UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL

(UCI)

# PROPOSAL OF A PROJECT MANAGEMENT PLAN FOR THE IMPLEMENTATION OF SECURITY MEASURES AT A FOREIGN EMBASSY IN BELIZE

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(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

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REVIEWER No.1

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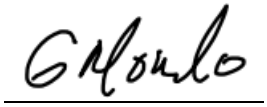

Student full name

STUDENT

## DEDICATION

This is dedicated to anyone who has doubted their capabilities in pursuing a greater goal. This is proof that with enough hard work, the right support, and a hint of spite, you can achieve what you set your mind to.

## ACKNOWLEDGEMENT

I would first like to extend my sincere gratitude to my tutor, Mr. Xavier Salas, for lending his expertise in the creation of this final project. His feedback not only helped steer the direction of this document, but also provided reassurance in moments of uncertainty. The professors who have accompanied us throughout the MPM program were also invaluable in providing the knowledge necessary to undertake this task.

My family has also been a great source of support throughout this process. Their words of motivation reminded me to keep focus on my goals. My sister was especially irreplaceable in this regard.

Finally, I would like to thank my friends for giving me moments of respite. Those moments allowed me to maintain a healthy mindset as I progressed in the program.

# ABSTRACT

The aim of this document is to provide a foreign embassy in Belize with a comprehensive project management plan, adhering to the standards recommended by the Project Management Institute, for the successful implementation of modern and scalable security measures to safeguard the assets of the embassy, including its physical infrastructure and personnel. Since its establishment, the diplomatic mission has grown and moved location, and is expected to continue expanding its operations in Belize. However, its existing security framework has remained stagnant, resulting in potential vulnerabilities in the safety of the embassy. Its equipment, though functional, fails to meet contemporary security benchmarks and is devoid of manufacturer support rending their utility limited and operation and maintenance costly.

The final product of this project, therefore, consists of the project management plan with all the relevant information necessary to guide the implementation of new security measures. The project management plan will be supported by all other relevant management plans as recommended by PMI. These will include plans that assess and describe the project's scope, stakeholders, schedule, costs, quality, risks, resources, and procurement strategies. To accomplish this, a combination of qualitative and quantitative research methods were used with guidance from PMI's recommended tools and techniques.

It was noted that the embassy lacked the capacity, assets, and foundational support structure to fully carry out internal projects. As a result, this project management plan presented a unique opportunity to not only guide the implementation of said project, but to contribute to the improvement of project management principles and processes at the embassy.

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## ABBREVIATIONS AND ACRONYMS

CBA: Central Building Authority

FGP: Final Graduation Project

GPM: Green Project Management

MOFA: Ministry of Foreign Affairs

NGO: Non-governmental Organization

OA: Office Administrator

OPA: Organizational Process Assets

PM: Project Manager

PMBOK: Project Management Body of Knowledge

PMI: Project Management Institute

PRiSM: Projects Integrating Sustainable Methods

RBS: Risk Breakdown Structure

SO: Security Officer

SP: Service Provider

UCI: Universidad para la Cooperacion Internacional

WBS: Work Breakdown Structure

## EXECUTIVE SUMMARY

It is generally accepted that safeguarding the sanctity of diplomatic missions is crucial for the successful foundation and continuation of an embassy's objectives in international relations. At the United Nation's 77th Session of the Sixth Committee of the General Assembly, representatives from several nations agreed that "ensuring the safety and security of diplomatic and consular missions and representatives is crucial for international relations to function" (2022). The foreign embassy in Belize in question has been steadily achieving its diplomatic obligations for the past four years and has intentions of expanding its availability of consular services to the people of Belize. It has managed thus far to be proactive in its approach to protecting its physical infrastructure as well as its personnel, but it is becoming increasingly clear that if it wishes to continue delivering on its objectives, its security measures need to be updated.

The pressing issue that the embassy is facing is one of potential gaps in security because of its rapid expansion and inability to scale its security solutions to meet its growing demands. For various reasons, the embassy has been unable to scale its security measures, leaving its personnel, facilities, and sensitive information vulnerable to potential threats. Its current security framework consists of equipment that is too costly to operate, maintain, while offering very limited functionality that befits a modern embassy – each issue being a result of the equipment's obsolescence.

To remedy this situation, the overall objective was to provide the embassy with a fully realized project management plan that will be used to guide the implementation of updated security measures. This general objective was further decomposed into specific goals that will support it, namely, the creation of all subsequent management plans as recommended by PMI. These included the development of management plans that cover the areas of scope, stakeholder, schedule, cost, quality, resources, risk, and procurement.

The methodology used for this project plan was a combination of qualitative and quantitative methods, with focus on the tools and techniques recommended by PMI. Interviews and discussions were a valuable source of primary data that informed the requirements of the project, while information from vendors and contractors provided the basis for analysis of performance indicators, timelines, and budgets, among others.

The creation of the project management plan required the amalgamation of several other management plans to produce a comprehensive guide for the successful implementation of new and upgraded security measures at the diplomatic mission. Each management plan utilized different sources of information, and tools and techniques, to synthesize qualitative and quantitative data to inform their creation. However, in doing so, key deficiencies at the embassy were identified. Specifically, it is noted that the embassy currently lacks a robust framework to support internal projects. There is a noticeable lack of historical information, no OPAs, and no specific role to carry out projects. This project management plan primarily served to guide the specific project; however, its development has led to the creation of a foundation to guide future projects at the embassy.

# 1 INTRODUCTION

## 1.1 Background

Belize and foreign country have formally entered diplomatic relations over 40 years ago. Despite this longstanding relation, the foreign country has not held a strong diplomatic presence in Belize. The foreign embassy in Belize was only established approximately four years ago in an effort to promote trade, cultural exchange, and mutual development of the two countries. During these four years, the embassy has increased in size and services it provides and is expected to continue growing as interest has increased in mutual development of diplomatic ties. Despite this, the security at the embassy has remained stagnant and unable to keep up with its own growth.

Because embassies stand at the forefront of national interests, the implementation of updated security measures requires a nuanced approach. In this regard, it is important to consider evolving geopolitical landscapes and security dynamics and how they impact the environment in which the embassy operates.

By contextualizing the significance of modernizing security measures within the broader diplomatic landscape, this project plan highlights the importance of implementation as well as provides the foundation required by the embassy to put the plan into action. Through a systemic approach, as guided by PMI standards, the methodologies, scope, requirements, and expected outcomes will be elaborated to improve the embassy's security, thereby ensuring the continued safety and efficacy of the mission, as well as allowing for future growth.

### 1.2 Statement of the Problem

The foreign embassy in Belize has been steadily expanding its operations throughout the four years since its formal establishment. With the increase in staff size and relocation to accommodate for growth, the embassy faces a pressing issue: outdated security measures. For various reasons, the embassy has been unable to scale its security measures, leaving its personnel, facilities, and sensitive information vulnerable to potential threats. This issue must be addressed if the embassy wishes to keep expanding its presence in Belize and safeguarding its assets.

### 1.3 Purpose

The purpose of the project is to inform and supply the embassy with the necessary information and plans required to update current and implement new security measures to increase the security of the embassy's assets, including building and staff. In doing so, it is expected that the general security of the embassy will be brought in line with newer technologies that can accommodate the needs of the embassy as it continues to expand its operations in Belize.

Through the use of recommended standards outlined by PMI, the project management plan will enable the relevant functional departments to coordinate activities in an effective, efficient, and data-driven manner to successfully implement the project. Of course, where necessary and as recommended by PMI, the project will be tailored to take into account the unique requirements of the embassy as well as the environment in which it operates.

The project management plan will also focus on providing relevant stakeholders with the means to integrate approaches in sustainability to the project itself. Namely, Green Project

Management's PRiSM Methodology will be used as an inspiration to include sustainability across different domains that are relevant to the project.

### 1.4 General Objectives

To develop a Project Management Plan that can be used by the foreign embassy in Belize to successfully implement updated and relevant security measures to ensure the safety of the building and its staff.

### 1.5 Specific Objectives

The specific objectives for this project include:

1. To develop a project charter that will be used to summarize and approve project details,
2. To develop a scope management plan that will define the bounds of the project and guide future management plans,
3. To develop a stakeholder management plan that will describe stakeholder requirement and expectations, and aid to prioritize and create communication strategies,
4. To create a schedule management plan that will list all project-related activities, expected time frame for project completion, and delegation of tasks,
5. To generate a cost management plan which will be used to estimate project cost, outline the distribution of funds, and create a budget for the project,
6. To develop a quality management plan that will serve to ensure all project deliverables meet the requirements as defined by the stakeholders,

7. To create a risk management plan that explores the risks and opportunities present in the project, as well as strategies to manage them,
8. To create a resource management plan which will be used to estimate resources required to complete activities along with their usage,
9. To generate a procurement management plan to outline the processes that will be used to acquire project resources,
10. To integrate sustainability practices in all aspects of project planning by using local suppliers, environmentally friendly technologies, and improving staff technical capacity.

# 2 THEORETICAL FRAMEWORK

## 2.1 Company/Enterprise Framework

### *2.1.1 Company/Enterprise Background*

The foreign embassy in Belize is relatively new, having only been in operation for the past four (4) years, despite diplomatic relations having been established for over forty (40) years. During its operational years the embassy has doubled its staffing. As a result, the embassy has had to move locations and increase the amount of attention given to safety measures.

As a diplomatic mission, and in keeping with diplomatic conventions, the primary role of the embassy is to represent and promote the interests of its home country through negotiations and to foster mutually beneficial relations (United Nations 1961). The embassy also functions to aid in the economic development and technical capacity of Belize through various grants and scholarships.

### *2.1.2 Mission and Vision Statements*

Currently, the embassy does not have any mission or vision statements. However, it is recognized that having mission and vision are crucial in giving the organization a sense of direction and purpose, while communicating its purpose to the larger public. As such, these statements will be created for this project.

