes will be initiated. Any change requests must be documented in a project change request file.

Upon receiving a change request, the Project Manager and the team will thoroughly evaluate the proposed scope change. The Project Manager can either approve or deny the change request. If approved, the Project Manager will formally submit the change request file to the client. Once relevant stakeholders approve the change request, the PM and the team will diligently revise all project documents. Additionally, the scope change will be communicated promptly to all project team members and stakeholders to ensure a clear understanding of the updated project scope.

4.3 Schedule Management Plan

The Schedule Management Plan for the scholarship program is strategically devised to outline the management approach governing the project schedule throughout its lifecycle. This comprehensive plan serves as a guiding document, establishing clear expectations, policies, and procedures for planning, developing, executing, and controlling the project schedule. The project schedule communicates vital information regarding the tasks to be performed, the designated organizational resources for task execution, and the stipulated timeframes for task completion, ensuring the timely delivery of the project.

4.3.1 Schedule Management Approach

The schedule will be developed using Microsoft Project 2021 and will use the approved WBS as its basis. Activities will be sequenced based on the logical relationships between project objectives. Resource estimates will be calculated to properly allocate

resources to work tasks and prevent conflicts during the project execution. The Project Manager and the project team will review the schedule once completed to review and confirm activity durations and resources.

4.3.2 Define Activities

The activity list comprises all of the scheduled activities for the project. These activities are estimated considering relevant dependencies and constraints which may influence the duration of the activity. Chart 8 below details the activity list of the project.

Chart 9 Activity List

WBS	Task Name	Duration (Days)	WBS Predecessor	WBS Successor	Resource Names
1.1	**Project Team Assembly**	**1**		**1.2**	**Project Manager**
1.2	**Project Kickoff**	**1**	**1.1**	**2.1**	**Project Manager**
2.1	**Environment Configurations**	**4**			**Software Developers, System Administrator, Database Administrator**
2.2	**Database**	**10**	**2.1**	**2.3**	**Database Administrator, System Administrator**
2.2.1	Database Design	7	2.1	2.2.2	Database Administrator
2.2.2	Database Implementation	3	2.2.1	2.3	Database Administrator, System Administrator
2.3	**User Portal**	**60**	**2.2.2**	**3.1**	**Software Developers**

WBS	Task Name	Duration (Days)	WBS Predecessor	WBS Successor	Resource Names
2.3.1	User Interface	15	2.2.2	2.3.2	Software Developers
2.3.2	User Creation and Authentication	5	2.3.1	2.3.3	Software Developers
2.3.3	Application Submission Functionality	27	2.3.2	2.3.4	Software Developers
2.3.4	Account Management Functionality	6	2.3.3	2.3.5	Software Developers
2.3.5	Progress Monitoring Functionality	7	2.3.4	3.1	Software Developers
2.4	**Internal Portal**	**70**	**2.2.2**	**3.1**	**Software Developers**
2.4.1	User Interface	15	2.2.2	2.4.2	Software Developers
2.4.2	Scholarship Application Management	35	2.4.1	2.4.3	Software Developers
2.4.3	User Access Management	10	2.4.2	2.4.4	Software Developers
2.4.4	Reports Module	10	2.4.3	3.1	Software Developers
3.1	**User Acceptance Testing**	**5**	**2.3.5, 2.4.4**	**3.2**	**QA Analyst**
3.2	**Training**	**4**	**3.1**	**4.1**	**QA Analyst**
3.2.1	Develop Training Materials	1	3.1	3.2.2	QA Analyst, Software Developers
3.2.2	Training Execution	3	3.2.1	4.1	QA Analyst
4.1	**Manuals**	**3**	**3.2.2**	**5.1**	**Software Developers**
4.1.1	Develop User Manuals	2	3.2.2	4.1.2	Software Developers
4.1.2	Review & Approval	1	4.1.1	5.1	Project Manager, QA Analyst
5.1	**System Deployment**	**2**	**4.1.2**	**6.1**	**Software Developers, System Admin**

WBS	Task Name	Duration (Days)	WBS Predecessor	WBS Successor	Resource Names
6.1	**Project Evaluation & Approval**	**2**	**5.1**		**Project Manager, Stakeholders**

Note. Activity List. Own Work.

4.3.3 Project Schedule

This stage involves the analysis of activity sequences, durations, resource needs, and schedule constraints to formulate the project schedule to facilitate project execution, monitoring, and control. Chart 9 and Figure 5, presented below, outline the project schedule.

Chart 10 Scheduled Activities

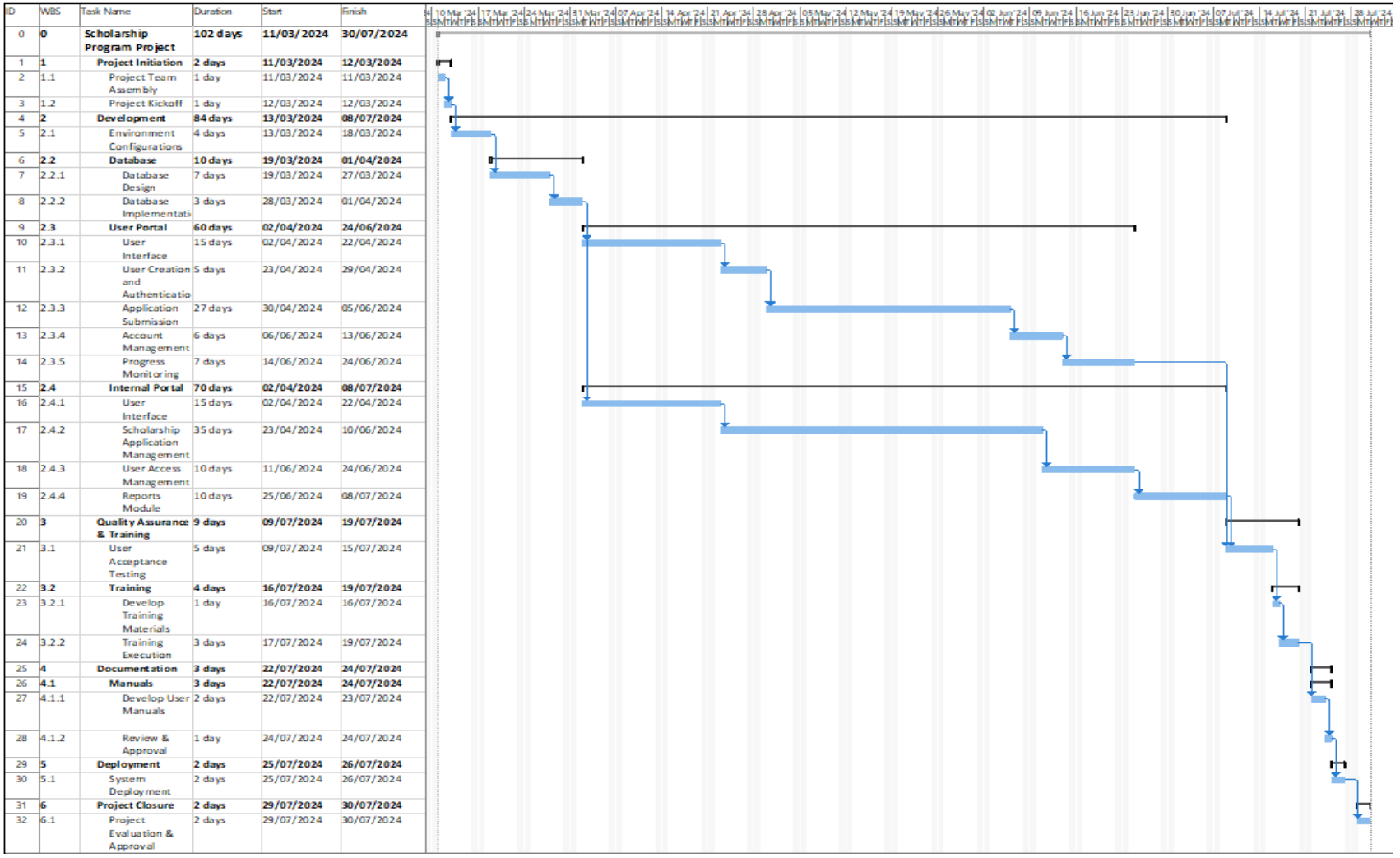
WBS	Task Name	Duration (Days)	Start Date	End Date	Resource Names
1.1	**Project Team Assembly**	**1**	11/03/2024	11/03/2024	**Project Manager**
1.2	**Project Kickoff**	**1**	12/03/2024	12/03/2024	**Project Manager**
2.1	**Environment Configurations**	**4**	13/03/2024	18/03/2024	**Software Developers, System Administrator, Database Administrator**
2.2	**Database**	**10**	**19/03/2024**	**01/04/2024**	**Database Administrator, System Administrator**
2.2.1	Database Design	7	19/03/2024	27/03/2024	Database Administrator
2.2.2	Database Implementation	3	28/03/2024	01/04/2024	Database Administrator,

WBS	Task Name	Duration (Days)	Start Date	End Date	Resource Names
					System Administrator
2.3	**User Portal**	**60**	**02/04/2024**	**24/06/2024**	**Software Developers**
2.3.1	User Interface	15	02/04/2024	22/04/2024	Software Developers
2.3.2	User Creation and Authentication	5	23/04/2024	29/04/2024	Software Developers
2.3.3	Application Submission Functionality	27	30/04/2024	05/06/2024	Software Developers
2.3.4	Account Management Functionality	6	06/06/2024	13/06/2024	Software Developers
2.3.5	Progress Monitoring Functionality	7	14/06/2024	24/06/2024	Software Developers
2.4	**Internal Portal**	**70**	**02/04/2024**	**08/07/2024**	**Software Developers**
2.4.1	User Interface	15	02/04/2024	22/04/2024	Software Developers
2.4.2	Scholarship Application Management	35	23/04/2024	10/06/2024	Software Developers
2.4.3	User Access Management	10	11/06/2024	24/06/2024	Software Developers
2.4.4	Reports Module	10	25/06/2024	08/07/2024	Software Developers
3.1	**User Acceptance Testing**	**5**	09/07/2024	15/07/2024	**QA Analyst**
3.2	**Training**	**4**	**16/07/2024**	**19/07/2024**	**QA Analyst**
3.2.1	Develop Training Materials	1	16/07/2024	16/07/2024	QA Analyst, Software Developers
3.2.2	Training Execution	3	17/07/2024	19/07/2024	QA Analyst
4.1	**Manuals**	**3**	**22/07/2024**	**24/07/2024**	**Software Developers**

WBS	Task Name	Duration (Days)	Start Date	End Date	Resource Names
4.1.1	Develop User Manuals	2	22/07/2024	23/07/2024	Software Developers
4.1.2	Review & Approval	1	24/07/2024	24/07/2024	Project Manager, QA Analyst
5.1	**System Deployment**	**2**	25/07/2024	26/07/2024	**Software Developers, System Admin**
6.1	**Project Evaluation & Approval**	**2**	29/07/2024	30/07/2024	**Project Manager, Stakeholders**

Note. Scholarship Project Scheduled Activities. Own Work.

Figure 5 Scholarship Project Gantt Chart

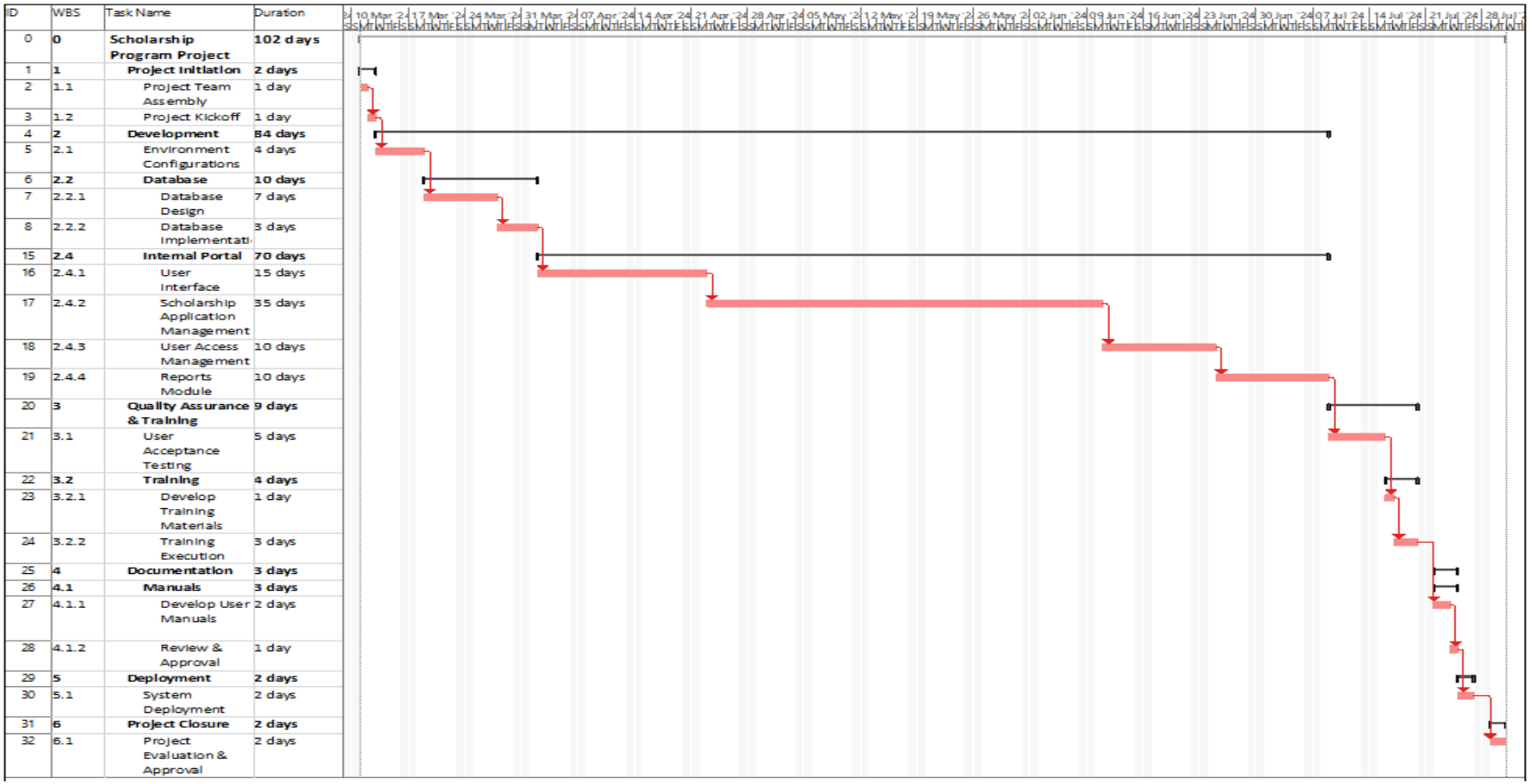


ID	WBS	Task Name	Duration	Start	Finish
0	**0**	**Scholarship Program Project**	**102 days**	**11/03/2024**	**30/07/2024**
1	**1**	**Project Initiation**	**2 days**	**11/03/2024**	**12/03/2024**
2	1.1	Project Team Assembly	1 day	11/03/2024	11/03/2024
3	1.2	Project Kickoff	1 day	12/03/2024	12/03/2024
4	**2**	**Development**	**84 days**	**13/03/2024**	**08/07/2024**
5	2.1	Environment Configurations	4 days	13/03/2024	18/03/2024
6	**2.2**	**Database**	**10 days**	**19/03/2024**	**01/04/2024**
7	2.2.1	Database Design	7 days	19/03/2024	27/03/2024
8	2.2.2	Database Implementati	3 days	28/03/2024	01/04/2024
9	**2.3**	**User Portal**	**60 days**	**02/04/2024**	**24/06/2024**
10	2.3.1	User Interface	15 days	02/04/2024	22/04/2024
11	2.3.2	User Creation and Authenticatio	5 days	23/04/2024	29/04/2024
12	2.3.3	Application Submission	27 days	30/04/2024	05/06/2024
13	2.3.4	Account Management	6 days	06/06/2024	13/06/2024
14	2.3.5	Progress Monitoring	7 days	14/06/2024	24/06/2024
15	**2.4**	**Internal Portal**	**70 days**	**02/04/2024**	**08/07/2024**
16	2.4.1	User Interface	15 days	02/04/2024	22/04/2024
17	2.4.2	Scholarship Application Management	35 days	23/04/2024	10/06/2024
18	2.4.3	User Access Management	10 days	11/06/2024	24/06/2024
19	2.4.4	Reports Module	10 days	25/06/2024	08/07/2024
20	**3**	**Quality Assurance & Training**	**9 days**	**09/07/2024**	**19/07/2024**
21	3.1	User Acceptance Testing	5 days	09/07/2024	15/07/2024
22	**3.2**	**Training**	**4 days**	**16/07/2024**	**19/07/2024**
23	3.2.1	Develop Training Materials	1 day	16/07/2024	16/07/2024
24	3.2.2	Training Execution	3 days	17/07/2024	19/07/2024
25	**4**	**Documentation**	**3 days**	**22/07/2024**	**24/07/2024**
26	**4.1**	**Manuals**	**3 days**	**22/07/2024**	**24/07/2024**
27	4.1.1	Develop User Manuals	2 days	22/07/2024	23/07/2024
28	4.1.2	Review & Approval	1 day	24/07/2024	24/07/2024
29	**5**	**Deployment**	**2 days**	**25/07/2024**	**26/07/2024**
30	5.1	System Deployment	2 days	25/07/2024	26/07/2024
31	**6**	**Project Closure**	**2 days**	**29/07/2024**	**30/07/2024**
32	6.1	Project Evaluation & Approval	2 days	29/07/2024	30/07/2024

Note. Scholarship Project Scheduled Activities. Own Work.

Figure 6 below highlights the critical path for the project, which is the longest sequence of tasks for the project. These tasks, if delayed, would result in a delay to the entire project.

Figure 6 Critical Path



ID	WBS	Task Name	Duration
0	0	**Scholarship Program Project**	**102 days**
1	1	**Project Initiation**	**2 days**
2	1.1	Project Team Assembly	1 day
3	1.2	Project Kickoff	1 day
4	2	**Development**	**84 days**
5	2.1	Environment Configurations	4 days
6	2.2	**Database**	**10 days**
7	2.2.1	Database Design	7 days
8	2.2.2	Database Implementati	3 days
15	2.4	**Internal Portal**	**70 days**
16	2.4.1	User Interface	15 days
17	2.4.2	Scholarship Application Management	35 days
18	2.4.3	User Access Management	10 days
19	2.4.4	Reports Module	10 days
20	3	**Quality Assurance & Training**	**9 days**
21	3.1	User Acceptance Testing	5 days
22	3.2	**Training**	**4 days**
23	3.2.1	Develop Training Materials	1 day
24	3.2.2	Training Execution	3 days
25	4	**Documentation**	**3 days**
26	4.1	**Manuals**	**3 days**
27	4.1.1	Develop User Manuals	2 days
28	4.1.2	Review & Approval	1 day
29	5	**Deployment**	**2 days**
30	5.1	System Deployment	2 days
31	6	**Project Closure**	**2 days**
32	6.1	Project Evaluation & Approval	2 days

Note. Project Critical Path. Own Work.

4.3.4 Project Schedule Control

The project schedule will undergo regular evaluation and adjustments based on new or updated information, including expected and actual start and completion dates. The responsibility for preparing schedule updates, hosting review sessions, and making schedule amendments lies with the Project Manager. The official communications plan will communicate schedule change requests and status updates.

If a project team member identifies the need for an alteration, the Project Manager and the rest of the team will convene to assess the proposed change. Active participation in regular schedule updates and review sessions is expected from the project team. The evaluation process will include identifying affected activities, assessing potential variances, and exploring alternative activities to understand the impact on scope, schedule, and resources. If the Project Manager determines that the proposed change exceeds predetermined boundary conditions, a formal schedule change request must be submitted and approved by lead stakeholders.

4.4 Cost Management Plan

The Cost Management Plan for the Belize Social Security Board's Scholarship Program aims to establish a comprehensive framework for managing project costs throughout its lifecycle. This plan outlines the methodologies, standards, and reporting formats that will govern the control of project expenses. The Project Manager will be pivotal in overseeing and reporting the project's costs, focusing on periodic status meetings to present and review cost performance using earned value metrics.

4.4.1 Cost Management Approach

The Cost Management Approach for the Belize Social Security Board's Scholarship Program is designed to ensure effective control and monitoring of project expenditures. In this tailored strategy, costs will be estimated and governed at the second level of the WBS, with dedicated Control Accounts (CA) overseeing expenditures. Employing Earned Value calculations at the CA level will be instrumental in assessing and managing the project's financial performance. Furthermore, Earned Value Analysis will be conducted at the work package level, where credit allocation will be based on the proportional completion of work relative to the total cost of each package.

Cost variances will be closely monitored, with a ±5% threshold triggering a "cautionary" status. Escalating variances beyond ±10% will shift the status to an "alert" stage, necessitating prompt corrective action to realign with the established performance indices. Corrective actions may involve project change orders, subject to rigorous review and approval by management before being incorporated into the project scope.
Regular reporting mechanisms will ensure transparency, with actual costs and variances communicated consistently to the Project Manager and project sponsors. Approval thresholds for cost changes have been set, requiring Project Manager approval for changes exceeding 5% and Board of Directors approval for changes exceeding 10%. The focus on cost management accuracy is primarily directed at the second level of the WBS, aligning with the unique requirements of the scholarship program.

4.4.2 Cost Performance Measurement

The project will employ Earned Value Management (EVM) as the primary method for measuring and controlling costs at both a detailed work level and an overall total cost of ownership. Earned value metrics will include

- Schedule Variance (SV)
- Cost Variance (CV)
- Schedule Performance Index (SPI)
- Cost Performance Index (CPI)

Should the SPI and CPI exhibit a variance between 0.1 and 0.3, the Project Manager must document and communicate the reasons for the exception. Variances exceeding 0.3 will trigger a comprehensive corrective plan, which will be presented to management to restore the project's performance to appropriate levels.

Chart 11 Project Budget

WBS Code	Element	Description	Assigned To	Budget
1	Project Initiation	Project related activities	Project Manager	$1,000
1.1	Project Team Assembly	Assemble Project Team	Project Manager	$300
1.2	Project Kickoff	Official Launch of the project	Project Manager	$700

WBS Code	Element	Description	Assigned To	Budget
2	Development	Development Activities for the Scholarship Program	Software Developers, Database Administrator	$15,000
2.1	Environment Configuration	Configuration of the development, testing and production development environments	System Administrator, Database Administrator, Software Developers	$1,500
2.2	Database	Development of database structure to house the raw data to be stored	Database Administrator	$2,000
2.2.1	Database Design	Design database structure based on requirements	Database Administrator	$1,500
2.2.2	Database Implementation	Deployment of Database for development	Database Administrator, System Administrator	$500
2.3	User Portal	Creation of the user portal	Software Developers	$5,000
2.3.1	User Interface	User interface/experience design	Software Developers	$700
2.3.2	User Creation and Authentication	Develop functionality for users to create accounts	Software Developers	$800

WBS Code	Element	Description	Assigned To	Budget
2.3.3	Application Submission Functionality	Develop the ability for users to submit all relevant information for their applications	Software Developers	$2,000
2.3.4	Account Management Functionality	Develop ability for users to manage their account credentials	Software Developers	$1,000
2.3.5	Progress Monitoring Functionality	Develop a functionality for users to track their progress in the scholarship cycle	Software Developers	$500
2.4	Internal Portal	Development of portal to be used by BSSB staff	Software Developers	6,500
2.4.1	User Interface	User interface/experience design	Software Developers	$800
2.4.2	Scholarship Application Management Functionality	Development of the functionality for BSSB users to manage the scholarship applications from review to disbursement processes	Software Developers	$4,000
2.4.3	User Access Management	Implement Access Management for Features	Software Developers	$1,000

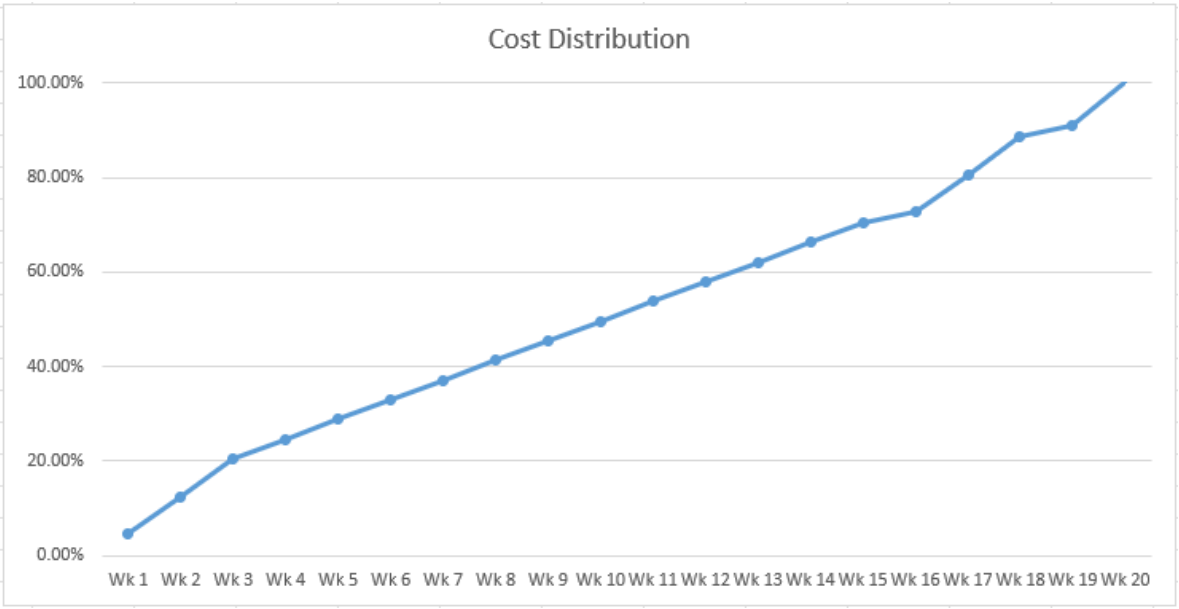
WBS Code	Element	Description	Assigned To	Budget
2.4.4	Reports Module	Reporting ability for BSSB users to generate required reporting requirements	Software Developers	$700
3	Quality Assurance & Training	Process to ensure the product meets requirements and the facilitating of user training	QA Analyst	$3,500
3.1	User Acceptance Testing	Process to determine the product performs functions as expected	QA Analyst	$2,000
3.2	Training	Training Activities	QA Analyst	$1,000
3.2.1	Develop Training Materials	Preparation of materials to train users	QA Analyst	$200
3.2.2	Training Execution	Carrying out training for BSSB Staff	QA Analyst	$800
4	Documentation	Creation of system documentation	Software Developers	$500
4.1	Manuals	Activities related to manual creation	Software Developers	$500
4.1.1	Develop User Manuals	Creation of user manuals	Software Developers	$500
4.1.2	Review & Approval	Review of manuals	QA Analyst, Project Manager	-

WBS Code	Element	Description	Assigned To	Budget
5	Deployment	Release of program to the public	Software Developers, System Administrator	$1,000
5.1	System Deployment	Process of releasing the scholarship program for public use	Software Developers, System Administrator	$1,000
6	Project Closure	Process of closing the project	Project Manager, Stakeholders	$1,000
6.1	Project Evaluation & Approval	Documentation review to close the project	Project Manager	$1,000
	Contingency & Management Reserve			$2,200
	Total Budget			$24,200

Note. Project Budget. Own Work.

Figure 7 below is a visual representation of the project's expected weekly cost distribution throughout the project life cycle.

Figure 7 Cost Distribution



Note. Expected Weekly Cost Distribution. Own Work.

4.4.3 Cost Control

The Cost Variance Response Process will be activated if the Control Threshold, defined as a CPI or SPI less than 0.7 or greater than 1.3, is reached. Upon detection, a Cost Variance Corrective Action Plan will be initiated, and the Project Manager will present potential corrective options to the Board of Directors within two business days. Once the Board approves the project cost changes, the plan will be fully implemented within three business days, outlining the steps required to bring the project within acceptable budget parameters.

The cost performance measurement strategy aligns with the unique requirements of the scholarship program, ensuring effective monitoring, timely corrective actions, and transparent reporting to key stakeholders.

The following table format is to be utilized when requesting changes. Project team members or stakeholders requesting a change can fill out this form for approval by the Project Manager. The approval criteria should align with the project's objectives, budget constraints, and overall impact on the project.

Chart 12 Cost Control Change Request Form

Cost Control Change Request Form	
Project Name:	[Enter Project Name]
Requester:	[Name of Requester]
Date:	[Date of Request]
Change Description:	[Detailed description of the change]
Rationale for Change:	[Explain the reason for the change]
Impact on Project:	[Assessment of how the change will affect the project]
Proposed Implementation:	[Suggested approach for implementing the change]
Resources Required:	[Specify any additional resources needed]
Cost Estimate:	[Provide an estimated cost for the change]

Cost Control Change Request Form	
Approval Authority:	[Specify who has the authority to approve or deny the change]
Approval Criteria:	[Clearly outline the criteria for approving the change, e.g., alignment with project goals, budget impact, etc.]
Approval	
Approver:	[Approver Name]
Decision:	[Approved/Denied]
Date:	[Date of Decision]

Note. Cost Control Change Request Form. Own Work.

4.5 Quality Management Plan

The Quality Management Plan is a pivotal document to ensure the delivery of a high-quality product that aligns with contract requirements and fulfills the organization's needs. This plan establishes a guide for the project's quality assurance processes, encompassing identification, planning, implementation, and execution of quality requirements. This document defines the project organization, procedures, roles, and responsibilities related to quality control and assurance activities. By adhering to the specified guidelines, the project aims to enhance collaboration among stakeholders and consistently meet the expectations for quality. The Project Manager plays a central role in leveraging the plan for assessing, measuring, monitoring, and improving project activities.

4.5.1 Quality Management Approach

This project will employ a comprehensive quality management approach. The quality standards, metrics, and continuous improvement strategies will be integrated into the project to guarantee the delivery of a high-quality scholarship program for the Belize Social Security Board. Quality standards for the project will be aligned with the organization's defined standards for software development.

The project manager and relevant stakeholders will define quality metrics to monitor the standards throughout the scholarship program's life cycle. Open channels for quality improvement suggestions will be established, allowing any project team member to contribute. Each recommendation will be reviewed thoroughly to assess its impact on the project budget and existing processes. If accepted, the project manager will update all documentation to incorporate them.

Similarly, the approach will cover processes and final deliverables, focusing on defining, assessing, and enhancing quality throughout the project. The project manager and key stakeholders will identify and document all relevant quality standards.

4.5.2 Quality Standards

Quality Process

To maintain high standards in developing and implementing the BSSB's Scholarship Program, the Project Manager and Quality Assurance Analyst will define process quality standards rooted in software development best practices. These standards will encompass user interface design, coding practices, system security, and thorough

testing methodologies. The PM will communicate these requirements to the development team, ensuring consistent adherence, and any deviations will trigger corrective actions. The process quality activities will be regularly assessed and communicated to relevant stakeholders.

Quality Product

The project manager and quality assurance analyst will oversee the product quality standards for the scholarship program and correspond with established software development norms. The focus will be on user experience, functional accuracy, scalability, security compliance, and comprehensive documentation. The PM and QA Analyst will ensure that the product meets design specifications, maintains efficient system response times, and handles user loads effectively. Additionally, the PM and QA Analyst will assess any identified product-specific quality activities during development. Approved changes to product quality standards will be documented, communicated to stakeholders, and incorporated into the Project Management Plan through the change control process.

4.5.3 Quality Assurance

The Belize Social Security Board's Scholarship Program's quality assurance approach centers on ensuring the effectiveness and compliance of software development processes. Led by the principal consultant and project manager, regular assessments will be conducted throughout the project to verify the correct implementation and execution of critical processes. In particular, emphasis will be placed on inspecting software architecture and coding practices, ensuring alignment with established standards and best practices.