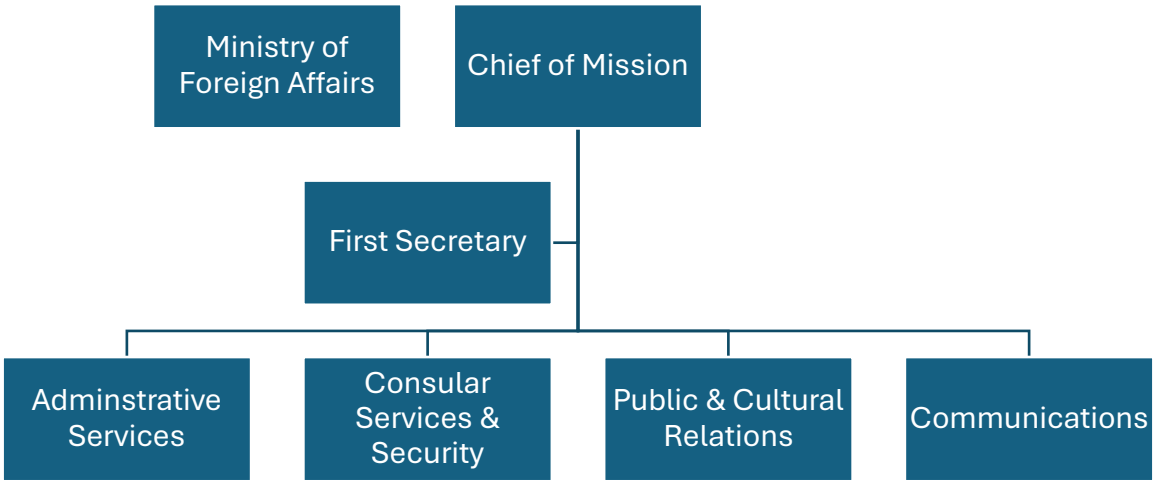
Mission: To develop and maintain amicable and mutually beneficial relations with Belize in the interest of the home through effective diplomacy and cultural exchange.

Vision: To be a leader in diplomacy, professionalism, and collaboration in Belize as representatives of the home through respect for diversity and shared development goals.

### *2.1.3 Organizational Structure*

The embassy's organizational structure follows a top-down approach where staff are divided into their functional roles at the embassy. At the top sits the chief of mission, with the first secretary below them, followed by functional department which is led by a department manager with support from their respective teams. Of course, the embassy is directly under the jurisdiction of the Ministry of Foreign Affairs of its home country.

**Figure 1 Organizational Structure of the Foreign Embassy in Belize (G. Novelo, 2024)**




### *2.1.4 Products or Services Offered*

The embassy offers its services to the government of Belize, general Belizean public, and nationals of its country who reside in Belize. Its list of services is limited to endeavors that promote its primary objective of fostering positive relations between the two countries; these include:

i. Promoting infrastructure development in various sectors through funding programs.
ii. Acting as an intermediary between an independent international funding and volunteer agency from its home country, the government of Belize, and various other NGOs that work alongside the agency.
iii. Assisting its nationals living in Belize with information to their inquiries.
iv. Passport renewals for its nationals living in Belize and other legal services.
v. Issuance of visa for Belizeans wishing to travel to its home country and providing relevant information relating to their travel.

## 2.2 Project Management Concepts

### *2.2.1 Project Management Principles*

Principles in project management are the guiding ethos that govern the way projects are carried. The principles describe the objectives, practices, and functions of project management. PMI (2021) describes twelve foundational principles; however, this paper will focus on nine principles, which are:

i. Stewardship: relates to the responsibility of the project team to complete project activities with integrity and care for the stakeholders it affects; and compliance with the regulatory boundaries in which the project exists.
ii. Stakeholders: acknowledges the role and importance of stakeholders regarding the success of the project.

iii. Systems Thinking: recognizes that projects do not exist in a vacuum. There are multiple factors, both internally and externally, that affect project success which must be evaluated and responded to in a manner that accounts for this dynamic.

iv. Leadership: speaks to the ability of the project team to carry out project activities proactively and taking accountability for their actions.

v. Tailoring: recognizes that the context in which a project is carried out may vary between projects. As such, the success of a project depends on the ability to adapt to these contextual differences.

vi. Quality: meeting the expectations of the stakeholders and requirements of the projects when achieving project objectives

vii. Risk: aims to identify, evaluate, and optimize the impact of positive and negative risks in completing project objectives. Recognizes that each project responds to risks differently based on the organization's risk strategy, appetite, and threshold.

viii. Adaptability and Resiliency: emphasizes the importance of having adaptability in the way project activities are carried out while also being able to recover from negative impacts with the goal of completing project objectives.

ix. Change: acknowledges that the project will affect operations and behaviors of stakeholders and makes attempts to guide the acceptance of the change through structured approaches.

### *2.2.2 Project Management Domains*

Domains in project management describe related activities that are done with the aim of successfully completing a project. Because they are related activities, they are generally thought of as an integrated system, where performance in one domain directly affects performance in

another domain (Project Management Institute, 2021). Performing actions in these domains occurs throughout the project's life cycle to achieve objectives. PMI also acknowledges that actions done to perform these domains may vary based on the organization's structure, culture, the project itself, and many other factors, so it is crucial to tailor the domains to fulfill project requirements.

There are eight (8) domains to consider for the creation of this project plan:

i. Stakeholders
ii. Teams
iii. Development Approach & Life Cycle
iv. Planning
v. Project Work
vi. Delivery
vii. Measurement
viii. Uncertainty

### *2.2.3 Predictive, Adaptive, and Hybrid Projects*

There are multiple development approaches to project management, each designed to successfully complete projects based on factors such as environmental conditions, complexity, and historical knowledge, among others. The three main approaches that are recommended by PMI (2021) are:

i. Predictive: this approach is used when all project requirements and factors influencing it are known ahead of time. Projects are completed in a logical and linear manner.

ii. Adaptive: this approach emphasizes agility and adaptability through incremental improvements and changes to project requirements. Adaptive projects require flexibility, so activities are completed iteratively.

iii. Hybrid: this approach leverages the principles of adaptive and predictive approaches through defined requirements while also allowing for changes when necessary. It is a semi-structured approach to completing projects that is useful when the project team needs to be responsive to change.

The project will be carried out using a predictive approach.

### *2.2.4 Project Management*

Project management involves the "application of processes, methods, skills, knowledge and experience to achieve specific project objectives" (*What Is Project Management? | APM*, n.d.). An important aspect to consider with regards to project management is that project objectives must be in the form of a deliverable, tangible or otherwise, and have a defined time constraint to achieve completion. Applying project management in an organization to achieve time constrained objectives requires methodical management of resources, strategies, and expectations.

For the purposes of this project, a project management plan will be developed with consideration given for the processes, methods, skills, and knowledge required to successfully complete the chosen project. To further demonstrate this, this document itself will be created as it if were a project. The plan will require a project charter for authorization, well-defined time constrained deliverables, and resource management, which culminates in the completion of the project.

### *2.2.5 Project Management Areas and Processes*

A knowledge area is an area of project management that requires the use of specific knowledge, skills, inputs, tools and techniques, and outputs. PMI defines ten (10) specific knowledge areas. These will be used in the development of the project. Each knowledge area is comprised of their own processes required to successfully fulfill its objective.

i. Project Integration Management
ii. Project Scope Management
iii. Project Schedule Management
iv. Project Cost Management
v. Project Quality Management
vi. Project Resource Management
vii. Project Communications Management
viii. Project Risk Management
ix. Project Procurement Management
x. Project Stakeholder Management

### *2.2.6 Project Life Cycle*

Due to the fact that projects are confined to a specific time frame, they must follow a life cycle. In other words, projects undergo logical sequencing from start to finish. A project's life cycle also helps categorize the knowledge area's processes for better understanding and implementation. The life cycle of a project typically consists of five (5) processes, these are:

i. Initiating: marks the start of the project where requirements and scope are defined with collaboration between the project team and stakeholders.

ii. Planning: describes the steps that will be taken to meet the requirements defined in the initiating phase. Roles and responsibilities are assigned, resources are allocated, and risks are identified in this stage, among other actions.

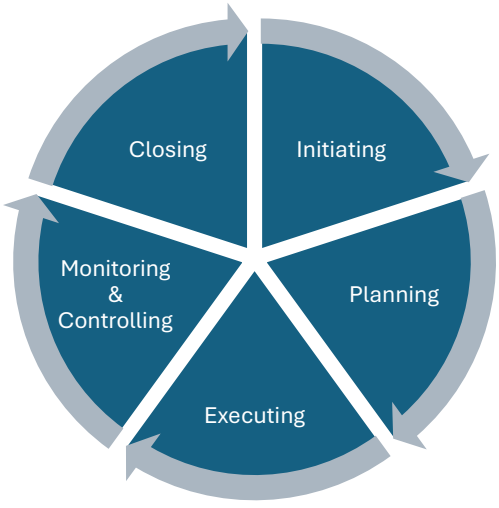
iii. Execution: the project team takes concrete steps to complete project activities as prescribed in the planning stage.

iv. Monitoring and Controlling: works in progress and activities completed are assessed for completeness in accordance with the requirements. Steps are taken, if necessary, to realign activities with project objectives.

v. Closing: denotes the formal end of the project. The final deliverable is handed off to the beneficiary who is responsible for final approval. Reviews and retrospectives may also occur in this stage.

For the purposes of the project, this document will only focus on the initiating and planning stages. The proposal is primarily created to define the parameters of the project, as well as to create a guide for the implementation of the security measures.

**Figure 2 Project Life Cycle (G. Novelo, 2024)**



### *2.2.7 Company Strategy, Portfolio, Programs, and Projects*

At present, the embassy does not have a formalized strategy to drive its primary objectives. Consequently, projects are mostly carried out on an as-needed basis with either the head of mission or the first secretary leading the project, with support from the Public and Cultural Relations department. Other departments are called to assist only when necessary.

Despite not having a formal strategy, however, the embassy does have a guiding principle that it adheres to when undertaking its projects. That is, each of the projects it implements or sponsors must aid in the development of Belize's economy, and its technical and technological capacities. As a result, most of its projects are aimed at grassroots initiatives.

## 2.3 Other Applicable Theories/Concepts Related to the Project and Context

### *2.3.1 Current Situation or the Problem or Opportunity in Study*

Though the embassy has only been operational for four (4) years in Belize, it has had to double its staff and move locations to accommodate for this growth. Despite this, its security measures have not adapted to account for increased staff size and new location. The project will be undertaken to improve its security. In a similar fashion, a project of this type has not been done before at the embassy, so there are no organizational assets or historical information that can be used to inform the creation of this document; therefore, the project and the plans created will be the first of its kind.

The security at the embassy, while functional, has remained the same since its inception. Consequently, some security procedures are in clear need of an update, while the equipment used for security needs to be upgraded to meet the expectations of a modern diplomatic mission.

### *2.3.2 Previous Research Done for the Topic*

Local research into areas related to the chosen topic is almost non-existent, likely due to the fact that it can present opportunities for breaches of confidentiality and security. The source of information that has been used to inspire the topic is from observations of how the staff interacts with the security measures and their perception of it. However, research into the intersectionality of architecture, safety, and diplomacy has been carried out mostly using U.S Embassies as the focal point.

The academic research that has been carried out is mostly divided into two distinct parts: case studies and conceptual designs. Case studies such as Loeffler's 'Embassy Design: Security v. Openness' looks at the historical design of US Embassies, human and natural phenomena that has affected them, the embassies' response, and the effectiveness of its responses. Case studies will be used to gain a practical understanding of the importance and utility of security in diplomacy. Conceptual designs such as Gaydosh's 'Life Safety as a Design Driver' use a combination of architectural best practices and innovative technologies to create a modern embassy that places focus on safety. These will be used to explore and inspire the possibilities that are available to the embassy to improve their security.