The project team will actively engage in daily quality management, weekly process audits, monitoring process performance metrics, and assessing overall process effectiveness against project standards. Immediate corrective actions will be taken for any identified areas of improvement under the guidance of the principal consultant.

Bi-annual project management reviews with an external auditor will be scheduled to provide an independent evaluation of quality management practices and adherence to project management processes. Results from these reviews will be utilized to continuously improve the processes, ensuring that any enhancements are thoroughly documented and communicated to all stakeholders.

4.5.4 Quality Control

The quality control approach for the BSSB's Scholarship Program revolves around systematically identifying and correcting any discrepancies encountered during the development and implementation of the scholarship user portal and internal portal. This process is crucial for monitoring and documenting the results of quality management activities, ensuring the integrity and completeness of project outputs while aligning with customer expectations.

Continuous monitoring will be conducted throughout the project, employing checklists and inspection forms to document findings and meticulously identify any instances of non-conformities. The quality control metrics outlined below will be primary indicators to assess performance and validate that the scholarship program outputs fulfill their intended purposes.

Chart 13 Quality Control Metrics

Process Action	Acceptable Process Standard	Assessment Interval
Functional Adequacy	● Features and functionalities meet the specified requirements outlined in the project scope. ● User acceptance testing confirms that the implemented features align with user expectations.	Ongoing throughout development
Data Accuracy	● Data validation procedures are in place to ensure accurate and reliable data handling. ● Regular checks are conducted to verify the integrity of data transactions and storage.	Regular intervals during development
User Experience	● Navigation is intuitive, providing an easy and efficient user journey.	Continuous throughout development
Security Compliance	● Encryption protocols and secure data transmission methods are implemented. ● Regular security audits are conducted to identify and address potential vulnerabilities.	Regular intervals
Adherence to Coding Standards	● Code reviews confirm compliance with established coding standards. ● Consistent use of best practices to enhance code readability and maintainability.	Weekly Intervals
Performance Testing	● System responsiveness meets predefined benchmarks under various usage scenarios.	Ongoing throughout development

Process Action	Acceptable Process Standard	Assessment Interval
	● Load testing validates the system's ability to handle expected user traffic volumes.	
Documentation Completeness	● Comprehensive documentation covers all aspects of the project, including design, development, and user guides. ● User-friendly documentation facilitates easy understanding and reference for stakeholders.	Monthly and after development

Note. Quality Control Metrics. Own Work.

The chart below represents the format to be developed and utilized by the project team in quality control and will be kept as supporting documentation for the project's approval.

Chart 14 Quality Control Log

Deliverable	Date	Item Measured	Expected Result	Actual Result	Passed (Y/N)	Recommendation	Date Resolv
User Experience	05/06/2024	Intuitiveness	UX is intuitive and easy to understand	UX was intuitive and easily understood	Y	None	

***Note*. Quality Control Log. Own Work.**

4.6 Resource Management Plan

The resource management plan provides comprehensive guidance on categorizing, allocating, and managing project resources. The plan outlines the management of both human and physical resources comprising of the roles and responsibilities of staff, organizational charts, staff management plans, and materials needed.

4.6.1 Human Resources

4.6.1.1 Roles and Responsibilities

Clear delineation of roles and responsibilities is crucial for successfully executing the project. Each team member needs a comprehensive understanding of their roles and responsibilities to contribute to their respective project tasks effectively. The chart below defines the roles and responsibilities of the project team members for this scholarship initiative.

Chart 15 Roles and Responsibilities

Role	Responsibility
Project Manager	● Overall project planning, execution, and monitoring ● Resource allocation and management ● Communication facilitation among team members ● Risk identification and mitigation ● Schedule development and management ● Stakeholder coordination and reporting ● Approve change requests within his/her authority ● Escalate scope and change issues

Role	Responsibility
System Administrator	● Maintenance and optimization of IT infrastructure ● User account management and system security ● Troubleshooting and issue resolution ● System backups and recovery ● Collaboration with other IT roles for seamless system functioning
Database Administrator	● Database design, implementation, and maintenance. ● Data security and access control ● Performance monitoring and optimization ● Backup and recovery planning ● Database troubleshooting and issue resolution ● Collaboration with software developers for database integration
Software Developers	● Application design, coding, testing, and debugging. ● Collaboration with other team members for system integration ● Adherence to coding standards and best practices ● Continuous learning and adaptation to emerging technologies ● Documentation of code and processes ● Participation in team meetings and reporting progress to the project manager
Quality Assurance Analyst	● Development and execution of test plans ● Identification and documentation of software defects ● Collaboration with developers to resolve issues ● Verification of software functionality and performance ● Adherence to quality standards and testing protocols ● Reporting on software quality metrics ● Preparation and execution of training materials
ICTS Manager	● Overall management of ICT infrastructure and services ● Strategic planning for technology adoption and enhancement ● Budgeting and resource allocation for ICT projects ● Collaboration with other departments to align ICT with organizational goals ● Vendor management and contract negotiations
Social Security Board	● Approve or reject requests ● Accept deliverables

Note. Team Roles and Responsibilities. Own Work.

4.6.1.2 Project Organization Charts

The following RACI chart illustrates the correlation between tasks in the scholarship project and the team members involved. Any proposed alterations to project responsibilities must undergo scrutiny and approval by the project manager. As modifications are implemented, the relevant project documents will be updated and redistributed accordingly per the change control process guidelines. Chart 15 delineates the RACI distribution for the project.

Chart 16 RACI Chart

Activity	**Project Manager**	**System Administrator**	**Database Administrator**	**Software Developers**	**QA Analyst**	**ICTS Manager**	**Social Security Board**
Project Team Assembly	R	A	I	C	I	C	C
Project Kickoff	R	A	I	C	I	C	C
Environment Configurations	R	A	R	I	C	I	C
Database Design	R	I	R	A	C	I	C
Database Implementation	R	I	A	C	C	I	C
User Interface	R	A	I	C	R	I	C
User Creation and Authentication	R	A	I	C	R	I	C
Application Submission	R	A	I	C	R	I	C
Account Management	R	A	I	C	R	I	C

Activity	Project Manager	System Administrator	Database Administrator	Software Developers	QA Analyst	ICTS Manager	Social Security Board
Progress Monitoring	R	A	I	C	R	I	C
Scholarship Application Management	R	A	I	C	R	I	C
User Access Management	R	A	I	C	R	I	C
Reports Module	R	A	I	C	R	I	C
User Acceptance Testing	R	A	I	C	R	I	C
Develop Training Materials	R	A	I	C	R	I	C
Training Execution	R	A	I	C	R	I	C
Develop User Manuals	R	A	I	C	R	I	C
Review & Approval	R	A	I	C	R	I	A
System Deployment	R	A	I	C	R	I	C
Project Evaluation & Approval	R	A	I	C	R	A	I

Note. Responsibility Assignment Matrix. Own Work.

Legend:

R – Responsible for completing the work

A - Accountable for ensuring task completion/sign off

C – Consulted before any decisions are made

I – Informed of when an action/decision has been made

4.6.1.3 Staff Acquisition

The project staff will exclusively consist of internal resources. The internal project team, forming the project's core, will be responsible for the software's development, implementation, and management. No external consultants or subcontractors will be involved in this process.

4.6.1.4 Training

Formal training will not be required as internal staff will be equipped with expertise through ongoing discussions on customer requirements and expectations. The selection of the internal team members is based on their demonstrated competency to fulfill all responsibilities within their designated scope of duties in software development.

4.6.1.5 Performance Reviews

The Project Manager within the Belize Social Security Board will conduct thorough reviews of the scholarship project's overall performance throughout its life cycle. At the project's initiation, the Project Manager will discuss with the project team to communicate expectations for the upcoming work. While the project manager oversees the management and evaluation of the performance of each team member, ensuring the practical completion of assigned software development tasks, the Project Manager will be responsible for evaluating the performance of the entire project team. The Project Manager will hold

weekly meetings with the project team to provide constructive feedback on individual and project performance.

4.6.1.6 Staff Management

A robust staff management strategy is in place to adeptly handle potential changes in team composition. Should a team member decide to leave or encounter performance challenges, the project has established a contingency plan centered on key principles.

A well-structured framework ensures that identified backup resources are well-acquainted with project responsibilities, facilitating transitions in the event of a departure. Transparent communication forms the backbone of this strategy, fostering an environment where concerns, expectations, and potential changes are openly discussed. Regular team meetings and one-on-one discussions contribute to maintaining clarity regarding roles and project expectations. Collaborative decision-making involving project managers, human resources, and affected team members ensures that changes are approached collectively, encouraging consensus-building and open dialogue.

Efficient documentation and knowledge transfer mechanisms are integral components of the strategy. Thoroughly documented roles, responsibilities, and project-related information facilitate a smooth transition, complemented by exit interviews to capture valuable insights for continuous improvement.

4.6.2 Physical Resources

Alongside the human resources engaged in developing the scholarship project, various physical resources and equipment such as servers, networking equipment, and backup storage will be used to ensure the project's effective execution

Chart 17 Physical Resources

Item	Description	Cost
Web Servers	High-performance servers for hosting the portals	$700
Networking Equipment	Routers, switches, cables for network setup	$100
Backup Storage	External hard drive for data backup and recovery	$100
Miscellaneous	Other miscellaneous items	$100
Total	**Total cost for physical resources**	**$1,000**

Note. Physical resources needed for the infrastructure. Own Work.

4.7 Communications Management Plan

The Communications Management Plan guides the distribution of information to pertinent stakeholders throughout the scholarship project's lifecycle. It outlines the procedures for collecting information from project team members and the frequency and nature of information dissemination. It designates a team member responsible for ensuring the accuracy of released information. Additionally, the plan details the communication

formats, distribution processes, and conditions for sharing information. The primary individual overseeing this plan is the Project Manager.

4.7.1 Communication Management Approach

The Project Manager plays a proactive role in fostering effective communication, be it written or verbal, throughout the scholarship project. The Communications Matrix will outline all communication requirements, serving as the standard for what information is shared, who communicates it, when it is disseminated, and to whom. The PM manages proposed and approved changes to the communications management plan, ensuring that any modifications are promptly documented, revised, and communicated to the project team and relevant stakeholders. This guarantees that everyone stays informed about any alterations to the project.

The Communication Management Plan is designed to identify, collect, distribute, store, retrieve, and manage project information for the project team and stakeholders. Leveraging inputs such as the Stakeholder Matrix, this plan encompasses various aspects, including identifying stakeholder communication requirements, specifying information collection sources and responsibilities, determining communication distribution channels, and scheduling project team meetings.

4.7.2 Roles and responsibilities

Chart 18 defines the roles and responsibilities of those involved in the Communications Management process.

Chart 18 Communication Roles and Responsibilities

Role	Responsibilities
Project Manager	● Develop and maintain the Communication Management Plan. ● Define communication requirements and standards for the project team. ● Oversee the implementation of the Communications Matrix. ● Manage changes to the communication plan and disseminate revisions to the team and stakeholders.
System Admin	● Collaborate with the Project Manager to ensure effective communication infrastructure. ● Implement communication tools and technologies as per the plan.
Database Admin	● Facilitate communication related to database design and implementation.
Software Developers	● Communicate progress, challenges, and solutions during development. ● Collaborate with the Project Manager to align communication with project objectives.
Quality Assurance	● Communicate testing results, issues, and recommendations to the project team. ● Contribute to the development of communication standards related to quality assurance.

Role	Responsibilities
ICTS Manager	● Oversee ICTS infrastructure for effective project communication. ● Collaborate with the Project Manager to address ICTS related communication challenges.
BSSB Stakeholders	● Provide input on communication requirements and expectations for the project. ● Stay informed about project progress and changes through effective communication channels.

Note. Communications Management Plan roles and responsibilities. Own Work.

4.7.3 Communications Methods and Technologies

The Communication Methods and Technologies for the project will be collaboratively determined by the organization's existing standards and policies. In the Agile framework adopted for the scholarship project, regular daily standup meetings, backlog grooming sessions, sprint reviews, and other agile ceremonies will serve as the primary modes of communication, promoting real-time collaboration among team members.

Mobile communication channels like phone calls and messaging applications like WhatsApp will facilitate quick and informal exchanges. Additionally, electronic communication through email will be employed for written reports or documentation needs. To enhance communication and information accessibility, Microsoft Teams will be utilized as the medium for virtual meetings and calls. This platform will enable seamless updates,

document sharing, and project-related discussions, fostering efficient collaboration among project stakeholders and team members.

4.7.4 Communications Matrix

The specifics of formal project communications are outlined in the project's communication matrix, as elaborated in Chart 18.

Chart 19 Communications Matrix

Communication Method	Frequency	Goal	Owner	Audience
Daily Standup Meetings	Daily (Monday to Friday)	Provide brief updates, discuss progress, and address impediments	Project Manager	Entire Project Team
Backlog Grooming Sessions	Weekly	Refine and prioritize items in the backlog	Product Owner, Scrum Master, Development Team	Entire Project Team
Sprint Planning Meetings	Bi-weekly	Plan and prioritize tasks for the upcoming sprint	Product Owner, Scrum Master, Development Team	Entire Project Team

Communication Method	Frequency	Goal	Owner	Audience
Sprint Review Meetings	Bi-weekly	Review and demonstrate completed work from the sprint	Development Team, Product Owner, Scrum Master	Entire Project Team, Stakeholders
Sprint Retrospective Meetings	Bi-weekly	Reflect on the previous sprint and identify areas for improvement	Scrum Master, Development Team	Entire Project Team
Ad-hoc Discussions	As needed	Address urgent issues, seek clarification, and discuss critical matters	Project Manager, Team Members	Relevant Team Members
Email Communication	As needed	Share formal updates, documentation, and important information	Project Manager, Team Members	Relevant Team Members, Stakeholders

Communication Method	Frequency	Goal	Owner	Audience
Collaboration Tools (e.g., Teams/Slack)	Ongoing	Facilitate real-time communication, document sharing, and collaboration	Project Manager, Team Members	Entire Project Team, Stakeholders

Note. Communications Matrix. Own Work.

4.8 Risk Management Plan

The Risk Management Plan for the Belize Social Security Board's Scholarship Project is designed to guide identifying, analyzing, and mitigating risks throughout the project's life cycle. This plan aims to identify, assess systematically, and plan responses for potential risks associated with the scholarship program.

The plan integrates inputs from the project charter and previously developed management plans. In alignment with the agile nature of the scholarship project, the plan leverages collaborative tools and techniques, including expert judgment, root cause analysis, and regular team meetings. The role of the Project Manager is pivotal, overseeing the entire risk management process and ensuring the effectiveness of risk mitigation strategies. The objectives of this plan encompass risk identification, thorough analysis, continuous monitoring, and the development of proactive mitigation strategies.