In addition to the academic research directly relating to the chosen topic, discussions, and further research into the efficacy of specific security measures will be used to decide which measures will be implemented. An example of this will be the Institute of Electrical and Electronics Engineers conference discussing the functional safety and efficacy of automating security systems for building security.

### *2.3.3 Other Theories Related to the Topic*

The Projects Integrating Sustainable Methods (PRiSM) is a methodology that aims to go beyond the traditional triple constraint of project management by introducing holistic thinking into its processes and products. It is a principle-based approach that emphasizes ethical value creation over conventional compliance (GPM Global, 2023).

PRiSM encourages project managers to incorporate sustainable methods with the use of the P5 Standard. The P5 Standard identifies several sustainability considerations, ranging from human rights, logistics, and of course, environmental impacts, among others. By expanding upon the customary definition of sustainability, PRiSM is able to contribute to the longevity of a project and it improves upon its intended benefits.

In the context of this project, PRiSM will serve as a guide in the decision-making process to ensure that the processes, and therefore the product, are able to provide a benefit to all stakeholders. Given the scope of the project, however, a full P5 assessment will not be performed. Instead, elements of the P5 Standard will be incorporated into the various management plans to help increase the inclusion of local talent and supplies, and observance of labor laws, policies, and general human rights.

# 3 METHODOLOGICAL FRAMEWORK

## 3.1 Information Sources

An information source, typically categorized between primary and secondary sources, describes any entity, object, or locale where information is originated or acquired. Primary and secondary sources are differentiated based on their originality and proximity of the original source (*Primary, Secondary, and Tertiary Sources | University of Minnesota Crookston*, n.d.). The categorization also helps the reader make their own inference on the validity of the source.

### *3.1.1 Primary Sources*

Primary sources are the closest in proximity to the origin. They include first-hand accounts, speeches, raw data, and historical artifacts, among other similar sources (*LibGuides: Primary, Secondary, and Tertiary Sources of Information in the Sciences: Types of Information Sources*, n.d.). Primary sources are beneficial for research because they add authenticity and immediacy to subject matter.

The primary sources that will be used in the creation of this document includes structured interviews and observations about the current state of security at the embassy, and conference proceedings. These will provide context to the problem that the project is directly trying to solve.

### *3.1.2 Secondary Sources*

Secondary sources are not considered evidence in and of themselves. Instead, they use other sources of information to analyze, synthesize, or evaluate to create new commentary and discussion of the subject matter (*LibGuides: Primary, Secondary, and Tertiary Sources of Information in the Sciences: Types of Information Sources*, n.d.). Secondary sources are useful for

research purposes because they can provide a deeper understanding of the subject matter by providing important alternative analysis and contextualization.

The secondary sources that will be used in the creation of the proposal include scholarly articles, dictionaries and encyclopedias, and textbooks. These sources will mainly serve to provide background information on the chosen topic.

**Chart 1 Information Sources (G. Novelo, 2024)**

| **Objectives** | **Information sources** | |
|---|---|---|
| | **Primary** | **Secondary** |
| To develop a project charter that will be used to summarize and approve project details | • Meeting with embassy and contractors to determine preliminary project scope and requirements | • Project Charter Template |
| To create a project management plan that demonstrates how the project will be approached, including all five stages of the project lifecycle | • Meetings with relevant stakeholders to establish project methodology and approaches to completing activities. | • Project documents |
| To develop a scope management plan that will define the bounds of the project and guide future management plans | • Interview with embassy security officer and office administrator to understand what activities will and will not be part of the scope. | • Case studies<br>• PMBOK® Guide. |
| To develop a stakeholder management plan that will describe stakeholder requirements and expectations, and aid to prioritize and create communication strategies | • Discussions with stakeholders to understand what each hope to gain from the completion of the project. | • PMBOK® Guide<br>• Online templates |
| To create a schedule management plan that will | • Discussions with stakeholders to determine the | |

| | | |
|---|---|---|
| list all project-related activities, expected time frame for project completion, and delegation of tasks | project timeline and create a realistic schedule. It will help determine critical path as well. | |
| To generate a cost management plan which will be used to estimate project cost, outline the distribution of funds, and create a budget for the project | • Discussion with stakeholders to create the project budget. Actions for how all cost-related activities will be carried will be determined. | • PMBOK® Guide |
| To develop a quality management plan that will serve to ensure all project deliverables meet the requirements as defined by the stakeholders | • Discussions with security officers and office administrator to establish metrics, activities, and actions to ensure quality is delivered. | • Online templates<br>• PMBOK® Guide. |
| To create a risk management plan that explores the risks and opportunities present in the project, as well as strategies to manage them | • Discussions with stakeholders to identify and prioritize project risks. Responses will also be established. | • Local news sources<br>• PMBOK® Guide. |
| To create a resource management plan which will be used to estimate resources required to complete activities along with their usage | • Discussions with stakeholders and other local vendors to understand realistic resource requirements and usage. | • Internet. |
| To generate a procurement management plan to outline the processes that will be used to acquire project resources | • Meeting with stakeholders to establish service provider selection process and criteria. Procurement of other resources will also be determined. | • Online templates. |

### 3.2 Research Methods

A research method is a strategy or systematic approach used in research to interpret and analyze information with the goal of improving the understanding of a given topic. Research methods are typically categorized between qualitive and quantitative methods (University of Newcastle, n.d.). The benefits of using research methods, regardless of type, are that they provide structure to how research is to be conducted and allow for validity and transparency.

The project plan will use a combination of qualitative and quantitative methods in the analysis of data. Qualitative methods focus on data gathered from experiences and behaviors, whereas quantitative methods focus on numeral data that can be ranked, measured, and categorized through statistical analysis (University of Newcastle, n.d.). In other words, qualitative research utilizes non-numerical data whereas quantitative research uses numerical data.

**Chart 2 Research Methods (G. Novelo, 2024)**

| Objectives | Qualitative Research | Quantitative Research |
|---|---|---|
| To develop a project charter that will be used to summarize and approve project details | Qualitative research in the form of meetings will be the primary method used for decision making. | Quantitative research in the form of descriptive research with be used for decision making. |
| To create a project management plan that demonstrates how the project will be approached, including all five stages of the project lifecycle | Qualitative research in the form of meetings will be the primary method used for decision making. | NO |
| To develop a scope management plan that will define the bounds of the project and guide future management plans | Qualitative research in the form of meetings and a focus group with staff will be the primary method used for decision making. | Quantitative research in the form of descriptive research and information from secondary sources with be used for decision making. |

| | | |
|---|---|---|
| To develop a stakeholder management plan that will describe stakeholder requirement and expectations, and aid to prioritize and create communication strategies | Qualitative research in the form of meetings will be the primary method used for decision making. | NO |
| To create a schedule management plan that will list all project-related activities, expected time frame for project completion, and delegation of tasks | Qualitative research in the form of meetings will be the primary method used for decision making. | Quantitative research in the form of descriptive research with be used for decision making. |
| To generate a cost management plan which will be used to estimate project cost, outline the distribution of funds, and create a budget for the project | Qualitative research in the form of meetings will be the primary method used for decision making. | Quantitative research in the form of descriptive research with be used for decision making. |
| To develop a quality management plan that will serve to ensure all project deliverables meet the requirements as defined by the stakeholders | Qualitative research in the form of meetings and observations will be the primary method used for decision making. | Quantitative research in the form of descriptive research, feedback forms, and criteria, will be used for decision making. |
| To create a risk management plan that explores the risks and opportunities present in the project, as well as strategies to manage them | Qualitative research in the form of meetings will be the primary method used for decision making. | Quantitative research in the form of descriptive research alongside information from secondary sources will be used for decision making. |
| To create a resource management plan which will be used to estimate resources required to complete activities along with their usage | Qualitative research in the form of meetings will be the primary method used for decision making. | Quantitative research in the form of descriptive research with be used for decision making. |
| To generate a procurement management plan to outline the processes that will be used to acquire project resources | Qualitative research in the form of meetings will be the primary method used for decision making. | Quantitative research in the form of descriptive research and guidance from GPM P5 Standards will be used for decision making. |

### 3.3 Tools

A research tool is a specific mechanism or instrument used in the collection and analysis of data. In project management, a tool is "something tangible…used in performing an activity to produce a product or result." (Project Management Institute, 2011). The tools used in any research may vary based on "complexity, interpretation, design, and administration [where] each tool is suitable for certain types of information." (Pandey & Mishra Pandey, 2015).

**Chart 3 Tools (G. Novelo, 2024)**

| **Objectives** | **Tools** |
|---|---|
| To develop a project charter that will be used to summarize and approve project details | • Project Charter template |
| To create a project management plan that demonstrates how the project will be approached, including all five stages of the project lifecycle | • Templates<br>• Diagrams<br>• Interviews<br>• Project management software and word processing software |
| To develop a scope management plan that will define the bounds of the project and guide future management plans | • Templates<br>• Diagrams<br>• Templates<br>• Interviews and observations<br>• Alternative analysis |
| To develop a stakeholder management plan that will describe stakeholder requirement and expectations, and aid to prioritize and create communication strategies | • Templates<br>• Interviews |
| To create a schedule management plan that will list all project-related activities, expected time frame for project completion, and delegation of tasks | • Project management software<br>• Diagrams<br>• Interviews. |
| To generate a cost management plan which will be used to estimate project cost, outline the distribution of funds, and create a budget for the project | • EMV analysis<br>• Project management software<br>• Templates. |
| To develop a quality management plan that will serve to ensure all project deliverables meet the requirements as defined by the stakeholders. | • Templates & checklists<br>• Observation & interviews |

| | |
|---|---|
| To create a risk management plan that explores the risks and opportunities present in the project, as well as strategies to manage them | • Brainstorming<br>• Meetings<br>• Probability impact analysis |
| To create a resource management plan which will be used to estimate resources required to complete activities along with their usage | • Diagrams<br>• Interviews<br>• Data analysis<br>• Bottom-up estimation<br>• Project management software |
| To generate a procurement management plan to outline the processes that will be used to acquire project resources | • Templates<br>• Source selection analysis<br>• Data gathering. |

### 3.4 Assumptions and Constraints

The identification of assumptions and constraints is an important part of the planning process because it influences the project lifecycle, its development, and the decision-making process. Abernethy (2016) describes assumptions as being anything in a project that we consider to be true. Abernethy further describes constraints as limiting factors that we know to be true. The project management plan is developed with guidance of assumptions and within the boundaries of the constraints.

**Chart 4 Assumptions and Constraints (G. Novelo, 2024)**

| **Objectives** | **Assumptions** | **Constraints** |
|---|---|---|
| To develop a project charter that will be used to summarize and approve project details | The project will be the authorized by the embassy. | Authorization will come with some restrictions for confidentiality purposes |

| Objectives | Assumptions | Constraints |
|---|---|---|
| To create a project management plan that demonstrates how the project will be approached, including all five stages of the project lifecycle | The management plan will be following PMI best practices | Relevant stakeholders will need to be briefed on PMI best practices. No OPAs relating to project management exists. |
| To develop a scope management plan that will define the bounds of the project and guide future management plans | Beneficiary of the project will provide detailed information to define scope. | Language barrier that may hinder understanding of requirements |
| To develop a stakeholder management plan that will describe stakeholder requirement and expectations, and aid to prioritize and create communication strategies | Stakeholders will be properly identified and assessed. | Language barrier that may hinder identification of stakeholders |
| To create a schedule management plan that will list all project-related activities, expected time frame for project completion, and delegation of tasks | All project-related activities will be identified and decomposed to identify a completion date. | Gathering of information will be contingent on the schedule of other parties. |
| To generate a cost management plan which will be used to estimate project cost, outline the distribution of funds, and create a budget for the project | A comprehensive budget will be created that accounts for all project related expenses. | Gathering of information will be contingent on the schedule of other parties. |
| To develop a quality management plan that will serve to ensure all project deliverables meet the requirements as defined by the stakeholders | New OPAs will need to be created to measure quality. | Language barrier that may alter the understanding of quality. |
| To create a risk management plan that explores the risks and opportunities present in the project, as well as strategies to manage them | Identification of risks will rely on | Historical information on diplomatic safety |

| Objectives | Assumptions | Constraints |
|---|---|---|
| | brainstorming and what-if scenarios. | risks will be limited. |
| To create a resource management plan which will be used to estimate resources required to complete activities along with their usage | All project-related resources will be identified, and their usage accounted for. | Human resources required to complete tasks will also have other operational activities to complete. |
| To generate a procurement management plan to outline the processes that will be used to acquire project resources | A list of local vendors that specialize in technology and security already exists. | Most technology required for security will need to be imported, affecting schedule. |

### 3.5 Deliverables

Deliverables in project management are typically tangible and well-defined items that are handed over to the client or beneficiary which denotes the completion of a project activity or the project itself (Lake, 1998). Deliverables are further defined by their ability to quantify the progress and quality of a project because they typically require verification and acceptance.

**Chart 5 Deliverables (G. Novelo, 2024)**

| Objectives | Deliverables |
|---|---|
| To develop a project charter that will be used to summarize and approve project details | Project Charter |
| To create a project management plan that demonstrates how the project will be approached, including all five stages of the project lifecycle | All subsequent management plans |
| To develop a scope management plan that will define the bounds of the project and guide future management plans | Requirements documentation, WBS, Scope management plan. |

| | |
|---|---|
| To develop a stakeholder management plan that will describe stakeholder requirements and expectations, and aid to prioritize and create communication strategies | Stakeholders register and analysis, stakeholder management plan. |
| To create a schedule management plan that will list all project-related activities, expected time frame for project completion, and delegation of tasks | Gantt chart, activity lists, Schedule management plan |
| To generate a cost management plan which will be used to estimate project cost, outline the distribution of funds, and create a budget for the project | Budgets, performance analysis, Cost management plan. |
| To develop a quality management plan that will serve to ensure all project deliverables meet the requirements as defined by the stakeholder | Quality checklists, metrics, quality management plan |
| To create a risk management plan that explores the risks and opportunities present in the project, as well as strategies to manage them | Risk register, responses, risk management plan |
| To create a resource management plan which will be used to estimate resources required to complete activities along with their usage | Resource requirement, resource management plan |
| To generate a procurement management plan to outline the processes that will be used to acquire project resources | Procurement strategy, cost estimates, selection criteria, procurement management plan |

# 4 RESULTS

## 4.1 Project Charter

| PROJECT CHARTER | | |
|---|---|---|
| **DATE** | **PROJECT NAME** | |
| 03/06/2023 | Implementation of Security Measures for a foreign Embassy in Belize. | |
| **PROJECT LIFECYCLE** | Hybrid | |
| **KNOWLEDGE AREA/PROCESS GROUP** | **Application Area (Sector/Activity)** | |
| Process Groups: Initiating, Planning, Executing, Monitoring and Controlling, Closing.<br>Knowledge Areas: Integration, Scope, Schedule, Cost, Quality, Procurement | Diplomatic; Security Management<br>Upgrading security equipment and additional security measures. | |
| **Tentative Start Date** | **Tentative Completion Date** | **Duration** |
| 08/02/2024 | 11/22/2024 | 81 days |
| **Project Objectives (General and Specifics)** | | |
| General: Upgrade and implement new security measures, including equipment, to meet the growing needs of the embassy.<br>Specifics:<br>1. To upgrade the existing security measures (cameras, alarms, etc.)<br>2. To successfully install upgraded security measures<br>3. To improve the safety of the building and staff | | |
| **Justification of the purpose of the project** | | |
| The foreign embassy in Belize has been steadily growing and expanding the availability of its services in Belize over the past four years. This growth has led to the embassy increasing its staff size and moving locations to accommodate for it. Despite this, the security measures that have been in place have remained the same as they were four years ago. This stagnation opens the possibility for vulnerabilities, which in turns serves as the catalyst for the proposal of this project to improve its security. | | |

| **Description of the product or service that the project will generate** |
|---|
| 1. Project Management<br>2. Security Management<br>3. Up-to-date security equipment<br>4. Improved communication strategies with security stakeholders<br>5. Integration of sustainability practices in project<br>6. Development of some Organizational Process Assets |

| **Assumptions** |
|---|
| 1. Quotations from different vendors for equipment may be from different brands, but technical specifications remain similar.<br>2. Budget for the project will receive approval from the relevant ministries related to the embassy.<br>3. The budget will not be reduced during the project.<br>4. The scope will not be changed during the project.<br>5. Service providers will adhere to the pre-approved schedule when doing installations.<br>6. New security measures will arrive without any defects. |

| **Constraints** |
|---|
| 1. The personnel leading the project will need to perform operational tasks concurrently.<br>2. Delays in the importation of equipment.<br>3. Language barrier limiting communication between stakeholders.<br>4. Change of security officer.<br>5. New statutory board implementing new regulations for security contractors |

| **Preliminary Risk Identification** |
|---|
| 1. As a result of lack of supervision, accidents during project execution could happen. This can impact costs due to increased supervision staff.<br>2. As a result of delays in budget approval, the start of the project could be postponed, causing a delay in the timeline of the project.<br>3. As a result of delays in the importation of equipment, the start of the project could be postponed, impacting on the project schedule.<br>4. As a result of an incomplete or miscommunicated scope, new requirements will be generated, which will impact on the project's cost and schedule.<br>5. As a result of change in security officer, the project could lose priority status, leading to a negative impact in the feasibility of the project. |

| **Budget** | |
|---|---|
| **Description** | **Cost (BZD)** |
| Planning | $1,000.00 |
| Procurement | $68,425.50 |
| Installation | $5,385.00 |
| Training | $450.00 |
| Acceptance | $50.00 |
| **TOTAL (BZD)** | **$75,310.50** |

| **Milestone Schedule** | |
|---|---|
| **Description** | **Date** |

| | |
|---|---|
| Project Start | 08/02/2024 |
| Approvals | 08/16/2024 |
| Procurement Finishes | 10/04/2024 |
| 1st Inspection Complete | 11/05/2024 |
| Assessments Passes | 11/19/2024 |
| Project Accepted & Closed | 11/22/2024 |

| **Historical Information** |
|---|
| Internally, this project will be the first of its kind. There are no records of similar projects being undertaken. This also means that no OPAs currently exist to be used in the creation of the various management plans. Therefore, the project will rely on information from security consultants to determine equipment needed and placement required, as well as guidance from PMBOK Guide to develop management plans. |
| **Identification of Interest Groups** |
| Ministry of Foreign Affairs of the embassy's home country<br>Foreign embassy in Belize<br>Belize Police Department<br>Security Company<br>Central Building Authority |
| **Name of Project Manager(s)** |
| Gionnan Novelo |
| **Name of Person Authorizing** |
| Security officer |

## 4.2 Scope Management Plan

The scope management plan for this project will provide stakeholders with a high-level understanding of all the works required to successfully complete the implementation of new security measures. The benefit of creating this plan is that it not only makes clear the works required, but also it explicitly states what works are not included in the project and assigns ownership of the required works so that all stakeholders are fully aware of their roles and responsibility throughout the project's lifecycle.

### *4.2.1 Scope Management Approach*

The responsibility for managing the scope of the project will primarily fall under the responsibility of the project manager, an employee of the embassy assigned to the project. The scope will be elaborated using the Scope Statement, Work Breakdown Structure (WBS), and a WBS dictionary. The assigned personnel acting as project manager will identify, develop, and approve documentation required for defining project scope as well as deliverables required to complete the project. Proposed changes to the scope of the project may be raised by the project manager, security officer, or office administrator via change request form (appendix 2), at which point the requested changes will be evaluated with expert input from a consultant specializing in security systems. The project manager and security officer must approve scope changes, with supplementary input from the office administrator. Upon approval, it is the responsibility of the project manager to implement the changes. All proposed and approved changes will be recorded via a change log (appendix 1)

### *4.2.2 Roles and Responsibilities*

**Chart 6: Roles and Responsibilities (G. Novelo, 2024)**

| Name | Role | Responsibility |
|---|---|---|
| MOFA | Sponsor; Foreign Government Entity | Acts as the main source of project funding.<br>Approves project budget and scope |
| Embassy | Beneficiary | Gives acceptance of project's final deliverable.<br>Approves project schedule. |
| Security Officer | Project Team; Authorizing personnel | Makes and approves change requests.<br>Update project documents as necessary.<br>Communicate project status to sponsor. |
| Office Administrator | Project Team | Makes change requests.<br>Provide input for approval of change requests.<br>Update project documents as necessary. |
| Project Manager | Project Manager | Manage project progress and activities.<br>Coordinate project activities with consultants/service providers.<br>Make and approve change requests. |
| Service Providers | Consultancy | Provide quotation for necessary services/equipment.<br>Execute project activities. |
| Central Building Authority | Local Government Entity | Reviews major structural and electrical changes if any are needed; give approval to execute changes. |

### *4.2.3 Scope Statement*

The upgraded security measures aim to prove increased safety to the physical structure as well as personnel of the staff and any individual inside the embassy seeking its services. Particularly, all current security cameras will be upgraded to brand-new, energy efficient, weather resistant security cameras equipped with audio recording, night vision, and auto-identification and tracking features. This totals 8 cameras. Two additional cameras with identical feature sets will be installed in identified blind spots. The alarm system will also be upgraded to be a full feature access control system including motion sensors, auto-locking, and auto-alert features. Monitors for fire and carbon dioxide will also be installed.