4.8.1 Risk Management Approach

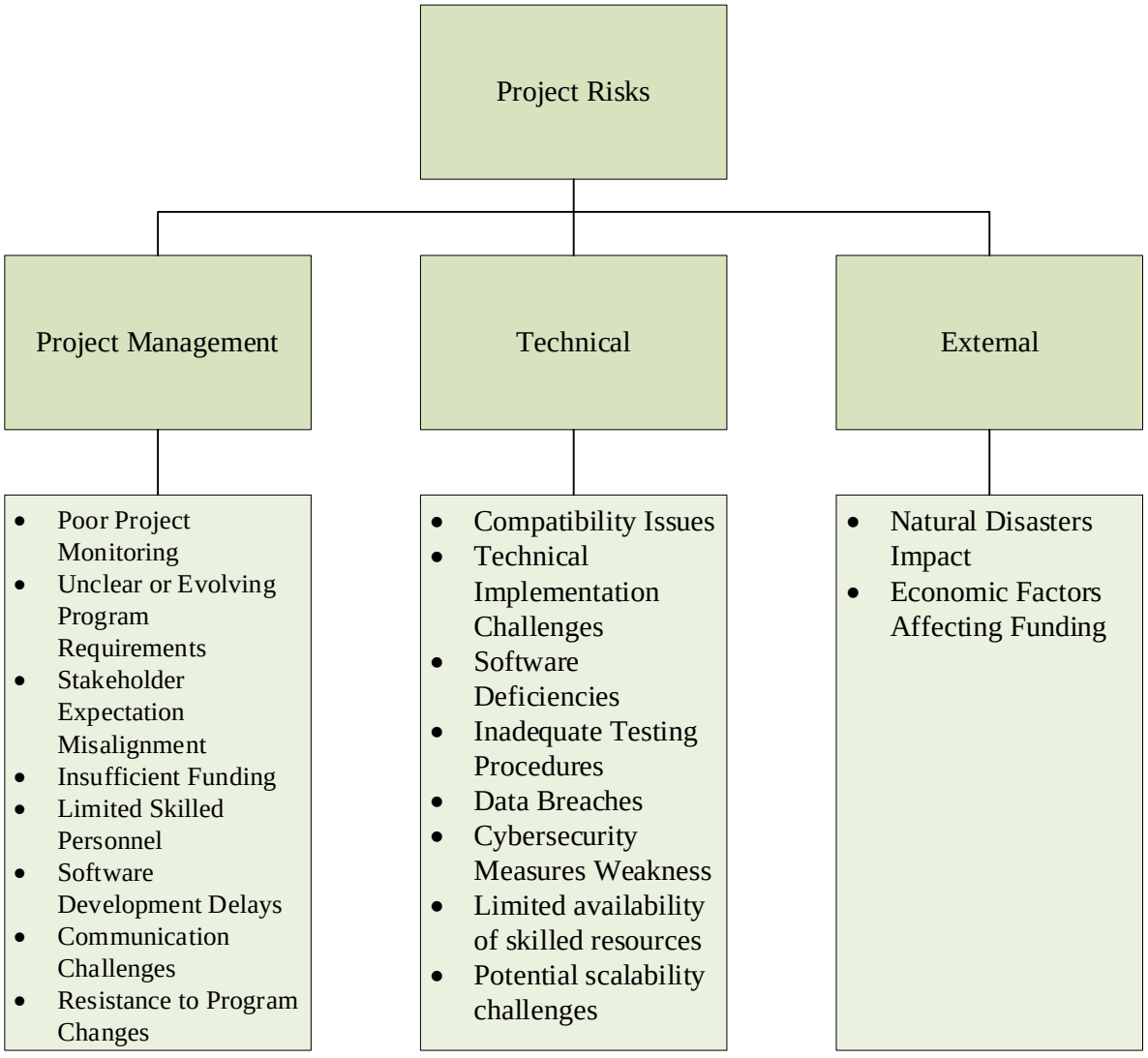
The Risk Management Approach adopted for the Belize Social Security Board's Scholarship Project follows a systematic process encompassing risk identification, analysis, and response planning. The approach includes vital components such as Plan Risk Management, Identify Risks, Perform Qualitative Risk Analysis, and Plan Risk Responses.

Risk identification plays a crucial role in project formulation and evaluation. Identified individual project risks are meticulously recorded in a Risk Register, with a comprehensive Risk Breakdown Structure (RBS) employed to categorize these risks effectively. This approach ensures that potential risks are identified early in the project, allowing for proactive mitigation to minimize their impact.

4.8.2 Risk Identification

At the project's initiation, preliminary risks are examined within the project charter stage. Subsequently, a comprehensive risk register will be created. During the risk identification phase, the Project Manager will review the risk register, making adjustments to incorporate or eliminate risks as the project evolves. The primary risk categories for this scholarship project include project management, technical, and external. The PM will spearhead creating and managing the risk register, ensuring a proactive approach to risk mitigation. The significant risk categories and some examples for this scholarship project are outlined in Figure 8 below.

Figure 8 Project Risk Breakdown Structure



Note. Risk Breakdown Structure. Own Work.

4.8.3 Probability and Impact Scales and Matrix

A probability-impact scale and matrix will be used during the qualitative risk analysis to assess the potential consequences and likelihood of identified risks. Each risk will be assigned a probability and impact factor, forming the basis for developing a

response plan. Whether a risk manifests positively or detrimentally, a tailored strategy will be devised to address its influence on the project. Probability and impact levels will be evaluated using a five-level scale from very low to very high, as presented in Chart 20.

Chart 20 Probability and Impact Scale

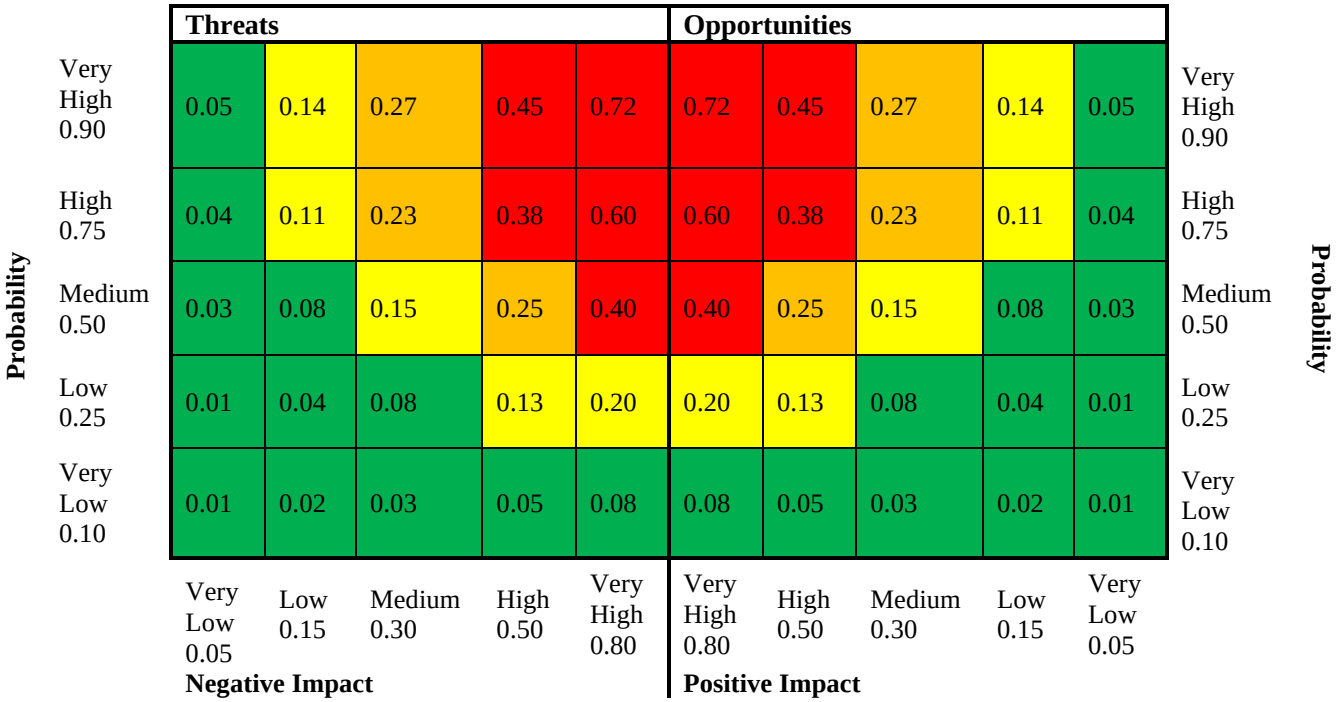
Scale	Probability	Impact		
		Cost	Time	Quality
Very High	>70%	>40%	>20%	Very significant impact on overall functionality
High	50 to <70%	>20% to 40%	>10 to 20%	Significant impact on overall functionality
Medium	30 to <50%	>10 to 20%	>5 to 10%	Some impact on critical functions
Low	10 to <30%	5 to 10%	3 to 5%	Minor impact on overall functionality
Very Low	<10%	<5%	<3%	Minor impact on secondary functions

Note. Probability and Impact Scale. Own work.

The Probability and Impact Matrix is color-coded, representing the urgency of risk response planning necessary.

- **Red (very high risk/very significant):** A very high risk with a score of more than 0.41 is critical and top priority.
- **Orange (high risk/significant):** A score of 0.25 to 0.27 is deemed high risk. These risks must be addressed but are not prioritized as very high risks.
- **Yellow (medium):** A score of 0.11 to 0.20 is deemed medium risk.
- **Green (low/ very low):** A score of 0.05 to 0.08 is deemed low to very low risk in impact, probability or both.

Chart 21 Probability and Impact Matrix



Note. Probability and Impact Matrix. Own work.

4.8.4 Risk Register

Chart 22 outlines the identified risks in order of importance and their potential impact. The applicable risk categories for the project are: Project Management, Technical, and External.

Chart 22 Risk Register

Risk ID	Risk	Cause	Consequence	Probability	Impact	PxI	Trigger	Owner	Response Strategy
1	Poor Project Monitoring	Inadequate monitoring mechanisms	Increased likelihood of missed deadlines and project deviations.	0.50	0.50	0.25	Lack of regular Project status updates.	Project Manager	Implement a robust project monitoring system to track progress, milestones, and potential issues. Establish regular project status meetings to ensure effective monitoring and communication.
2	Unclear or Evolving Program Requirements	Lack of clarity in project requirements	Scope creep, leading to project delays and potential dissatisfaction.	0.75	0.30	0.23	Frequent changes in project requirements.	Project Manager	Conduct thorough requirements gathering and analysis in collaboration with stakeholders. Maintain open communication channels to

Risk ID	Risk	Cause	Consequence	Probability	Impact	PxI	Trigger	Owner	Response Strategy
									address evolving requirements promptly. Clearly document and validate requirements before implementation.
3	Stakeholder Expectation Misalignment	Miscommunication or changing expectations among stakeholders	Confusion, dissatisfaction, or unmet expectations	0.50	0.50	0.25	Stakeholders expressing conflicting needs	Project Manager	Regularly engage with stakeholders to understand their expectations and concerns. Establish clear communication channels and conduct periodic reviews to ensure alignment. Implement change management

Risk ID	Risk	Cause	Consequence	Probability	Impact	PxI	Trigger	Owner	Response Strategy
									processes for transparent communication of project changes.
4	Insufficient Funding	Funding constraints or budget limitations	Delays, incomplete deliverables, or posible project termination.	0.25	0.50	0.13	Budget reviews indicating shortfalls	Project Manager	Diversify funding sources, explore grants, and actively seek additional funding opportunities. Regularly review budget allocations and adjust project plans accordingly to mitigate financial risks.
5	Limited Skilled Personnel	Shortage of skilled team members or staff turnover	Delays, increased workload on existing staff, or compromised quality	0.03	0.80	0.40	Departure of key members	ICTS Manager	Cross-train team members to enhance skill sets. Engage in proactive

Risk ID	Risk	Cause	Consequence	Probability	Impact	PxI	Trigger	Owner	Response Strategy
									recruitment efforts to address skill gaps. Collaborate with educational institutions to foster talent development.
6	Software Development Delays	Technical challenges, scope changes, or resource constraints	Project timeline shifts, affecting following phases	0.75	0.80	0.60	Continuous delays in code delivery	Software Developers	Implement Agile development methodologies for iterative progress and continuous feedback. Regularly review project timelines and adjust plans based on real-time feedback.
7	Communication Challenges	Ineffective communication channels	Misunderstandings, lack of coordination, and potential conflict	0.25	0.30	0.08	Increased frequency of miscommunication incidents	Project Manager	Implement clear communication protocols and tools. Conduct regular team

Risk ID	Risk	Cause	Consequence	Probability	Impact	PxI	Trigger	Owner	Response Strategy
									meetings and stakeholder briefings to enhance communication and collaboration. Address language and cultural differences proactively.
8	Resistance to Program Changes	Stakeholder resistance or lack of buy-in for program changes	Project delays, reduced productivity, or failed implementation	0.25	0.50	0.13	Increased resistance from end users	Project Manager	Conduct comprehensive change management activities, including stakeholder engagement, communication, and training. Address concerns and promote the

Risk ID	Risk	Cause	Consequence	Probability	Impact	PxI	Trigger	Owner	Response Strategy
									benefits of proposed changes to gain stakeholder support.
9	Compatibility Issues	Incompatibility challenges with existing systems	Integration challenges, data loss, or system failures	0.10	0.30	0.03	Failed compatibility tests	Software Developer	Conduct thorough compatibility testing and engage in early integration testing. Establish clear API standards and ensure compatibility with third-party systems. Regularly communicate and coordinate with external vendors for seamless integration.

Risk ID	Risk	Cause	Consequence	Probability	Impact	PxI	Trigger	Owner	Response Strategy
10	Technical Implementation Challenges	Complex technical requirements or lack of expertise	Project delays, cost overruns, or compromised functionality	0.50	0.50	0.25	Continuous technical setbacks	Software Developer	Engage in detailed technical planning and feasibility studies. Allocate sufficient time and resources for technical implementation. Seek expert consultation for challenging technical aspects.
11	Software Deficiencies	Coding errors, oversight, or insufficient testing	System malfunctions, bugs, or security vulnerabilities	0.25	0.50	0.13	Frequent reports of software issues	QA Analyst	Conduct thorough testing at various development stages. Implement continuous improvement processes to address software

Risk ID	Risk	Cause	Consequence	Probability	Impact	PxI	Trigger	Owner	Response Strategy
									deficiencies promptly. Establish user feedback mechanisms for ongoing software refinement.
12	Inadequate Testing Procedures	Insufficient testing resources, time constraints, or oversight	Undetected defects, poor software quality, or system failures	0.25	0.50	0.13	Frequent test failures or software issues	QA Analyst	Implement comprehensive testing strategies, including unit testing, integration testing, and user acceptance testing. Establish clear testing protocols and ensure testing is integrated into the development lifecycle. Regularly review and update

Risk ID	Risk	Cause	Consequence	Probability	Impact	PxI	Trigger	Owner	Response Strategy
									testing procedures.
13	Data Breaches	Weak cybersecurity measures or external attacks	Data loss, compromised privacy, and legal consequences	0.25	0.30	0.08	Security incidents or suspicious activity	System Adminis	Implement robust cybersecurity measures, including encryption, access controls, and regular security audits. Train team members on cybersecurity best practices. Regularly update and patch software to address vulnerabilities.
14	Cybersecurity Measures Weakness	Outdated security protocols, lack of awareness, or insufficient resources	Vulnerability to cyber threats and potential data breaches	0.25	0.50	0.13	Increasing cyber threats	System Admin	Strengthen cybersecurity protocols and update them regularly.

Risk ID	Risk	Cause	Consequence	Probability	Impact	PxI	Trigger	Owner	Response Strategy
									Conduct cybersecurity training for team members to enhance awareness. Collaborate with cybersecurity experts for vulnerability assessments.
15	Limited Availability of Resources	Resource allocation issues or external dependencies	Potential project delays, compromised system performance, or increased costs due to scarcity	0.10	0.50	0.05	Unexpected increase in resource demands	Project Manager	Ensure backup vendors are available as well as proactively manage other physical resources.
16	Potential Scalability Challenges	Inadequate infrastructure planning or unforeseen user growth	Performance issues, system crashes, or increased costs	0.25	0.30	0.08	Increase in user volume	Software Developer	Invest in scalable infrastructure, conduct scalability assessments, and implement monitoring

Risk ID	Risk	Cause	Consequence	Probability	Impact	PxI	Trigger	Owner	Response Strategy
									systems. Regularly review and adjust infrastructure based on user volume projections.
17	Natural Disasters Impact	Unpredictable natural events like hurricanes or earthquakes	Project disruption or data loss	0.25	0.50	0.13	Weather warnings	Project Manager	Develop disaster recovery and contingency plans. Regularly review and update plans based on regional risk assessments. Collaborate with local emergency services for disaster response coordination.
18	Economic Factors Affecting Funding	Economic downturns or changes in funding priorities	Budget cuts, resource constraints, or project cancellation	0.25	0.50	0.13	Economic indicators for financial challenges	Project Manager	Diversify funding sources, secure grants, and establish

Risk ID	Risk	Cause	Consequence	Probability	Impact	PxI	Trigger	Owner	Response Strategy
									financial contingency plans. Regularly monitor economic indicators and adjust funding strategies accordingly.