**CONSTRAINTS:**

- Where changes are required to the physical structure or its electrical wiring, approval will be needed from the CBA.
- Change requests will need to be approved by both described personnel before being implemented.
- Scope and budget must be approved by the relevant ministries before proceeding.
- Project must be completed before the end of the current fiscal year.

**ASSUMPTIONS:**

- All resources required to accomplish project activities will be made available as necessary.
- Funding will be approved in its entirety and funding disbursed before the start date of the project.
- Project progress will be communicated to all stakeholders, as appropriate, as defined in the stakeholder management plan.

### *4.2.4 Work Breakdown Structure (WBS)*

The WBS decomposes the project into manageable work packages and activities in a hierarchical and logical manner. For this project, the WBS will follow a phase-based approach, defining the stages of the project by its logical sequence of activities.

**Figure 3: Work Breakdown Structure (G. Novelo, 2024)**

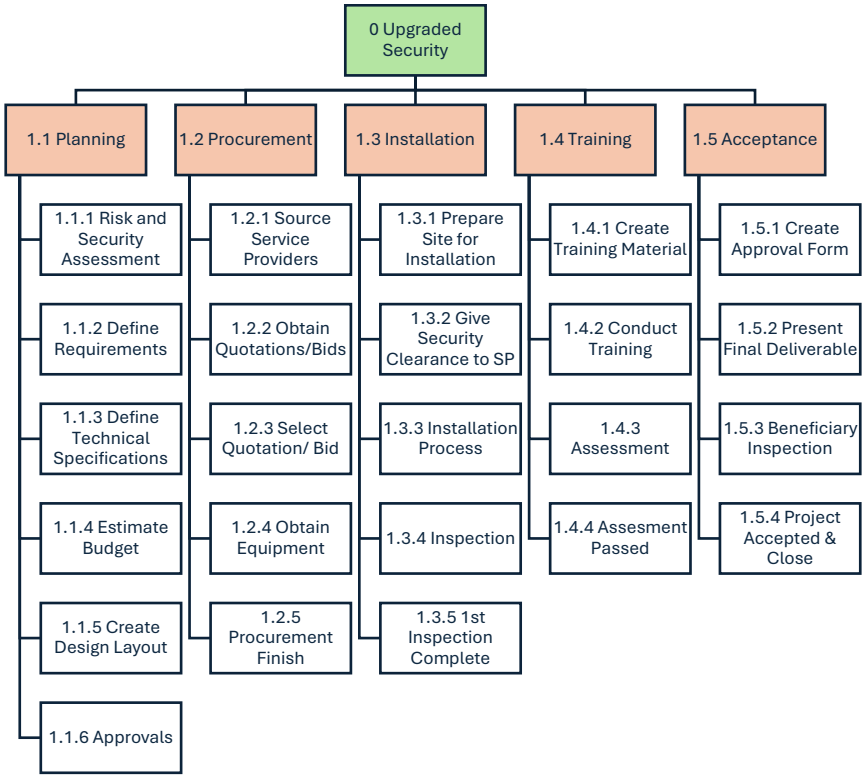



**Chart 7: WBS Dictionary (G. Novelo, 2024)**

| Lvl | WBS | Element | Description of Work | Deliverables | Resources |
|---|---|---|---|---|---|
| **2** | **1.1** | **Planning** | **Fully conceptualize the requirements of the project.** | **Approval to proceed with project** | **Project Requirements** |
| 3 | 1.1.1 | Risk and Security Assessment | Identify risks and gaps in embassy security | Assessment report | SO, PM, Beneficiary |
| 3 | 1.1.2 | Define Requirements | Describe the initial needs of the embassy | List of equipment required | Scope Statement |
| 3 | 1.1.3 | Define Technical Specifications | Describe the initial specifications of the equipment | List of desired technical specifications | Scope Statement |
| 3 | 1.1.4 | Estimate Budget | Estimate all costs associated with the project | Project budget | Project Requirements; quotations |
| 3 | 1.1.5 | Create Layout Design | Propose the installation locations | Floor plan indicating equipment locations. | Blueprints; Project Requirements |
| 3 | 1.1.6 | Approvals | Requirements of project approved by | Signed approval form | Project Requirements; |

| | | | | | |
|---|---|---|---|---|---|
| | | | sponsor and beneficiary | | designs, initial budget |
| **2** | **1.2** | **Procurement** | **Acquire all necessary equipment** | **Delivery of equipment to site** | **Delivery personnel** |
| 3 | 1.2.1 | Source service providers | Outsource services – select at least 3 local providers | Information for at least 3 different providers | Providers' contact information |
| 3 | 1.2.2 | Obtain Quotations/Bids | Receive pricing for equipment & services from providers | Receive official quotation from providers | Quotations |
| 3 | 1.2.3 | Select Quotation/Bid | Choose provider based on criteria | Final selection results and approval | Selection criteria template |
| 3 | 1.2.4 | Obtain Equipment | Successfully order equipment & services | Confirmation that equipment & services secured | Invoices; contract |
| 3 | 1.2.5 | Procurement Finishes | Equipment has landed, cleared, and delivered | Confirmation that equipment is delivered | Order fulfilment receipt |
| **2** | **1.3** | **Installation** | **All work relating to installation of equipment** | **All equipment has been properly installed** | **Installation team** |
| 3 | 1.3.1 | Prepare Site for Installation | Obtain necessary permits & ready local network | Site is ready for installation | Project manager; OA |
| 3 | 1.3.2 | Give Security Clearance | Security officer must authorize entrance of any non-employee | Approval from security officer | Brief background check |
| 3 | 1.3.3 | Installation Process | Equipment installed at designated locations | Equipment fully installed | Service provider's installation team |
| 3 | 1.3.4 | Inspection | Carry out inspection of installation | Inspection results | Quality templates |
| 3 | 1.3.5 | 1st Inspection Complete | Initial inspection of installation complete | Inspection approval signed by PM & SO | Inspection results |
| **2** | **1.4** | **Training** | **Carry out training on operation of new equipment** | **Staff is fully trained on operation of equipment** | **SP expertise & manufacturer guides** |
| 3 | 1.4.1 | Create Training Materials | Work with providers to create training materials | Portfolio of materials to be used for training | Booklets; presentations |
| | 1.4.2 | Conduct Training | Training on operation of new equipment | Staff is fully trained | Training materials |

| | | | | | |
|---|---|---|---|---|---|
| 3 | 1.4.3 | Assessment | Grade results of training | Final training results | Forms; templates |
| 3 | 1.4.4 | Assessment Passed | Assessment results of >75% | All staff meets minimum passing threshold | Assessment results |
| **2** | **1.5** | **Acceptance** | **Final deliverable is accepted** | **Final deliverable is accepted; project close.** | **Inspection & assessment results; signatures** |
| 3 | 1.5.1 | Create Approval Form | Template of approval form must be made | Approval form is created | Template |
| 3 | 1.5.2 | Present Final Deliverable | Final deliverable is presented to beneficiary | Final deliverable is presented to beneficiary | Inspection & assessment results |
| 3 | 1.5.3 | Beneficiary Inspection | Beneficiary conducts final inspection of installation and training results | Inspection form signed by beneficiary | Signatures from Ambassador |
| 3 | 1.5.4 | Project Accepted & Closed | The beneficiary accepts the final project deliverable. Project is closed. | Final approval form is signed by beneficiary | Signature from PM, SO, & Ambassador to denote closure |

### *4.2.5 Requirements Traceability Matrix*

**Chart 8: Requirements Traceability Matrix (G. Novelo, 2024)**

| Req. ID | WBS Code | Requirement | Justification | Objective | Deliverable |
|---|---|---|---|---|---|
| 1 | 1.1.2 | 8 cameras are needed | Cameras required to replace existing equipment and cover blind spots. | Increase the coverage and reliability of equipment and deter crimes. | Approval of project requirements |
| 2 | 1.1.2 | Access control system | Acts as a central hub to monitor and control security equipment. | Allows for increased security management features. | Approval of project requirements |
| 3 | 1.1.2 | Fire detector | Alerts staff if there is a threat of fire in the office. | Improve alert and response times. | Approval of project requirements |
| 4 | 1.1.2 | Carbon monoxide detector | Alerts staff if there is a threat of carbon monoxide in the office. | Improve alert and response times. | Approval of project requirements |

| | | | | | |
|---|---|---|---|---|---|
| 5 | 1.1.3 | Nigh vision (camera) | Better visuals in the dark | Increase security capabilities of the equipment | Establish technical requirements |
| 6 | 1.1.3 | Audio recording (camera) | Audio recording as evidence if necessary | Increase security capabilities of the equipment | Establish technical requirements |
| 7 | 1.1.3 | Auto identification & tracking (camera) | Automatically identify the object being recorded and moves camera to track movement. | Increase security capabilities of the equipment | Establish technical requirements |
| 8 | 1.1.3 | Weather resistant (camera) | Cameras will be able to withstand weather conditions of Belize. | Improve longevity of the equipment | Establish technical requirements |
| 9 | 1.1.3 | Local and remote networking capabilities (access control) | Allows security officer to stay updated regardless of location. | Increase security capabilities of the equipment | Establish technical requirements |
| 10 | 1.2.0 | Equipment is ordered through local vendors | Compliance with embassy policy of prioritizing local vendors. | Wherever possible, use local services to drive local economy. | Equipment is ordered and delivered to site. |
| 12 | 1.3.0 | Installation completed and passed inspection | Project manager needs to verify work done by service provider. | Ensures that equipment is functioning. | Equipment and installation acceptance. |
| 13 | 1.4.3 | Training completed with passing score >75% | Staff should be able to operate equipment in cases of emergency. | Ensures there will always be someone capable of operation. | Assessment results and acceptance. |

### *4.2.6 Scope Control*

The project manager will be solely responsible for ensuring that the scope of the project remains aligned with what is described in the scope statement and WBS. The project manager will make use of the WBS Dictionary to control the scope by referencing it as a statement of work for each element and activity. Activities will be completed in a logical sequence as outlined in the WBS, following a top-down, left-right sequence. The expected deliverables will be achieved by completing only the works described in the WBS dictionary.

The project is expected to take a predictive approach with changes to scope not being expected unless under extraordinary circumstances, however, flexibility will be permitted to an extent as it relates to schedule. If changes to the scope occur, it must first undergo the previously defined process before being approved. All requested changes to the scope will be recorded, along with their status as either approved or rejected.

### *4.2.7 Scope Verification*

Throughout the project, the project manager will verify that each WBS element and its associated deliverable is completed against the scope statement, WBS, and WBS dictionary. The project manager will then meet with the beneficiary for final approval. During this meeting, the project manager will formally present the final deliverable and the beneficiary performs a final inspection. The beneficiary of the project will accept the deliverable by signing an acceptance form. The project is considered closed once this is complete.

## 4.3 Schedule Management Plan

### *4.3.1 Schedule Management Approach*

The schedule plan will demonstrate the approximate timeline of the project's progress, from its start up to its closing. Microsoft Project will be used to illustrate the timeline via Gantt chart and will reflect project deliverables as defined in the WBS. The main input considered for this will be deadline provided by the beneficiary and sponsors; however, it is noted that schedule may differ due to various delays. The project manager will ensure that the schedule is adhered to as much as possible notwithstanding events outside of their control. The project manager will be responsible for creating the activity definitions, their sequencing and duration, and estimating resources associated with each activity.

The initial schedule created will be considered the Schedule Baseline, through which all subsequent schedule performance evaluations will be measured against. Changes to schedule will be recorded in an appropriate log, depending on the reason for change.

### *4.3.2 Schedule Control*

The project's schedule will be continuously monitored and evaluated twice a month to gain up-to-date performance information that will allow the project manager to enact effective measures to control the project's progress and achieve its objectives. The baseline will be used to measure performance. Schedule variance and schedule performance index will be used in this evaluation. SPI acceptance levels are as follows:

| **SPI Acceptance & Response** | |
|---|---|
| =1 | Do Nothing |
| >1 | Identify activities that can be moved up the timeline, if possible |
| <1 | Identify reason for delay and explore corrective actions |

To further control the schedule, the project manager will need to utilize the deadlines provided by the project sponsor. In this case, it will be at the end of the current fiscal year. In addition, MS Project will be used to visualize the project timeline for necessary stakeholders to understand its progress. Using MS Project, the project manager will actively and routinely compare work packages and activities to compare against the baseline. Critical path will be determined when activities are sequenced to identify activities that are considered mission critical, while also highlighting areas for schedule flexibility. Resource smoothing will be the primary response action to any apparent delays to the project schedule.

The project manager should meet with the SO and OA, as well as beneficiary, to conduct what-if scenarios to discuss and explore possible risk areas and their impact on the project. Risks will be recorded in a risk register.

### *4.3.3 Activity List & Estimated Duration*

**Chart 9: Activity List & Estimated Duration (G. Novelo, 2024)**

| WBS | Element | Duration(days) | Start | Finish | Predecessor |
|---|---|---|---|---|---|
| **1.1** | **Planning** | **11 days** | **8/2/24** | **8/16/24** | |
| 1.1.1 | Risk and Security Assessment | 1 | 8/2/24 | 8/2/24 | |
| 1.1.2 | Define Requirements | 2 | 8/2/24 | 8/5/24 | 1.1.1SS |
| 1.1.3 | Define Technical Specifications | 2 | 8/6/24 | 8/7/24 | 1.1.2 |
| 1.1.4 | Estimate Budget | 2 | 8/8/24 | 8/9/24 | 1.1.3 |
| 1.1.5 | Create Layout Design | 5 | 8/12/24 | 8/16/24 | 1.1.4 |
| 1.1.6 | Approvals | 0 | 8/16/24 | 8/16/24 | 1.1.5 |
| **1.2** | **Procurement** | **35 days** | **8/19/24** | **10/4/24** | |
| 1.2.1 | Source service providers | 5 | 8/19/24 | 8/23/24 | 1.1.6 |
| 1.2.2 | Obtain Quotations/Bids | 5 | 8/26/24 | 8/30/24 | 1.2.1 |
| 1.2.3 | Select Quotation/Bid | 3 | 9/2/24 | 9/4/24 | 1.2.2 |
| 1.2.4 | Obtain Equipment | 22 | 9/5/24 | 10/4/24 | 1.2.3 |
| 1.2.5 | Procurement Finishes | 0 | 10/4/24 | 10/4/24 | 1.2.4 |
| **1.3** | **Installation** | **32 days** | **9/23/24** | **11/5/24** | |

| | | | | | |
|---|---|---|---|---|---|
| 1.3.1 | Prepare Site for Installation | 15 | 9/23/24 | 10/11/24 | 1.2.4SS |
| 1.3.2 | Give Security Clearance to SP | 3 | 10/11/24 | 10/15/24 | 1.3.1SS |
| 1.3.3 | Installation Process | 13 | 10/16/24 | 11/1/24 | 1.3.2 |
| 1.3.4 | Inspection | 2 | 11/4/24 | 11/5/24 | 1.3.3 |
| 1.3.5 | 1st Inspection Complete | 0 | 11/5/24 | 11/5/24 | 1.3.4 |
| **1.4** | **Training** | **10 days** | **11/6/24** | **11/19/24** | |
| 1.4.1 | Create Training Materials | 3 | 11/6/24 | 11/8/24 | 1.3.5 |
| 1.4.2 | Conduct Training | 5 | 11/11/24 | 11/15/24 | 1.4.1 |
| 1.4.3 | Assessment | 2 | 11/18/24 | 11/19/24 | 1.4.2 |
| 1.4.4 | Assessment Passed | 0 | 11/19/24 | 11/19/24 | 1.4.3FF |
| **1.5** | **Acceptance** | **3 days** | **11/20/24** | **11/22/24** | |
| 1.5.1 | Create Approval Form | 1 | 11/20/24 | 11/20/24 | 1.4.4 |
| 1.5.2 | Present Final Deliverable | 2 | 11/21/24 | 11/22/24 | 1.4.1 |
| 1.5.3 | Beneficiary Inspection | 1 | 11/22/24 | 11/22/24 | 1.5.2SS |
| 1.5.4 | Project Accepted & Close | 0 | 11/22/24 | 11/22/24 | 1.5.3 |

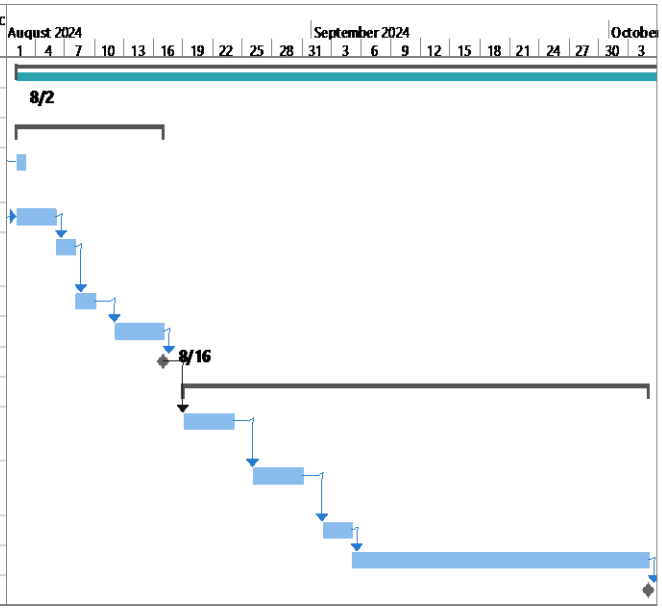
| **Estimated Duration Summary** | | | |
|---|---|---|---|
| **WBS Element** | **Days** | **End Date** | |
| 1.1 Planning | 11 days | 8/16/24 | **Some activities will run concurrently.** |
| 1.2 Procurement | 35 days | 10/4/24 | |
| 1.3 Installation | 32 days | 11/5/24 | |
| 1.4 Training | 10 days | 11/19/24 | |
| 1.5 Acceptance | 3 days | 11/22/24 | |
| **TOTAL EST. DURATION** | **81 days** | **11/22/24** | |

.

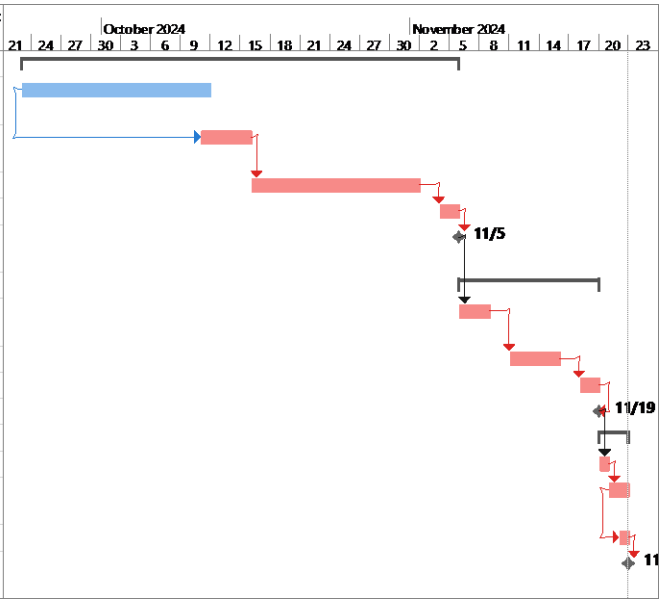
### *4.3.4 Gantt Chart*

**Figure 4: Gantt Chart (G. Novelo, 2024)**

| ID | WBS | Task Name | Duration | Start | Finish | Predec |
|---|---|---|---|---|---|---|
| 1 | **0** | **Upgraded Security** | **81 days** | **Fri 8/2/24** | **Fri 11/22/24** | |
| 2 | 0.1 | Project Start | 0 days | Fri 8/2/24 | Fri 8/2/24 | |
| 3 | **1.1** | **Planning** | **11 days** | **Fri 8/2/24** | **Fri 8/16/24** | |
| 4 | 1.1.1 | Security and Risk Assessment | 1 day | Fri 8/2/24 | Fri 8/2/24 | |
| 5 | 1.1.2 | Define Requirement: | 2 days | Fri 8/2/24 | Mon 8/5/24 | 4SS |
| 6 | 1.1.3 | Define Technical Specification | 2 days | Tue 8/6/24 | Wed 8/7/24 | 5 |
| 7 | 1.1.4 | Estimate Budget | 2 days | Thu 8/8/24 | Fri 8/9/24 | 6 |
| 8 | 1.1.5 | Create Layout Design | 5 days | Mon 8/12/2 | Fri 8/16/24 | 7 |
| 9 | 1.1.6 | Approvals | 0 days | Fri 8/16/24 | Fri 8/16/24 | 8 |
| 10 | **1.2** | **Procurement** | **35 days** | **Mon 8/19/2** | **Fri 10/4/24** | |
| 11 | 1.2.1 | Source Service Providers | 5 days | Mon 8/19/24 | Fri 8/23/24 | 9 |
| 12 | 1.2.2 | Obtain Quotation/Bids | 5 days | Mon 8/26/24 | Fri 8/30/24 | 11 |
| 13 | 1.2.3 | Select Quotation/Bid | 3 days | Mon 9/2/24 | Wed 9/4/24 | 12 |
| 14 | 1.2.4 | Obtain Equipment | 22 days | Thu 9/5/24 | Fri 10/4/24 | 13 |
| 15 | 1.2.5 | Procurement Finishe | 0 days | Fri 10/4/24 | Fri 10/4/24 | 14 |