Note. Risk Register. Own Work.

4.8.5 Risk Monitoring

The project manager will oversee risks in the scholarship project and systematically evaluate project data, referencing it against the risk register and risk analysis summary. Risks carrying significant potential impact will receive heightened scrutiny, allowing for effective risk exposure limitation. Continuous monitoring of risks will be an ongoing and adaptive process, recognizing the possibility of unforeseen risks emerging during the project's lifecycle.

The risk register will be updated weekly, and crucial information will be disseminated to relevant team members during regular project status meetings. Furthermore, this information will be included in the monthly reports provided to the donor. In response to emerging situations, ad hoc meetings may be convened, with the PM exercising discretion in determining the implementation of risk responses. This meticulous approach ensures a proactive and responsive risk management strategy for the scholarship project.

4.8.6 Risk Strategy and Responses

The risk strategy delineates the approach to prevent, alleviate, or directly address risks, aiming to diminish their impact on the project. These strategies may take a proactive or reactive stance, including measures like contingent responses, expert judgment, or reinforcement. Under the guidance of the project manager, the project team will identify and contribute to implementing risk responses while also managing data collection and

storage. The overarching objective is to mitigate the impact of risks, ensuring the successful completion of the project within the designated time.

4.9 Procurement Management Plan

The Procurement Management Plan serves as a framework for effectively managing procurement activities throughout the lifecycle of the scholarship project, and it will be subject to updates as necessitated by project needs. Given the extensive background in software development within the BSSB, a detailed make-or-buy analysis is not required, as the project team is well-versed in distinguishing between in-house development and external procurement. This plan outlines the specific types of contracts to be employed, details the approval processes, and establishes decision criteria, ensuring a transparent and thoughtful procurement process aligned with the unique needs of the scholarship project.

4.9.1 Procurement Management Approach

In alignment with the specific requirements of the scholarship project, all procurements will be orchestrated by the Project Manager under the guidance of the ICTS Manager, ensuring oversight and supervision of all procurement activities. Collaborating closely with the project team, the PM will lead the identification of items essential for project implementation, facilitating a collective decision-making process on whether to build or procure these items. Vendor selection, purchasing, and contracting processes will follow, with the PM conducting a comprehensive review of the procurement list before its final submission to the ICTS Manager for execution. This approach emphasizes efficiency,

collaboration, and adherence to project goals, ensuring a seamless procurement process tailored to the unique needs of the scholarship project.

4.9.2 Roles and Responsibilities

The Project Manager will play a pivotal role, supported by oversight from the ICTS Manager. Their collaborative efforts will ensure streamlined procurement activities encompassing vendor selection, purchasing, and contracting processes. The roles and responsibilities outlined below delineate the specific contributions of each team member in facilitating a cohesive procurement strategy for the project.

Chart 23 Roles and Responsibilities

Role	**Responsibility**
Project Manager	- Oversee and manage all procurement activities for the scholarship project. - Collaborate with the project team to identify essential items for project implementation. - Facilitate collective decision-making on whether to build or procure identified items. - Lead the vendor selection, purchasing, and contracting processes. - Conduct a comprehensive review of the procurement list before final submission to the ICTS Manager for execution.

Role	Responsibility
ICTS Manager	- Provide oversight and guidance on procurement activities to ensure alignment with ICT strategies and organizational objectives. - Collaborate with the PM to review and approve the procurement list, ensuring it aligns with the project's technological and information management requirements. - Execute procurement activities as per the approved list provided by the PM, ensuring adherence to organizational policies and requirements.
Project Team Members	- Collaborate with the PM in identifying project-related items for procurement. - Provide insights and expertise on the feasibility of building or procuring specific items. - Collaborate with the PM in reviewing and refining the procurement list as part of the collective decision-making process.

Note. Procurement Roles and Responsibilities. Own Work.

4.9.3 Procurement Definition

Chart 24 defines the list of items and services determined to be required for project completion and success.

Chart 24 Procurement List

Item Num	Description	Quantity	Justification
1	Visual Studio License	2	Essential for software development and collaboration
2	Database Server	1	Required for storing and managing project data
3	Web Server	1	Needed for hosting the scholarship portal
4	Domain Name	1	Provides a unique and recognizable web address
5	Automated Testing Tool	1	Streamlines testing processes and enhances efficiency
6	Load Testing Tool	1	Ensures the system can handle expected user loads

Note. Procurement List. Own Work.

4.9.4 Procurement Guidelines

In acquiring essential resources for in-house software development, we will establish precise Terms of Reference (TOR) tailored to acquiring licenses and servers within the Project Team. After the meticulous selection, formal agreements will be formalized, aligning comprehensively with the TOR. Fixed-price contracts, well-suited for projects with clearly defined requirements and minimal anticipated changes, will be the cornerstone of our procurement strategy. By implementing TORs and structuring contracts meticulously, the project endeavors to set transparent expectations and efficiently manage the procurement of licenses and servers crucial for the success of the scholarship project.

4.9.5 Procurement Constraints

The procurement management plan tailored for our scholarship project considers specific constraints, even though all procurement activities are in-house. These constraints, integrated into our internal processes, will guide our team in executing procurement activities effectively. The constraints address vital aspects such as schedule, cost, scope, resources, and technology, ensuring alignment with our project's unique requirements:

Schedule:

Our internal project schedule is rigid, requiring all in-house procurement activities and administration to adhere strictly to the established project timeline.

Cost:

Although the project budget includes a contingency reserve, this reserve is reserved exclusively for approved changes in project scope. Procurement activities should be conducted within the allocated budget without utilizing the contingency reserve.

Resources:

Procurement activities must be managed with the BSSB's existing workforce. No additional personnel will be recruited or reassigned to support procurement activities within the project.

4.9.6 Procurement Change Control Process

The Procurement Change Control Process serves as a structured approach to handle modifications in the procurement plan while maintaining the project's integrity. Team members or stakeholders identify potential changes, and a formal Change Request is

submitted to initiate the process. This request outlines the proposed modification, including a detailed explanation, its impact on procurement activities, and the underlying rationale.

Key project stakeholders conduct a thorough review and assessment of the Change Request. This evaluation considers the implications of project timelines, budget, and overall objectives. Subsequently, an informed decision is made on whether to approve, reject, or defer the change. Approved changes are communicated promptly to all relevant team members and stakeholders, ensuring awareness of the adjustments and their implications. Once approved, the changes are integrated into the procurement plan and executed accordingly. Team members responsible for procurement activities adjust their approach based on the approved modifications.

4.10 Stakeholder Management Plan

The Stakeholder Management Plan is designed to serve as a framework for recognizing, categorizing, and strategically engaging with project stakeholders. In alignment with project goals, this plan goes beyond mere identification. It delves into evaluating each stakeholder's power, interest, and influence, facilitating a nuanced understanding of their roles throughout the project life cycle.

By proactively assessing the communication methods tailored to each stakeholder, the stakeholder management plan aims to establish robust engagement channels, ensuring that valuable input for project planning is gathered and cultivating increasing support as the project progresses. Recognizing that stakeholder dynamics can significantly impact project

outcomes, the plan seeks to minimize the potential challenges arising from competing priorities and enhance the availability of essential resources for project completion.

4.10.1 Stakeholder Identification

The stakeholder matrix in Chart 25 outlines the key stakeholders identified for the project.

Chart 25 Stakeholder Matrix

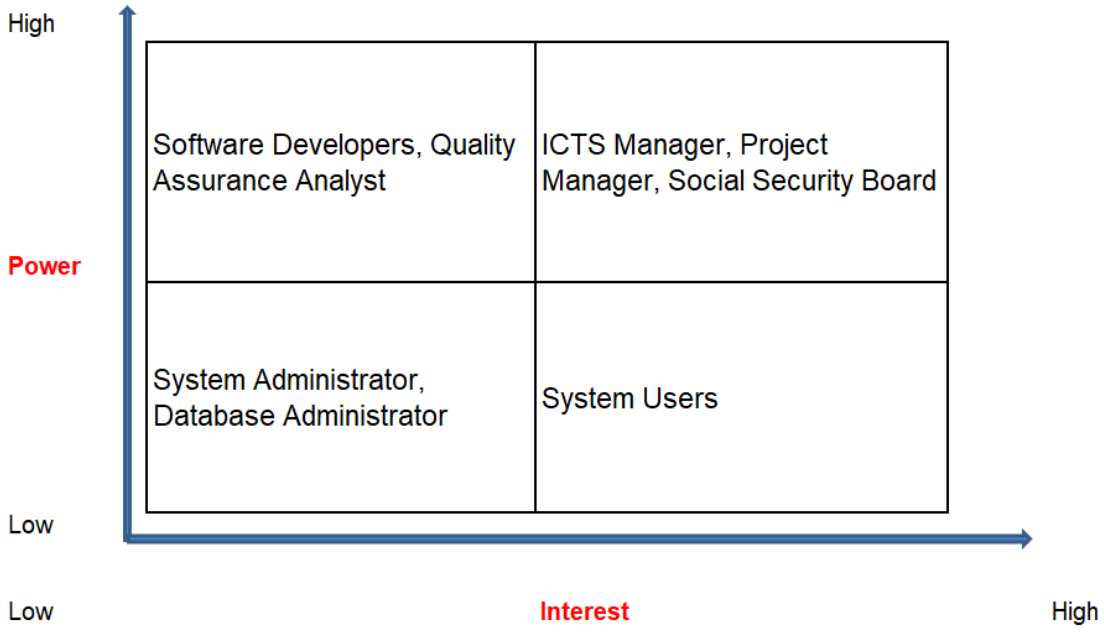
ID	Stakeholder	Functional Area	Main Expectation	Power	Interest
1	Project Manager	Project Management	Successful project delivery and timeline adherence	High	High
2	ICTS Manager	Information Technology	Seamless integration of technology solutions	High	High
3	Software Developers	Software Development	Successful project development and conducive work environment	High	Low
4	Database Administrator	Database Management	Optimal database performance and security	Low	Low
5	Quality Assurance Analyst	Quality Assurance	High-quality, error-free software applications	High	Low
6	Social Security Board	Project Oversight	Successful implementation aligned with policies	High	High
7	Applicants	System Users	Utilize the Scholarship Application	Low	High
8	System Administrator	Server Management	Optimal Server performance and security	Low	Low

Note. Stakeholders Matrix. Own Work.

4.10.2 Power & Interest Matrix

The Power/Interest Matrix is a vital tool for project management, providing a succinct visual representation of stakeholders' influence and interest levels in a project. By categorizing stakeholders based on their power to affect the project and their level of interest, the matrix helps prioritize communication and engagement strategies.

Figure 9 Stakeholder Power/Interest Matrix



Note. Power/Interest Matrix. Own Work.

4.10.3 Stakeholder Assessment Matrix

The Stakeholder Power/Interest Matrix was utilized to develop the Stakeholder Management Assessment Matrix. The goal is to evaluate the degree of stakeholder engagement to devise strategies to amplify their involvement and enhance overall project

support. The current level of engagement is denoted by "C," while the desired or targeted level is indicated by "D."

Chart 26 Stakeholder Assessment Matrix

ID	Stakeholder	Unaware	Resistant	Neutral	Supporting	Leading
1	Project Manager					CD
2	ICTS Manager					CD
3	Software Developers					CD
4	Database Administrator				CD	
5	Quality Assurance Analyst				CD	
6	Social Security Board				CD	
7	Applicants	C			D	
8	System Administrator				CD	

Note. Stakeholder Assessment Matrix. Own work.

4.10.4 Stakeholder Communication Matrix

The communication matrix outlines the information to be conveyed, including the communication method, frequency, and communication goals, as well as the sender and receiver of the information. This information plays a crucial role in guaranteeing the regular dissemination of project updates to all relevant stakeholders.

Chart 27 Stakeholder Communication Matrix

ID	Stakeholder	Method	Goal	Frequency	Owner
1	Project Manager	Emails, Workshops, Virtual Meetings	Enhance project support	Bi-weekly	Project Team
2	ICTS Manager	Emails, Workshops, Virtual Meetings	Maintain alignment and awareness	Bi-weekly	Project Manager & Project Team
3	Software Developers	Face-to-Face, Emails, Virtual Meetings	Ensure clear communication	Daily	Project Manager
4	Database Administrator	Face-to-Face, Emails, Virtual Meetings	Address technical considerations	Bi-weekly	Project Team
5	Quality Assurance Analyst	Face-to-Face, Emails, Virtual Meetings	Ensure quality standards are met	Weekly	Project Manager and Developers
6	Social Security Board	Virtual Meetings	Ensure alignment with objectives	Monthly	Project Manager
7	Applicants	Workshops	Validate user satisfaction	Monthly	ICTS Manager
8	System Administrator	Face-to-Face, Emails, Virtual Meetings	Resolve technical issues	As needed	Project Manager

Note. Communication Matrix. Own Work.

4.10.5 Communication Escalation Process

A communication escalation process will be initiated if an internal or external opportunity or threat falls beyond the authority or control of the project team or project manager. The project manager will assess the situation and identify the appropriate individual or department within the organization that should be informed about the event. Subsequently, the project manager will relay the pertinent details of the event to the designated person or department. It is essential to emphasize that upon communication of the event details, ownership and responsibility for addressing the event are transferred to the designated recipient within the organization.

4.11 Sustainable Development Plan

The sustainable development plan plays a pivotal role in establishing a foundation for the sustainability of the scholarship project. It outlines the methodology, delineates roles and responsibilities, and defines reporting practices to align with the organization's dedication to economic growth, environmental conservation, and social responsibility. This plan serves as a guide for the project team, facilitating informed decision-making, effective management, and the project's daily operations in a sustainable manner that considers environmental and social considerations.

4.11.1 Approach

The sustainability management plan will adopt strategies tailored to the nature of the project. Emphasis will be placed on efficient resource utilization and environmental responsibility throughout the project life cycle. This involves optimizing energy-efficient

technologies, incorporating sustainable coding practices, and minimizing waste in the development process. By implementing eco-conscious measures, such as adopting sustainable coding practices, the project aims to reduce its environmental footprint. The sustainability management approach will align with the principles of sustainable development, promoting responsible and resilient practices in the realm of software project implementation.

4.11.2 Roles and Responsibilities

Chart 28 Sustainability Roles and Responsibilities

Role	Responsibilities
Project Manager	- Oversight of sustainability goals and initiatives - Integration of sustainability practices into project planning - Monitoring and reporting on sustainability metrics - Collaborating with team members to ensure sustainability is a project priority
ICTS Manager	- Implementing sustainable technology practices - Managing energy-efficient ICT infrastructure - Collaborating with Project Manager to align technology strategies with sustainability goals
Software Developers	- Integrating sustainable coding practices - Optimizing code for energy efficiency - Reducing resource consumption in software development processes - Collaborating with the team to incorporate sustainable features into software solutions
QA Analyst	- Ensuring that software meets sustainability requirements - Testing and evaluating software for eco-friendly performance - Collaborating with developers to identify and rectify sustainability-related issues
Systems Administrator	- Implementing and managing sustainable practices in system infrastructure - Monitoring and optimizing energy usage - Ensuring that hardware and systems align with sustainability goals
Database Administrator	- Designing and managing databases with sustainability considerations - Optimizing data storage and retrieval for energy efficiency

	- Collaborating with developers to ensure sustainable data management practices

Note. Roles and Responsibilities for Sustainability. Own Work.

4.11.3 Budget

The project's financial plan for Sustainability Management encompasses provisions for creating sustainability documents and reports. Additionally, it should account for resources allocated to hosting meetings with stakeholders to facilitate discussions and collect feedback on response strategies.

Given that our project is an in-house software development initiative, it is noteworthy that integrating sustainability practices imposes no additional financial burden. Therefore, no supplementary budget is required as sustainability measures align seamlessly with the project's existing cost structure.