| ID | WBS | Task Name | Duration | Start | Finish | Predec |
|---|---|---|---|---|---|---|
| 16 | **1.3** | **Installation** | **32 days** | **Mon 9/23/2** | **Tue 11/5/24** | |
| 17 | 1.3.1 | Prepare Site for Installation | 15 days | Mon 9/23/24 | Fri 10/11/24 | 14SS |
| 18 | 1.3.2 | Give Security Clearance | 3 days | Fri 10/11/24 | Tue 10/15/24 | 17SS |
| 19 | 1.3.3 | Installation Process | 13 days | Wed 10/16/ | Fri 11/1/24 | 18 |
| 20 | 1.3.4 | Inspection | 2 days | Mon 11/4/2 | Tue 11/5/24 | 19 |
| 21 | 1.3.5 | 1st Inpection Complete | 0 days | Tue 11/5/24 | Tue 11/5/24 | 20 |
| 22 | **1.4** | **Training** | **10 days** | **Wed 11/6/2** | **Tue 11/19/2** | |
| 23 | 1.4.1 | Create Training Material | 3 days | Wed 11/6/24 | Fri 11/8/24 | 21 |
| 24 | 1.4.2 | Conduct Training | 5 days | Mon 11/11/ | Fri 11/15/24 | 23 |
| 25 | 1.4.3 | Assessment | 2 days | Mon 11/18/ | Tue 11/19/2 | 24 |
| 26 | 1.4.4 | Assessments Passed | 0 days | Tue 11/19/2 | Tue 11/19/2 | 25FF |
| 27 | **1.5** | **Acceptance** | **3 days** | **Wed 11/20/** | **Fri 11/22/24** | |
| 28 | 1.5.1 | Create Approval Forn | 1 day | Wed 11/20/ | Wed 11/20/ | 26 |
| 29 | 1.5.2 | Present Final Deliverable | 2 days | Thu 11/21/24 | Fri 11/22/24 | 28 |
| 30 | 1.5.3 | Beneficiary Inspectio | 1 day | Fri 11/22/24 | Fri 11/22/24 | 29SS |
| 31 | 1.5.4 | Project Accepted & Closed | 0 days | Fri 11/22/24 | Fri 11/22/24 | 30 |



## 4.4 Cost Management Plan

### *4.4.1 Cost Management Approach*

The project manager assigned to the project will be the primary person responsible for managing project finances, with additional administrative support from the OA as necessary. Costs will be managed using the WBS, specifically using the second level, to define control accounts and decompose costs using project activities as line items. Where appropriate, the project schedule will be used as well to detail costs that are duration dependent.

The initial budget estimation will follow a bottom-up approach, where the costs for each activity will be estimated and summed up to calculate costs associated with each control account. Totals for each control account will be aggregated to estimate the initial budget for all works associated with the project. This will be considered the budget at completion. In addition, in alignment with MOFA's recommendations, a contingency and management reserve of 5% each will also be considered. The cost baseline will be calculated using the sum of BAC and contingency reserve, whereas the total project budget will be determined using the sum of the baseline and management reserve.

### *4.4.2 Cost Control*

The costs of the project will be evaluated based on the total duration of the project's assumed time frame. This will occur at 50% and 80% completion to ensure that the budget is being adhered to, and a final evaluation at 100% so that the project's cost performance can be wholly evaluated.

The primary mechanism for understanding cost performance at each stage will be cost variance and cost performance index. The baseline will be the measure to which these analyses will be evaluated against. To this end, the acceptance levels of CPI are as follows:

| CPI Acceptance & Response | |
|---|---|
| =1 | Do Nothing |
| >1 | Identify activities that can benefit from an injection of funds |
| <1 | Identify reason for over expenditure and explore corrective actions |

Based on the result of the CPI, additional forecasting may be conducted to explore possible scenarios and the results of corrective actions. Cost forecasting and tracking will be implemented to control the costs using MS Project. Should performance be less than expected, corrective action primarily in the form of resource optimization will be triggered to keep the costs within acceptable bounds.

Controlling project costs may also take the form of contract and vendor management. This will ensure that the payment terms and conditions are negotiated in favor of the embassy. The contract terms will also prevent any unexpected surcharges.

Changes to budgets will undergo the previously defined procedure and be recorded.

### *4.4.3 Project Budget*

**Chart 10: Project Budget (G. Novelo, 2024)**

| WBS | Element | Unit Cost | Qty | Total | Notes |
|---|---|---|---|---|---|
| **1.1** | **Planning** | | | **$1,000.00** | |
| 1.1.1 | Risk and Security Assessment | -- | -- | -- | No anticipated costs |
| 1.1.2 | Define Requirements | $50.00 | 1 | $50.00 | Bonus to PM |
| 1.1.3 | Define Technical Specifications | $50.00 | 1 | $50.00 | Bonus to PM |

| | | | | | |
|---|---|---|---|---|---|
| 1.1.4 | Estimate Budget | $100.00 | 1 | $100.00 | Bonus to PM |
| 1.1.5 | Create Layout Design | $800.00 | 1 | $800.00 | Contract architect to create floor plan |
| 1.1.6 | Approvals | -- | -- | -- | No anticipated costs |
| **1.2** | **Procurement** | | | **$68,425.50** | |
| 1.2.1 | Source service providers | $50.00 | 1 | $50.00 | Travel cost to visit SP |
| 1.2.2 | Obtain Quotations/Bids | $150.00 | 3 | $450.00 | Consultation fee |
| 1.2.3 | Select Quotation/Bid | $50.00 | 1 | $50.00 | Bonus to PM |
| 1.2.4 | Obtain Equipment | $67,875.50 | 1 | $67,875.50 | Equipment breakdown in appendices. |
| 1.2.5 | Procurement Finishes | -- | -- | -- | No anticipated costs |
| **1.3** | **Installation** | | | **$5,385.00** | |
| 1.3.1 | Prepare Site for Installation | $15.00/hr | 15d | $1,800.00 | $15/hr; 4hrs/day; 15 days; 2 people |
| 1.3.2 | Give Security Clearance to SP | $25.00 | 1 | $25.00 | Background check service |
| 1.3.3 | Installation Process | $15.00/hr | 13d | $3,510.00 | $15/hr; 6hr/day; 13days; 3 people |
| 1.3.4 | Inspection | $50 | 1 | $50.00 | Bonus to PM |
| 1.3.5 | 1st Inspection Complete | -- | -- | -- | No anticipated costs |
| **1.4** | **Training** | | | **$450.00** | |
| 1.4.1 | Create Training Materials | $100 | 1 | $100.00 | Bonus to PM |
| 1.4.2 | Conduct Training | $15.00/hr | 5d | $300.00 | 15/hr; 4hr/day; 5days; 1 person |
| 1.4.3 | Assessment | $50.00 | 1 | $50.00 | Bonus to PM |
| 1.4.4 | Assessment Passed | -- | -- | -- | No anticipated costs |
| **1.5** | **Acceptance** | | | **$50.00** | |
| 1.5.1 | Create Approval Form | $50.00 | 1 | $50.00 | Bonus to PM |

| | | | | | |
|---|---|---|---|---|---|
| 1.5.2 | Present Final Deliverable | -- | -- | -- | No anticipated costs |
| 1.5.3 | Beneficiary Inspection | -- | -- | -- | No anticipated costs |
| 1.5.4 | Project Accepted & Close | -- | -- | -- | No anticipated costs |
| | **TOTAL** | | | **$75,310.50** | |

| | |
|---|---|
| Contingency Reserve (5%) | $3,765.53 |
| Management Reserve (5%) | $3,953.80 |
| **Cost Baseline** | **$79,076.02** |
| **TOTAL PROJECT BUDGET** | **$83,029.82** |

## 4.5 Quality Management Plan

### *4.5.1 Quality Management Approach*

The quality management plan will describe all activities and processes required for delivering a final product that meets all expected specifications and requirements. The approach used will place focus on the needs of the beneficiary of the project. It will reflect the embassy's current desires for new security measures and potential for future growth through scalable solutions.

The project manager, security officer, and beneficiary will oversee defining quality standards, with additional supplemental input from the office administrator and guidance from the ministry to advise on preferred best practices. For this project, project quality will be divided into product and process quality, both with their own metrics for defining and measuring quality. Product quality will refer to the physical characteristics and technical specifications of the equipment; while process quality will refer to the way activities are carried, with focus being placed on the procurement, installation, and training phases of the project. The project manager, with support from the security officer, will hold the primary responsibility of ensuring both product and process quality are met. This responsibility will be fulfilled using inspection, checklists, and metrics, as well as meetings if necessary (see appendix 4 for sample template).

### *4.5.2 Quality Assurance & Metrics*

To ensure that both process and product standards are being met, quality will be assessed at frequent intervals as defined by the milestones on the WBS. The final deliverable will be inspected for quality by the beneficiary. Different performance metrics will be used to assess the

deliverables, these will then be measured using checklists and quality scales. The metrics will therefore be determined based on applicability to the current project.

The areas of quality being assessed fall within five categories: technical specifications, ease of use, budget, schedule, and scalability.

**Chart 11: Quality Categories (G. Novelo, 2024)**

| Category | Definition |
|---|---|
| Technical specification | The equipment will meet the needs of the customer. This includes size, functionality, and maintenance. |
| Ease of use | The equipment, including its hardware and software, will not be difficult to operate. Instructions for its usage will be unambiguous. Training included. |
| Budget | The final cost of the project will be less than or equal to the estimated cost. |
| Schedule | Activities (procurement, shipping, training, etc.) will be completed within the estimated time frame. |
| Scalability | The equipment that will be selected will can be easily adapted to a larger network to account for future growth. |

Given these areas of quality that will be considered for the project, different performance metrics will be used to specifically measure the degree to which these areas are being met.

**Chart 12: Quality Metrics (G. Novelo, 2024)**

| Product Quality | Process Quality |
|---|---|
| Customer Satisfaction<br>Product lifespan<br>Cost of quality<br>Video Retention Compliance | Customer Satisfaction<br>On-time order rate<br>Rework rate<br>Complaint resolution time<br>CPI & SPI<br>Knowledge retention<br>Cost of quality |

Based on the preliminary metrics defined, their respective baselines, measurement frequency, and responsibilities will be described.