4.11.4 Key Performance Indicators

Chart 29 Key Performance Indicators

P5 Domain	Lens	Category	Element	Key Performance Indicator	Metric
People	Lifespan	Labor Practices and Decent Work	Staff Training	Training Completion Rate	100 % of staff trained
	Effectiveness	Labor Practices and Decent Work	Organizational Learning	Number of Incidents Reported	Less than 5% reported per quarter
	Lifespan	Ethical Behavior	Responsible Technology	Ethics Policy compliance Rate	99 % among employees

P5 Domain	Lens	Category	Element	Key Performance Indicator	Metric
	Fairness	Human Rights	Harassment and Discrimination	Human Rights Law Compliance	100 percent compliance to human rights law
Planet	Lifespan	Transport	Local Procurement	Percentage of Local Procurements	100% of procurements are local
	Lifespan	Transport	Digital Communication	Percentage of communication conducted digitally	90% of communication is conducted digitally
	Effectiveness	Energy	Energy Consumption	Energy Consumption Reduction	25% reduction
Prosperity	Lifespan	Market and Economic Stimulation	Indirect Benefits	Improved quality of life	Quality of life index
	Lifespan	Market and Economic Stimulation	Local Economic Impact	Contribution to Local Economy	Contribute growth and opportunities to local economy

Note. Sustainability Key Performance Indicators. Own work.

Chart 30 People Impacts

People Impacts	Initial Score	New Score	Change
Labor Practices and Decent Work	1.6	3.6	-2.0
Society and Customers	1.8	4.2	-2.4
Human Rights	2.4	4.2	-1.9
Ethical Behavior	1.3	4.3	-2.9
Overall People Score	4.1		

Note. P5 Impact Analysis (People Impacts). Own work.

Chart 31 Planet Impacts

Planet Impacts	**Initial Score**	**New Score**	**Change**
Transport	1.4	4.8	-3.3
Energy	1.8	4.2	-2.3
Land Air, and Water	1.9	4.2	-2.3
Consumption	2.6	4.0	-1.4
Overall Planet Score	4.3		

Note. P5 Impact Analysis (Planet Impacts). Own work.

Chart 32 Prosperity Impacts

Prosperity Impacts	**Initial Score**	**New Score**	**Change**
Project Feasibility	2.2	4.5	-2.3
Business Agility	2	4.333333	-2.33333
Local Economic Impact	2	3.8	-1.8
Overall Prosperity Score	4.2		

Note. P5 Impact Analysis (Prosperity Impacts). Own work.

5 CONCLUSIONS

This chapter encapsulates a brief overview of each individual management plan, outlining their unique purposes, supporting tools, and alignment with project methodologies. The breakdown of key plans specific to the scholarship project is described as follows:

1. Project Management Plan: This plan serves as the foundation for the scholarship project, providing a roadmap for successful execution. It incorporates the methodologies from the PMBOK Guide's sixth and seventh editions, offering a robust analytical research approach.
2. Integration Management Plan: As the initial element of the Project Management Plan, the Integration Management Plan initiates the project by capturing crucial background information, objectives, risks, and milestones. A well-defined project charter serves as a benchmark to organize key elements, setting the stage for seamless integration of project components.
3. Scope Management Plan defines and manages the software and hardware requirements. It outlines roles and responsibilities, ensuring clarity in deliverables, risks, and benefits. Sustainable practices are seamlessly integrated into the software development process.
4. Schedule Management Plan: This plan provides a detailed timeline for the implementation and rollout of project deliverables. It determines, examines, and ranks scheduling-related changes and incorporates a Milestone Chart, serving as a

Schedule Baseline. This iterative approach ensures a dynamic schedule aligned with the project's evolving needs.

5. Cost Management Plan: Focused on overseeing planned and actual costs, the Cost Management Plan guides the project by developing performance measures. It acts as a guide, allowing the project team to seek additional funding if required, ensuring financial responsibility throughout the project lifecycle.
6. Quality Management Plan: This plan embeds quality measures into the project's processes and final output. It outlines how quality will be achieved, defines quality assurance and control tasks, and establishes acceptable quality standards. The emphasis is on maintaining standards established by the BSSB, ensuring the project meets or exceeds requirements.
7. Resource Management Plan: This plan outlines staff roles and responsibilities, organizational charts, and staff management plans. It verifies that the right resources are hired with requisite skills, incorporates upskilling initiatives, and ensures seamless execution of team activities.
8. Communications Management Plan: The tool for disseminating information to stakeholders, this plan details information gathering, output rates, and types of information shared and assigns team members to guarantee accurate information distribution. A Communications Matrix was developed, encapsulating communication types, purposes, and delivery methods.
9. Risk Management Plan: This instrument identifies and accounts for project risks, analyzing and minimizing their impact. The identification, qualitative analysis, and

planning for project risks were conducted through tools such as root cause analysis, expert judgment, and collaborative meetings. The Risk Breakdown Structure outlines potential risks categorized into Project Management, Technical, and External domains.

10. Procurement Management Plan: The procurement process will involve acquiring licenses, servers, and other necessary software and hardware. A detailed list of procurements, including item descriptions, quantities, and justifications, has been prepared for effective planning. This plan defines and outlines the specifics for procuring goods and services.
11. Stakeholder Management Plan: Stakeholders, including the Project Manager, ICTS Manager, Software Developers, and Quality Assurance Analysts, have been identified and assessed. Stakeholder engagement strategies, communication approaches, and frequency have been defined in the Stakeholder Engagement Matrix. This plan documents and categorizes project stakeholders by identifying their power, interest, and influence.
12. Sustainable Development Plan: This plan outlines strategies to minimize environmental impact to promote sustainability in software development. While an in-house software development project typically incurs no additional budget for sustainability practices, the plan emphasizes incorporating eco-friendly measures within the project scope to minimize environmental impact.

6 RECOMMENDATIONS

These recommendations, meticulously tailored to the nature of software development and scholarship program management, aim to optimize project success by addressing critical aspects such as skill development, documentation standardization, team empowerment, resource allocation, and strategic planning. By embracing these insights, the BSSB project team can improve their project management capabilities and develop a more resilient and efficient framework for the dynamic challenges inherent in the organization's initiatives.

1. **Expand Project Management Skills:** To enhance project success in future initiatives, the BSSB project team should consider expanding their project management skills, particularly in software development. This broader skill set will contribute to a more comprehensive understanding of project requirements, risks, and stakeholder engagement, aligning with scholarship-focused software development projects' unique needs.
2. **Standardize Project Management Documentation:** It is recommended that the BSSB project team establish a set of standard project management documentation templates before the initiation of each software development cycle. Tailoring these documents to the specific characteristics of the scholarship project will create a consistent and efficient framework for planning, execution, and monitoring, facilitating smoother project lifecycles.

3. **Select and Empower Skilled Project Manager:** The BSSB should ensure the training and preparation of the project manager with the appropriate skills for the pertinent projects. This individual and their team should lead all project planning-related activities, ensuring a proactive and strategic approach to project management throughout its lifecycle.
4. **Dedicated Resource for Documentation:** BSSB may benefit from assigning a dedicated individual responsible for producing and maintaining project management documents. This resource could specialize in creating a comprehensive guide or framework for all project management tools, ensuring consistency and accuracy across different project phases.
5. **Invest in Risk Analysis Tools:** Allocating additional resources to acquire advanced tools for qualitative and quantitative risk analyses is recommended. This investment will empower the project team to conduct more thorough risk assessments, identify potential challenges early, and implement effective risk mitigation strategies, ultimately enhancing the project's resilience to uncertainties.
6. **Utilize Planning Processes and Templates:** BSSB's project management team is advised to leverage planning processes and templates to produce the Project Management Plan. Establishing a standardized methodology based on proven templates will serve as a foundation for executing future projects of a similar nature, fostering consistency and efficiency across the organization's project portfolio.

7 VALIDATION OF THE FGP IN THE FIELD OF REGENERATIVE AND SUSTAINABLE DEVELOPMENT

Developing the Project Management Plan (PMP) for the Belize Social Security Board's (BSSB) scholarship program demonstrates a profound relationship with and significant impact on regenerative and sustainable development. By analyzing the effects of the project's execution, deliverables, maintenance, and operation of the final product, we can highlight its implications for Sustainable Development Goals (SDGs) and the broader objectives of sustainable and regenerative development.

The project strongly aligns with multiple SDGs, notably Goal 4, Quality Education. Implementing the scholarship management program ensures equitable access to education for Belizean youths, contributing directly to the attainment of this SDG. Additionally, the project indirectly supports various other goals, such as Goal 1, No Poverty, by empowering students from vulnerable communities with educational opportunities.

Promoting gender equality is a core principle of sustainable development, encapsulated in Goal 5, Gender Equality. The scholarship program furthers this objective by ensuring that educational opportunities are equally accessible to all genders, dismantling educational gender disparities.

Goal 8, Decent Work and Economic Growth, is also fostered through education. By empowering students with education, the project enhances their employability and skills, ultimately contributing to economic growth, a critical aspect of this SDG.

While the project's primary focus is education, it indirectly contributes to other SDGs. Education, as advocated by the scholarship program, has implications for Goal 3, Good

Health and Well-being, as it equips individuals with knowledge that can lead to healthier lives. Additionally, it contributes to Goal 10, Reduced Inequalities, and this project serves as a catalyst for this goal by addressing disparities in access to quality education.

The project leverages modern project management methodologies to enhance the efficiency and accessibility of education. By optimizing resource allocation and streamlining processes, it ensures that the scholarship program operates in a cost-effective and environmentally sustainable manner. This approach aligns with the principles of regenerative development, which emphasize efficiency and resource optimization.

As part of the project's sustainability aspect, a P5 impact analysis will be developed. This analysis will help assess the project's impact on various dimensions, including People, Planet, Prosperity, Peace, and Partnership, in alignment with the Sustainable Development Goals (SDGs). It will provide a comprehensive understanding of how the project's execution, deliverables, and operational aspects affect regenerative and sustainable development goals and principles.

However, it is essential to acknowledge that while the project significantly aligns with regenerative and sustainable development, there may be challenges. For instance, producing technological solutions for educational access could increase electronic waste, potentially harming the environment. Additionally, the execution of the project may require specific financial resources that could be allocated to other critical social initiatives, potentially affecting Goal 1, No Poverty, if appropriately managed.

In conclusion, developing the Project Management Plan for the scholarship management program at the BSSB stands as a testament to its commitment to regenerative

and sustainable development. By facilitating equitable access to education, optimizing resource usage, and fostering community engagement, the project contributes significantly to Belize's progress toward achieving SDGs related to quality education, poverty reduction, gender equality, and economic growth while preserving and regenerating the environment.

BIBLIOGRAPHY

Association for Project Management. (n.d). *What is project management?*. https://www.apm.org.uk/resources/what-is-project-management/

Aston, Ben. (2023, June 20). What is the Project Life Cycle: The 5 Main Phases Explained. https:// thedigitalprojectmanager.com/projects/pm-methodology/project-management-life-cycle/

Cherry, Kendra. (2022, November 8). *What is Self Determination Theory?*. https://www.verywellmind.com/what-is-self-determination-theory-2795387

Coursera. (2023, July 27). *12 Project Management Methodologies: Your Guide*. https://www.coursera.org/articles/project-management-methodologies-your-guide

Doughnut Economics Action Lab. (n.d.). *About Doughnut Economics.* https://doughnuteconomics.org/about-doughnut-economics

Galante, Meredith. (2022, March 27). *What is Project Management? Definitions, Examples & More*. https://www.forbes.com/advisor/business/what-is-project-management/

Hassan, Muhammad. (2023, September 7). *Research Methods - Types, Examples and Guide*. https://researchmethod.net/researchmethods/

Iqbal, M. (2023, February 2). *Predictive, Adaptive and Hybrid Approaches*. https://mudassiriqbal.net/predictive-adaptive-and-hybrid-approaches/

Iqbal, M. (2022, August 1). *Using agile in project management*. Scrum.org. https://www.scrum.org/resources/blog/using-agile-project-management

Management Study Guide. (n.d). *Kotter's 8 Step Model of Change.* https://www.managementstudyguide.com/kotters-8-step-model-of-change.htm

Mcleod, Saul. (2023, July 26). *Maslow's Hierarchy of Needs.* https://www.simplypsychology.org/maslow.html

Miller, D. (2023, January 19). *Project Life Cycle: What Is It, Its Phases & Why It's Important*. ProProfs Project Blog. https://www.proprofsproject.com/blog/project-life-cycle-and-its-phases/

Project Management Institue. (2021). *The Standard for Project Management and a Guide to the Project Management Body of Knowledge (PMBOK Guide) (7th Ed.).* Project Management Institute, Incorporated.

Project Management Institute . (2017). *A Guide to the Project Management Body of Knowledge (PMBOK Guide) (6th Ed.).* Project Management Institute, Incorprated.

Ray, S. (2021, May 26). *What Is Scope Creep and How Can I Avoid It?* https://www.projectmanager.com/blog/5-ways-to-avoid-scope-creep

Social Security Board. (2021). *Social Security Board*. https://www.socialsecurity.org.bz/our-history/

Satter, Sanjida. (2023). *Analytical Research: What is it, Importance + Examples.* https:// ://www.questionpro.com/blog/analytical-research/

Statistical Institute of Belize. (2021). *Statistical Institute of Belize*. https://sib.org.bz/statistics/other-statistics/education-statistics/

Streefkerk, Raimo. (2018, June 20). Primary vs. Secondary Sources | Difference & Examples. https://www.scribbr.com/working-with-sources/primary-and-secondary-sources/

APPENDICES

Appendix 1: FGP Charter

CHARTER OF THE PROPOSED

FINAL GRADUATION PROJECT (FGP)

1. Student name

Allen Alexander Guerra

2. FGP name

A Project Management Plan for the Development of a Scholarship Management Program in Belize

3. Application Area (Sector or activity)

Education and Social Services

4. Student signature

5. Name of the Graduation Seminar facilitator

Roger Valverde

6. Signature of the facilitator

7. Date of charter approval

8. Project start and finish date

August 29th 2023	NA

9. Research question

What elements are required to develop a project management plan to guide the development and implementation of a comprehensive software solution for the Belize Social Security Board's scholarship program?

10. Research hypothesis

Is it possible to develop a meticulously designed project management plan to significantly enhance the efficiency, collaboration, and overall success of developing the comprehensive software solution for the Belize Social Security Board's scholarship program?

11. General objective

To develop a project management plan to develop the Belize Social Security Board’s scholarship program.

12. Specific objectives

1. To develop an Integration Management Plan to outline how project elements will be coordinated, integrated and managed to ensure alignment with overall project objectives.
2. To develop the Scope Management Plan to define how project scope will be defined, documented, verified, and controlled throughout the project to prevent scope creep and ensure focus.
3. To develop the Schedule Management Plan which will define project scheduling, including activities, milestones, dependencies and resources to prevent setbacks and manage efficient time allocations.
4. To create a Cost Management Plan that will outline how project costs will be estimated, budgeted, managed and controlled to achieve financial efficiency and prevent cost overruns.
5. To develop a Quality Management Plan which will define quality standards, metrics, processes, and procedures to ensure project deliverables meet quality expectations.
6. To create a Resource Management Plan to outline how project roles and responsibilities will be managed and met to facilitate efficient project execution.
7. To create a Communication Management Plan which defines communication channels and processes to maintain effective communication and collaboration among stakeholders.

8. To develop a Risk Management Plan which facilitates the identification of project risks as well as defining mitigation and response strategies for managing project risks to ensure proactive risk management and project success.
9. To create a Procurement Management Plan to define procurement processes, vendor criteria, and contract management processes to ensure efficient acquisitions and support the project's goals.
10. To design a Stakeholder Management Plan that identifies stakeholders, determines their interests and expectations, and defines strategies for stakeholder engagement and communication to foster positive and effective relationships ensuring project success.
11. To formulate a Sustainable Development Management Plan to assess and enhance the project's contribution to regenerative and sustainable development, aligning project activities with environmental and social sustainability objectives.

13. FGP purpose or justification

The development of a Project Management Plan (PMP) for the Belize Social Security Board's scholarship program is essential to address the pressing need for enhanced

educational access and efficient scholarship management. Currently, manual processes hamper the program's effectiveness, leading to delays, data inconsistencies, and limited scalability. By creating a PMP tailored to the specific needs of this project, the aim is to transform the way the scholarship program is managed, ensuring equitable educational opportunities for all students.

The PMP seeks to address the challenges faced by streamlining processes, enhancing transparency, and optimizing resource allocation. By implementing this PMP, a substantial reduction of about 25% in data inconsistencies and reporting discrepancies is anticipated. Moreover, the implementation of a meticulously designed PMP for the program is anticipated to result in a potential increase of up to 15% in the number of students benefiting from the scholarship program.

14. Work Breakdown Structure (WBS). In table form, describing the main deliverable as well as secondary, products or services to be created by the FGP.

FGP

1. Graduation Seminar
    - 1.1 FGP Deliverables
        - 1.1.1 Charter
        - 1.1.2 Preliminary bibliographical research
        - 1.1.3 WBS
        - 1.1.4 Chapter II. Theoretical framework
        - 1.1.5 Chapter III. Methodological framework
        - 1.1.6 Chapter I. Introduction
        - 1.1.7 Chapter VII. Project validation in sustainable and regenerative development
        - 1.1.8 Schedule
        - 1.1.9 Executive summary
        - 1.1.10 Abstract
    - 1.2 Graduation Seminar Approval
2. Tutoring Process
    - 2.1 Tutor

2.1.1 Tutor Assignment

2.1.2 Communication

2.2 Adjustments of previous chapters (if needed)

2.3 Chapter IV. Development (Results)

2.3.1 Integration Management Plan

2.3.2 Scope Management Plan

2.3.3 Schedule Management Plan

2.3.4 Cost Management Plan

2.3.5 Quality Management Plan

2.3.6 Resource Management Plan

2.3.7 Communications Management Plan

2.3.8 Risk Management Plan

2.3.9 Procurement Management Plan

2.3.10 Stakeholder Management Plan

2.3.11 Sustainable Development Plan

2.4 Conclusions

2.5 Recommendation

3. Reading by Reviewers

3.1 Reviewers assignment request

3.1.1 Assignment of two reviewers

3.1.2 Communication

3.1.3 FGP submission to reviewers

3.2 Reviewers work

3.2.1 Reviewer 1

3.2.1.1 FGP reading

3.2.1.2 Reader 1 report

3.2.2 Reviewer 2

3.2.2.1 FGP reading

3.2.2.2 Reader 2 report

4. Adjustments

4.1 Report for reviewers

4.2 FGP update

4.3 Second review by reviewers

5. Presentation to Board of Examiners

5.1 Final review by board

5.2 FGP grade report

15. FGP budget

1. Printing and Binding: $95 USD
2. Travel: $75 USD
3. Shipping and Postage: $300 USD
4. Philologist: $100 USD
5. Miscellaneous: $30 USD

Total Budget: $600 USD

16. FGP planning and development assumptions

1. Necessary information and documentation will be readily available to the student.
2. The student will dedicate at least 15 hours per week to the FGP development.
3. The project facilitators will provide timely feedback to all questions/concerns of the student.
4. Project members are committed to embracing agile principles.
5. Key stakeholders will be available and actively collaborate throughout the development of the FGP.

17. FGP constraints

1. The project must be completed within four months.
2. Human resources for the development of the FGP is limited to one project manager.
3. Integrating existing systems and processes within the BSSB may present challenges and limitations.
4. The scope of the PMP must align with the project's objectives and be within the available resources and time.

18. FGP development risks

1. Unforeseen extreme weather conditions may affect the student's ability to produce deliverables for the FGP on time.
2. Scope creep may create significant deviations from the project objectives, affecting the quality and feasibility of the FGP.
3. Unexpected health issues the student faces may affect the quality and timely completion of the deliverables.
4. Any challenges faced with accessing necessary information for the development of the FGP may hinder the time and quality of deliverables.

19. FGP main milestones

Milestones are related to deliverables on the second level (deliverables) and third level (control accounts) of the WBS of section 14 of this Charter. At the same time,

the deliverables are related to the specific objectives (in the case of the FGP, please include the times for the tutorship reviews and the readership).

Deliverable	**Finish estimated date**
1.1 FGP Deliverables	Oct 16, 2023
1.1.1 Charter	Oct 16, 2023
1.1.2 Preliminary Bibliographical research	Oct 16, 2023
1.1.3 WBS	Sep 11, 2023
1.1.4 Chapter II. Theoretical framework	Sep 25, 2023
1.1.5 Chapter III. Methodological framework	Oct 2, 2023
1.1.6 Chapter I. Introduction	Oct 9, 2023
1.1.7 Chapter VII. Project Validation	Oct 9, 2023
1.1.8 Schedule	Oct 9, 2023
1.1.9 Executive Summary	Oct 16, 2023
1.1.10 Abstract	Oct 16, 2023
1.2 Graduation Seminar Approval	Oct 23, 2023
2.1 Tutor	Oct 26, 2023
2.1.1 Tutor Assignment	Oct 24, 2023
2.1.2 Communication	Oct 26, 2023

2.2 Adjustments of previous chapters (if needed)	Nov 2, 2023
2.3 Chapter IV. Development (Results)	Jan 16, 2024
2.3.1 Integration Management Plan	Jan 16, 2024
2.3.2 Scope Management Plan	Jan 16, 2024
2.3.3 Schedule Management Plan	Jan 16, 2024
2.3.4 Cost Management Plan	Jan 16, 2024
2.3.5 Quality Management Plan	Jan 16, 2024
2.3.6 Resource Management Plan	Jan 16, 2024
2.3.7 Communication Management Plan	Jan 16, 2024
2.3.8 Risk Management Plan	Jan 16, 2024
2.3.9 Procurement Management Plan	Jan 16, 2024
2.3.10 Stakeholder Management Plan	Jan 16, 2024
2.3.11 Sustainable Development Plan	Jan 16, 2024
2.4 Conclusion	Jan 23, 2024
2.5 Recommendation	Jan 30, 2024
3.1 Reviewers assignment request	Feb 6, 2024
3.1.1 Assignment of two reviewers	Feb 1, 2024
3.1.2 Communication	Feb 5, 2024
3.1.3 FGP submission to reviewers	Feb 6, 2024
3.2 Reviewers work	Feb 20, 2024
3.2.1 Reviewer 1	Feb 20, 2024

3.2.1.1 FGP reading	Feb 19, 2024
3.2.1.2 Reader 1 report	Feb 20, 2024
3.2.2 Reviewer 2	Feb 20, 2024
3.2.2.1 FGP reading	Feb 19, 2024
3.2.2.2 Reader 2 report	Feb 20, 2024
4.1 Report for reviewers	Mar 4, 2024
4.2 FGP update	Mar 5, 2024
4.3 Second review by reviewers	Mar 19, 2024
5.1 Final review by board	Mar 21, 2024
5.2 FGP grade report	Mar 26, 2024

20. Theoretical framework

20.1 Estate of the “matter”

The FGP underscores the importance of the Belize Social Security Board's scholarship program in addressing educational access challenges. Data from the Statistical Institute of Belize (SIB) highlights issues with secondary school

enrollment and youth poverty rates. The program is essential in providing educational opportunities to Belizeans. Thus, to address the challenges of the manual process used by the program, a Project Management Plan with hybrid methodologies and sustainability principles will be implemented, aiming for reduced data inconsistencies, enhanced transparency, and long-term societal impact.

20.2 Basic conceptual framework

Project Management Plan, Hybrid Methodologies, Agile Methodologies, Sustainable & Regenerative Development

21. Methodological framework

Objective	**Name of deliverable**	**Information sources**	**Research method**	**Tools**	**Restrictions**
To develop an Integration Management	Integration Manag	Primary: Interviews/Meetings with	Analytical, Qualitative, Quantitative	Expert judgement, Data	The timeframe for the

Plan to outline how project elements will be coordinated, integrated and managed to ensure alignment with overall project objectives.	ement Plan	the stakeholders (students, school administrators, Communications Department), Research data, Company legislation and regulation Secondary: PMBOK Guide, Journals, Internet		gathering, Interpersonal and Team Skills, Meetings	developm ent of the integratio n managem ent plan is not flexible.

		resources, Lecture notes			
To develop the Scope Management Plan to define how project scope will be defined, documented, verified, and controlled throughout the project to prevent scope creep and ensure focus.	Scope Management Plan	Primary: Interviews/Meetings with the stakeholders (Communications Department, ICTS Team), Research data, Lessons learned	Analytical	Expert Judgement, Data gathering, Data analysis, Interpersonal & team skills, Work Breakdown Structure Template, Work Breakdown Structure dictionary template,	The project scope must be adhered to.

		from similar projects Secondary: PMBOK Guide, Journals, Internet resource, Lecture notes		Meetings	
To develop the Schedule Management Plan which will define project scheduling, including	Schedule Management Plan	Primary: Interviews/Meetings with stakeholders (ICTS	Analytical, Qualitative, Quantitative	Expert Judgment, Meetings, Data analysis, Precedence diagramming method,	Strict deadlines must be adhered to.

activities, milestones, dependencies and resources to prevent setbacks and manage efficient time allocations.		Team and HR), Lessons learned from similar projects, Research data Secondary: PMBOK Guide, Journals, Internet resource, Lecture notes		leads and lags, PMIS (MS Project), Schedule network analysis, critical path method, Resource optimization, Estimating	

To create a Cost Management Plan that will outline how project costs will be estimated, budgeted, managed and controlled to achieve financial efficiency and prevent cost overruns. To develop a Quality Management Plan which will define	Cost Management Plan	Primary: Interviews/Meetings with stakeholders (ICTS Team and HR), Lessons learned from similar projects, Company legislation and regulatio	Analytical, Quantitative	Expert Judgement, Data Analysis, Decision-making, Estimating, Cost aggregation, meetings	The allocated budget must be adhered to.

quality standards, metrics, processes, and procedures to ensure project deliverables meet quality expectations.		n Seconda ry: PMBOK Guide, Journals, Lecture notes			
To develop a Quality Management Plan which will define quality standards, metrics, processes, and procedures to ensure project	Quality Manag ement Plan	Primary: Intervie ws/Meet ings with the stakehol ders (Commu nication s Departm	Qualitative, Quantitative	Expert judgement, data gathering, Data analysis, decision making, test and inspection, meetings	All quality standards must be met.

deliverables meet quality expectations.		ent, ITCS Team), Company standards Secondary: PMBOK Guide, Journals, Internet resource, Lecture notes			
To create a Resource Management Plan to	Resource Management	Primary: Interviews/Meetings	Quantitative	Expert judgement, Data representati	Limited staff available due to

outline how project roles and responsibilities will be managed and met to facilitate efficient project execution.	Plan	with the stakeholders (Communications Department, ICTS Department), Lessons learned from similar projects Secondary: PMBOK Guide,Jo		on, Estimating, Data analysis, meetings, Decision making, Negotiation	other ongoing projects.

		urnals, Internet resource, Lecture notes			
To create a Communication Management Plan which defines communication channels and processes to maintain effective communication and collaboration among stakeholders.	Communication Management Plan	Primary: Interviews/Meetings with the stakeholders (Communications Department, ICTS Department), Lessons	Qualitative, Quantitative	Expert judgement, Communication requirement analysis, Communication technology, Communication model, Communication methods, Interperson	Dependent on third party Internet service providers.

		learned from similar projects Secondary: PMBOK Guide,Journals, Internet resources		al and team skills, Meetings	
To develop a Risk Management Plan which facilitates the identificatio	Risk Management Plan	Primary: Interviews/Meetings with the stakeholders (Commu	Analytical, Qualitative, Quantitative	Expert judgement, Data gathering, Data analysis, Data representati	Limited human resources may lead to incomplete risk identificat

n of project risks as well as defining mitigation and response strategies for managing project risks to ensure proactive risk managemen t and project success.		nication s Departm ent, ICTS Departm ent), Lessons learned from similar projects Seconda ry: PMBOK Guide Journals, Internet resource , Lecture		on, Interperson al and team skills, Risk categorizati on, Strategies, Meetings	ion.

		notes			
To create a Procurement Management Plan to define procurement processes, vendor criteria, and contract management processes to ensure efficient acquisitions and support the project's goals.	Procurement Management Plan	Primary: Interviews/Meetings with the stakeholders (Communications Department, ICTS Department), Company legislati	Analytical	Expert judgement, Data gathering, Source selection analysis, Meetings	Project budget must be adhered to.

		on and regulation, Lessons learned from similar projects Secondary: PMBOK Guide, Journals, Internet resource, Lecture notes			
To design a Stakeholder Management	Stakeholder Manag	Primary: Interviews/Meet	Analytical, Qualitative	Expert Judgement, Data	Differing stakeholder

Plan that identifies stakeholders, determines their interests and expectations, and defines strategies for stakeholder engagement and communication to foster positive and effective relationships ensuring project success.	ement Plan	ings with the stakeholders (Communications Department, HR Department), Lessons learned from similar projects Secondary: PMBOK Guide,		gathering, Data analysis, Data representation, Communication skills, Interpersonal and team skills, Meetings	interests and expectations.

		Journals, Internet resources			
To formulate a Sustainable Development Management Plan to assess and enhance the project's contribution to regenerative and sustainable development, aligning project activities with environmental	Sustainable Development Management Plan	Primary: Sustainable Project Management: The GPM Reference Guide Secondary: Journals, Internet resource, Lecture	Analytical, Qualitative		Sustainability efforts must remain within the allotted budget.

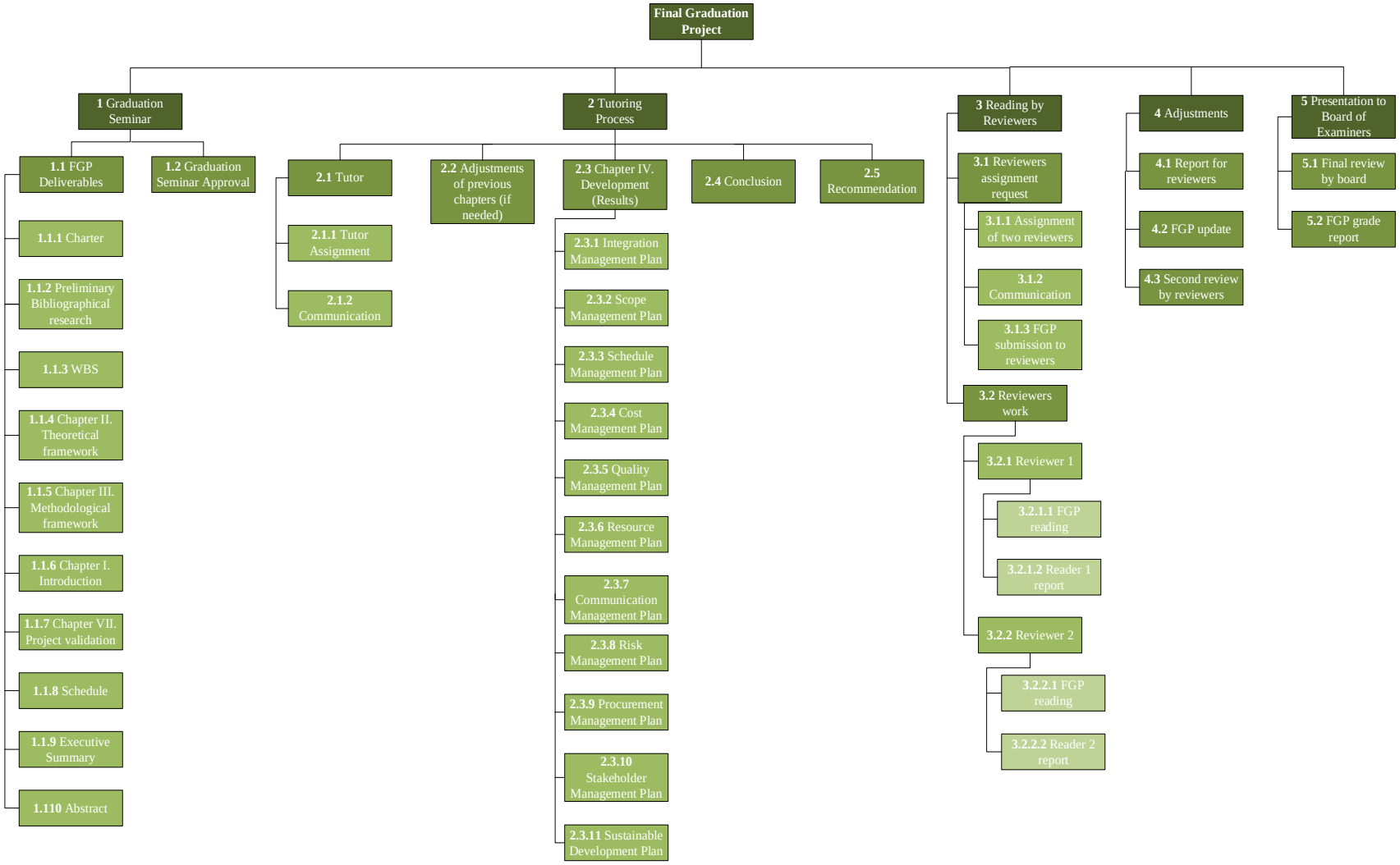
and social sustainability objectives.		notes			

22. Validation of the work in the field of the regenerative and sustainable development.

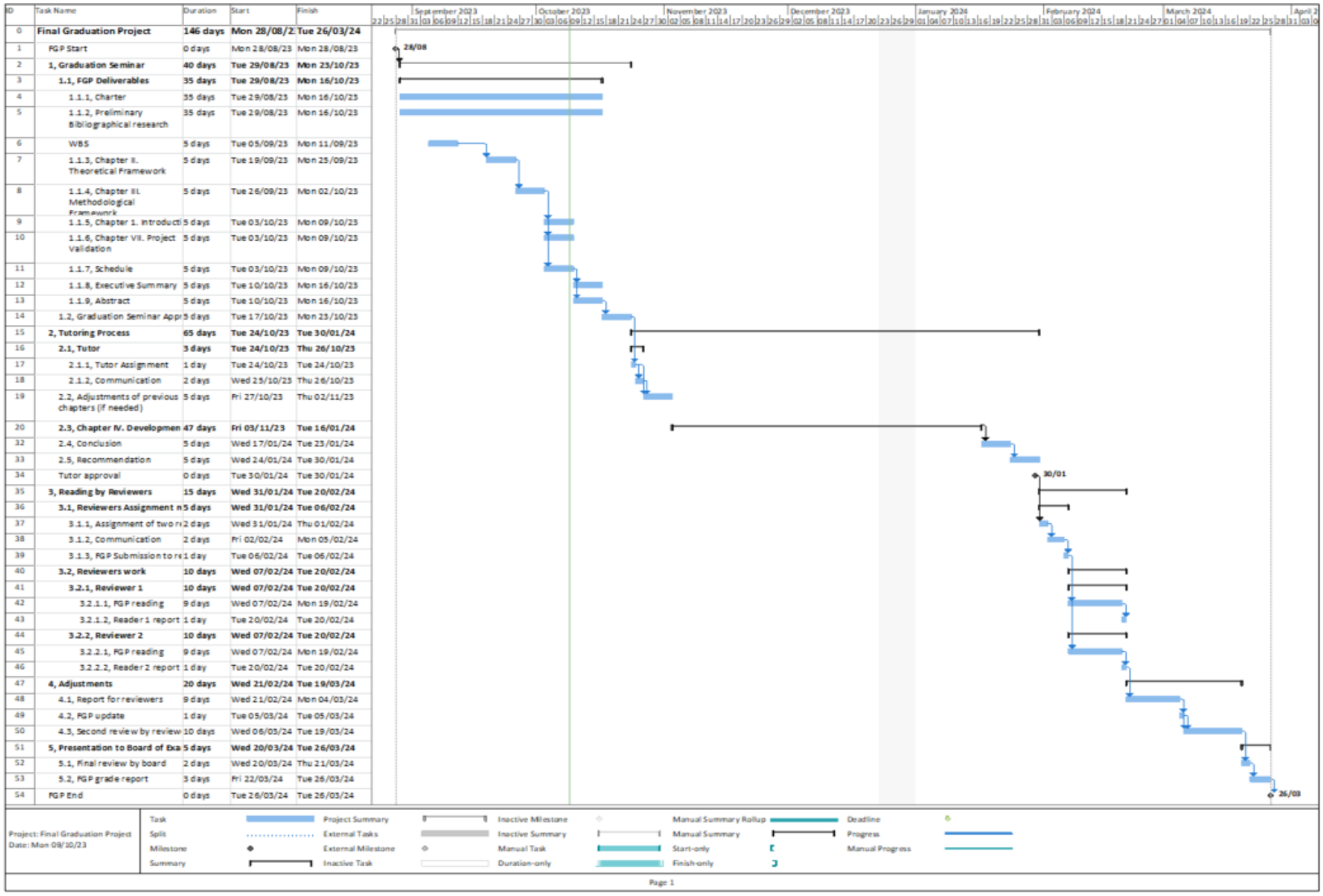
The Project Management Plan (PMP) for the Belize Social Security Board's scholarship program embodies a profound commitment to regenerative and sustainable development. Through comprehensive analysis, the project's profound impact on Sustainable Development Goals becomes evident. It directly aligns with SDG 4, fostering equitable education access and empowering Belizean youth. This, in turn, indirectly contributes to other goals such as poverty reduction, gender equality, and economic growth by enhancing employability and dismantling gender disparities in education. Furthermore, the project promotes health and well-being and reduced inequalities by addressing disparities in quality education access. Leveraging modern project management methodologies, the project optimizes resource allocation and environmental sustainability while promoting regenerative development principles. To ensure sustainability, a P5 impact

analysis will be developed, assessing the project's effects on People, Planet, Prosperity, Peace, and Partnership in alignment with SDGs. However, potential challenges such as electronic waste and resource allocation management must be carefully considered to avoid unintended environmental consequences and ensure prudent resource usage. In sum, the PMP not only champions education but also aligns with regenerative and sustainable development, benefiting Belizean youth and the environment, thereby advancing Belize's progress toward SDGs.

Appendix 2: FGP WBS



Appendix 3: FGP Schedule



ID	Task Name	Duration	Start	Finish
0	**Final Graduation Project**	**146 days**	**Mon 28/08/2**	**Tue 26/03/24**
1	FGP Start	0 days	Mon 28/08/23	Mon 28/08/23
2	**1, Graduation Seminar**	**40 days**	**Tue 29/08/23**	**Mon 23/10/23**
3	**1.1, FGP Deliverables**	**35 days**	**Tue 29/08/23**	**Mon 16/10/23**
4	1.1.1, Charter	35 days	Tue 29/08/23	Mon 16/10/23
5	1.1.2, Preliminary Bibliographical research	35 days	Tue 29/08/23	Mon 16/10/23
6	WBS	5 days	Tue 05/09/23	Mon 11/09/23
7	1.1.3, Chapter II. Theoretical Framework	5 days	Tue 19/09/23	Mon 25/09/23
8	1.1.4, Chapter III. Methodological Framework	5 days	Tue 26/09/23	Mon 02/10/23
9	1.1.5, Chapter I. Introducti	5 days	Tue 03/10/23	Mon 09/10/23
10	1.1.6, Chapter VII. Project Validation	5 days	Tue 03/10/23	Mon 09/10/23
11	1.1.7, Schedule	5 days	Tue 03/10/23	Mon 09/10/23
12	1.1.8, Executive Summary	5 days	Tue 10/10/23	Mon 16/10/23
13	1.1.9, Abstract	5 days	Tue 10/10/23	Mon 16/10/23
14	1.2, Graduation Seminar Appr	5 days	Tue 17/10/23	Mon 23/10/23
15	**2, Tutoring Process**	**65 days**	**Tue 24/10/23**	**Tue 30/01/24**
16	**2.1, Tutor**	**3 days**	**Tue 24/10/23**	**Thu 26/10/23**
17	2.1.1, Tutor Assignment	1 day	Tue 24/10/23	Tue 24/10/23
18	2.1.2, Communication	2 days	Wed 25/10/23	Thu 26/10/23
19	2.2, Adjustments of previous chapters (if needed)	5 days	Fri 27/10/23	Thu 02/11/23
20	**2.3, Chapter IV. Developmen**	**47 days**	**Fri 03/11/23**	**Tue 16/01/24**
32	2.4, Conclusion	5 days	Wed 17/01/24	Tue 23/01/24
33	2.5, Recommendation	5 days	Wed 24/01/24	Tue 30/01/24
34	Tutor approval	0 days	Tue 30/01/24	Tue 30/01/24
35	**3, Reading by Reviewers**	**15 days**	**Wed 31/01/24**	**Tue 20/02/24**
36	**3.1, Reviewers Assignment n**	**5 days**	**Wed 31/01/24**	**Tue 06/02/24**
37	3.1.1, Assignment of two re	2 days	Wed 31/01/24	Thu 01/02/24
38	3.1.2, Communication	2 days	Fri 02/02/24	Mon 05/02/24
39	3.1.3, FGP Submission to re	1 day	Tue 06/02/24	Tue 06/02/24
40	**3.2, Reviewers work**	**10 days**	**Wed 07/02/24**	**Tue 20/02/24**
41	**3.2.1, Reviewer 1**	**10 days**	**Wed 07/02/24**	**Tue 20/02/24**
42	3.2.1.1, FGP reading	9 days	Wed 07/02/24	Mon 19/02/24
43	3.2.1.2, Reader 1 report	1 day	Tue 20/02/24	Tue 20/02/24
44	**3.2.2, Reviewer 2**	**10 days**	**Wed 07/02/24**	**Tue 20/02/24**
45	3.2.2.1, FGP reading	9 days	Wed 07/02/24	Mon 19/02/24
46	3.2.2.2, Reader 2 report	1 day	Tue 20/02/24	Tue 20/02/24
47	**4, Adjustments**	**20 days**	**Wed 21/02/24**	**Tue 19/03/24**
48	4.1, Report for reviewers	9 days	Wed 21/02/24	Mon 04/03/24
49	4.2, FGP update	1 day	Tue 05/03/24	Tue 05/03/24
50	4.3, Second review by review	10 days	Wed 06/03/24	Tue 19/03/24
51	**5, Presentation to Board of Exa**	**5 days**	**Wed 20/03/24**	**Tue 26/03/24**
52	5.1, Final review by board	2 days	Wed 20/03/24	Thu 21/03/24
53	5.2, FGP grade report	3 days	Fri 22/03/24	Tue 26/03/24
54	FGP End	0 days	Tue 26/03/24	Tue 26/03/24

Appendix 4: Preliminary bibliographical research

The reference provides information on project management.

Association for Project Management. (n.d). *What is project management?*. https://www.apm.org.uk/resources/what-is-project-management/

The reference provides information on the project life cycle.

Aston, Ben. (2023, June 20). What is the Project Life Cycle: The 5 Main Phases Explained. https:// thedigitalprojectmanager.com/projects/pm-methodology/project-management-life-cycle/

The reference provides information on the Self Determination theory.

Cherry, Kendra. (2022, November 8). *What is Self Determination Theory?*. https://www.verywellmind.com/what-is-self-determination-theory-2795387

The reference provides a guide on managing project risk.

Coursera. (2023, June 15). *How to Manage Project Risk*. https://www.coursera.org/articles/how-to-manage-project-risk

The reference provides a guide on project management methodologies.

Coursera. (2023, July 27). *12 Project Management Methodologies: Your Guide*. https://www.coursera.org/articles/project-management-methodologies-your-guide

The reference provides information on Doughnut Economics.

Doughnut Economics Action Lab. (n.d.). *About Doughnut Economics.* https://doughnuteconomics.org/about-doughnut-economics

The reference provides information on Project management.

Galante, Meredith. (2022, March 27). *What is Project Management? Definitions, Examples & More*. https://www.forbes.com/advisor/business/what-is-project-management/

The reference provides information on research methods.

Hassan, Muhammad. (2023, September 7). *Research Methods - Types, Examples and Guide*. https://researchmethod.net/researchmethods/

The reference provides information on sustainable and regenerative development.

Institute Project Management. (2021, November 19), *Sustainability in Project Management*. https://www.projectmanagement.ie/blog/sustainability-in-project-management/

The reference provides an overview of predictive adaptive and hybrid methodologies.

Iqbal, M. (2023, February 2). *Predictive, Adaptive and Hybrid Approaches*. https://mudassiriqbal.net/predictive-adaptive-and-hybrid-approaches/

The reference provides an overview of how Agile can be used in project management. It explains the differences between predictive and adaptive approaches

Iqbal, M. (2022, August 1). *Using agile in project management*. Scrum.org. https://www.scrum.org/resources/blog/using-agile-project-management

The reference provides information on Maslow's Hierarchy of Needs.

Mcleod, Saul. (2023, July 26). *Maslow's Hierarchy of Needs.* https://www.simplypsychology.org/maslow.html

The reference provides information on Kotter's 8 step model.

Management Study Guide. (n.d). *Kotter's 8 Step Model of Change.* https://www.managementstudyguide.com/kotters-8-step-model-of-change.htm

The reference provides background information on the project life cycle and its phases.

Miller, D. (2023, January 19). *Project Life Cycle: What Is It, Its Phases & Why It's Important*. ProProfs Project Blog. https://www.proprofsproject.com/blog/project-life-cycle-and-its-phases/

The reference provides information on the Triple Bottom Line theory.

Miller, Kelsey. (2020, December 8). The Triple Bottom Line. https://online.hbs.edu/blog/post/what-is-the-triple-bottom-line

The reference provides a comprehensive guide on how to write a project plan.

Nediger, M. (2023, July 5). *How to write a project management plan*. Venngage. https://venngage.com/blog/project-management-plan/

The reference provides information on sustainable project management.

PMO 365. (2021, October 5), *Sustainable Project Management Explained*. https://pmo365.com/sustainable-project-management-explained/

The reference provides background information on the development of a project management plan.

Project Management Institue. (2021). *The Standard for Project Management and a Guide to the Project Management Body of Knowledge (PMBOK Guide) (7th Ed.).* Project Management Institute, Incorporated.

The reference provides background information on the project development of a project management plan.

Project Management Institute . (2017). *A Guide to the Project Management Body of Knowledge (PMBOK Guide) (6th Ed.).* Project Management Institute, Incorprated.

The reference provides background information on scope creep and how to avoid it.

Ray, S. (2021, May 26). *What Is Scope Creep and How Can I Avoid It?* https://www.projectmanager.com/blog/5-ways-to-avoid-scope-creep

The reference provides information on analytical research.

Satter, Sanjida. (2023). *Analytical Research: What is it, Importance + Examples.* https:// ://www.questionpro.com/blog/analytical-research/

The reference provides information on the Belize Social Security Board.

Social Security Board. (2021). *Social Security Board*. https://www.socialsecurity.org.bz/our-history/

The reference provides information on educational statistics in Belize.

Statistical Institute of Belize. (2021). *Statistical Institute of Belize*. https://sib.org.bz/statistics/other-statistics/education-statistics/

The reference provides an overview of information sources.

Streefkerk, Raimo. (2018, June 20). Primary vs. Secondary Sources | Difference & Examples. https://www.scribbr.com/working-with-sources/primary-and-secondary-sources/

The reference provides an overview of Scrum and its use in project management.

TechTarget, (2023, January). *What is Agile project management.* https://www.techtarget.com/searchcio/definition/Agile-project-management

Appendix 6: Philologist Dictum

February 16, 2024

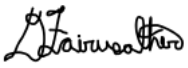
Academic Advisor
Master's Degree in Project Management (MPM)
Universidad para la Cooperacion Internacional (UCI)

Dear Academic Advisor,

RE: **Thorough Review and Proofreading of the FInal Graduation Project submitted by Allen Guerra in partial fulfillment of the requirements for the Master in Project Management (MPM) Degree.**

I hereby verify that Allen Geurra has made all the corrections to the Final Graduation Project document as advised. I can confirm that the document now meets the literary and linguistic standards expected of a student for a degree at the master's level.

Best Regards,



Denae Fairweather
M.A. English Language