**Chart 13: Quality Metrics Definitions & Frequencies (G. Novelo, 2024)**

| Metric | Definition | Expected Outcome | Frequency | Responsibility |
|---|---|---|---|---|
| Customer satisfaction | The degree to which the beneficiary is satisfied with the progress and outcome of the project | Very satisfied (8 or higher overall, on a scale of 1-10) | At every project milestone. | Project manager |
| On-time order rate | The degree to which deliveries are made on time. | All deliveries will be done on schedule. | Per delivery ETA | Service providers |
| Rework rate | The extent to which the Install Team will need to re-do/adjust certain tasks to eliminate faults. | 5% rework rate | At the end of installation, before clean-up. | Service providers |
| Complaint resolution time | Time taken to address customer feedback and resolve complaints. | Max. one week to present a solution. | Per customer communication | Project manager, security officer, service providers |
| Product lifespan | The degree to which the equipment has experienced wear and tear | Depreciation of 5-8% per annum | Annually | Service providers |
| Cost of quality | Costs of conformance and non-conformance | 10% of project budget | Continuous throughout the project | Project manager, Service providers |
| Cost performance index | The extent to which activities are being done within estimated costs | CPI equal to or greater than 1 | Intervals of 50%, 80%, 100% project completion | Project manager |
| Schedule performance index | The degree to which activities are being done within estimated time frame | SPI equal to or greater than 1 | Intervals of 50%, 80%, 100% project completion | Project manager, service providers |
| Knowledge retention | The extent to which the end user knows how to operate the equipment | 90% pass rate on end user tests. | Once, after training sessions are complete | Project manager |
| Level of Risk | The degree to which gaps in security have been resolved. | 100% of identified security gaps resolved. | Once; at the time of inspections | Security officer, project manager |

### *4.5.3 Quality Activities & Control*

The activities to ensure quality will similarly be based on the WBS milestones, with the milestones acting as quality deliverables. The activities that will be carried out will manage and control the quality of the project's final deliverable.

**Chart 14: Quality Activities (G. Novelo, 2024)**

| Deliverable | Requirement | Manage & Control Activity | Frequency & Expected Outcome | Responsibility |
|---|---|---|---|---|
| Project Start | Initial project requirements documented. | Manage: Keep track of Meeting Minutes for record keeping.<br>Control: Use agenda and checklists to keep meeting on track | Once, at the start.<br>All requirements identified and recorded. | PM |
| Approvals | Project scope, budget, and schedule approval forms signed. | Manage: Keep track of Meeting Minutes for record keeping.<br>Control: Use agenda and checklists to keep meeting on track | Once, at the start<br>Scope, budget, schedule determined and approved. | PM, Sponsor, Beneficiary |
| Procurement Finishes | All bid documents from SP. Equipment have been delivered. | Manage: Cause and Effect diagram and flowcharts to visualize the process and identify issues<br>Control: Performance reviews, root cause analysis, and product testing | Once, after SP is selected and terms accepted.<br>Items delivered with no functional defects. | PM, SP |
| 1st Inspection Complete | Installation complete. 1st inspection documented. | Manage: Flowcharts to visualize process. Data Analysis Techniques and Audits to ensure project follows established standards.<br>Control: Use of Checklists and surveys to accurately identify which requirements are met. | Once, after installation is complete.<br>Equipment installed in identified locations and are operational. | PM |

| | | | | |
|---|---|---|---|---|
| Assessment Passes | Training complete. Assessment scores documented. | Manage: Data collection and Analysis to formulate an appropriate test and measure its results.<br>Control: Meet with SP. Administer user tests, visual data representation of findings. | Once, after installation. May be repeated depending on test scores. 4 end users pass with >90% score. | PM, SP |
| Project Accepted & Closed | Final inspection completed. Lessons learned updated. Retrospective documented. | Manage: Data Analysis Techniques and Audits to ensure project follows established standards.<br>Control: Use of Checklists and surveys to accurately identify which requirements are met. | Once, at the end of project. Beneficiary accepts the final delivery with no critiques on functionality. | PM, Beneficiary |

Furthermore, the project manager along with the security officer will perform the inspections and measurements of all interim deliverables. The final deliverable will be inspected by the beneficiary. Each deliverable, including the final, must fall within the previously defined thresholds to be accepted. The acceptance of each deliverable will be recorded using an acceptance form, which will also keep track of any additional comments and actions that have been undertaken.

## 4.6 Resource Management Plan

### *4.6.1 Resource Management Approach*

The resource plan will show the resources, both human and material, that will be needed to complete project activities. It will highlight how the resources will be utilized, including their assignment to specific project tasks. For this specific project, the project manager will hold the primary responsibility of managing the resources to achieve efficiency. Supporting this responsibility will be the security officer, office administrator, and service provider.

The material resources for the project will be considered the new security equipment, the tools and vehicles required for delivery and installation, as well as materials used during the training process. In contrast, the human resources for the project will be classified as the individual or group of individuals who are responsible for, or contribute to, accomplishing project objectives.

### *4.6.2 Roles and Responsibilities*

Those involved, whether directly or indirectly, will need to understand their position in relation to the project so that the activities can be effectively and efficiently completed. The roles and responsibilities for the main stakeholders will be:

**Chart 15: Roles and Responsibilities – Resource Management (G. Novelo, 2024)**

| Name | Role | Responsibility |
|---|---|---|
| Ministry of Foreign Affairs | Sponsor | Acts as the main source of project funding.<br>Approves project budget and scope |
| Embassy | Beneficiary | Gives acceptance of project's final deliverable.<br>Approves project schedule. |
| Security Officer | Project Team | Makes and approves change requests.<br>Update project documents as necessary. |

| | | |
|---|---|---|
| | | Communicate project status to sponsor. |
| Office Administrator | Project Team | Makes change requests.<br>Provide input for approval of change requests.<br>Update project documents as necessary. |
| Project Manager | Project Manager | Manage project progress and activities.<br>Coordinate project activities with consultants/service providers.<br>Make and approve change requests. |
| Consultant/Service Providers | Consultant | Provide quotation for necessary services/equipment.<br>Execute project activities. |

A RACI (responsible, accountable, consulted, informed) chart will be used to further define the specific dynamics and responsibilities between the project's main stakeholders and project activities:

**Chart 16: RACI Chart (G. Novelo, 2024)**

| | **Ministry** | **Embassy** | **Security Officer** | **Office Administrator** | **Project Manager** | **Service Provider** |
|---|---|---|---|---|---|---|
| 1.1.1 Risk & Security Assessment | I | C | R | A | A | I |
| 1.1.2 Define Requirements | C | R | C | C | A | I |
| 1.1.3 Define Technical Specifications | C | R | C | C | A | I |
| 1.1.4 Estimate Budget | C | R | A | A | A | I |
| 1.1.5 Create Layout Design | C | I | A | I | A | R |
| 1.1.6 Approvals | R | R | A | I | A | I |
| 1.2.1 Source service providers | I | C | A | I | R | I |
| 1.2.2 Obtain Quotations/Bids | I | I | I | I | R | C |
| 1.2.3 Select Quotation/Bid | I | C | C | C | R | I |
| 1.2.4 Obtain Equipment | I | I | I | I | A | R |
| 1.2.5 Procurement Finishes | I | I | I | I | A | R |
| 1.3.1 Prepare Site for Installation | I | I | I | C | A | R |
| 1.3.2 Give Security Clearance | I | I | R | I | A | I |
| 1.3.3 Installation Process | I | I | C | C | A | R |
| 1.3.4 Inspection | I | I | C | I | R | I |
| 1.3.5 1st Inspection Complete | I | I | A | I | R | I |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1.4.1 Create Training Materials | I | I | A | I | C | R |
| 1.4.2 Conduct Training | I | I | C | I | A | R |
| 1.4.3 Assessment | I | I | C | C | A | R |
| 1.4.4 Assessment Passed | I | I | I | I | R | I |
| 1.5.1 Create Approval Form | I | I | I | I | R | I |
| 1.5.2 Present Final Deliverable | I | C | A | C | R | I |
| 1.5.3 Beneficiary Inspection | C | R | C | I | A | I |
| 1.5.4 Project Accepted & Closed | A | R | C | C | I | I |

Any changes to the assignment of roles and responsibilities must first be submitted to the project manager, who will then consult with the relevant personnel such as SO and OA. All requests, along with the approval status will be recorded in a change log (appendix 1). Project documents will need to be updated to reflect any approved changes.

### *4.6.3 Human Resources*

The human resources involved in the project will be a combination of internal staff and external consultants/service providers. As such, the staffing for this project will follow a relatively straight forward process; this is especially true given the overall organizational structure of the embassy.

The internal staff will be pre-decided based on their role at the embassy, with three members being involved. The external consultants will be decided based on a multicriteria analysis as well as general organizational compatibility, which will be decided via in-person meetings. The initial expectation is that three individuals from the chosen service providers will be involved in the project. The service provider will provide individuals with experience in IT, installations, networking, and facilitating training. The selection of the consultants will follow

the timeline previously defined in the WBS and schedule management plan. An example of the selection criteria can be found in appendix 6.

Given the project's intended timeline, performance appraisals for the project will follow the regularly scheduled quarterly evaluations that all staff must undergo. For the project manager specifically, monetary bonuses will be rewarded per successful completion of specified project deliverables which are accounted for in the project budget. Depending on the project's actual budget at completion, a completion bonus may be rewarded to the others directly involved in the project, including service providers.

### *4.6.4 Material Resources*

The specific materials required for the project will be fully determined after the service provider has been selected because it will require their expertise to reduce the potential of delays or resource waste. Initial materials in the forms of documentations and other OPAs have been defined in the WBS Dictionary.

Once fully defined, the material resources will be sourced from a combination of internal and external sources. It is anticipated that majority of the material resources required will be allocated for the Installation phase of the project, thus the main external source will be hardware and IT stores. It will be the responsibility of the service providers to acquire the resources using the project budget.

## 4.7 Communication Management Plan

### *4.7.1 Communication Management Approach*

The communication plan will be used to describe how communication will be carried out throughout the project's lifecycle. This will include details such as communication types, media, and frequency of communication. It will be the responsibility of the project manager to ensure that the communication plan is adhered to effectively to avoid any communication-related issues. A communication matrix will be used to outline most of the details relating to this specific area of the project.

Updates and changes to the communication plan are permissible if the proper change procedures are followed. The details of the request must be submitted to the project manager who will then decide, after additional consultations with the SO and OA, the status of the request. The changes will be recorded in the appropriate log for transparency and accountability purposes. Additionally, any changes made to the project itself, whether scope, budget, etc., will be communicated to the other stakeholders based on the communication matrix defined here.

### *4.7.2 Communication Matrix*

The project will make use of a variety of formal and informal communication channels based on urgency and organizational preferences of both the embassy and service providers, and availability of the chosen medium and methods.

**Chart 17: Communication Matrix (G. Novelo, 2024)**

| Communication Type | Objective | Medium | Frequency | Audience | Deliverable |
|---|---|---|---|---|---|
| Initial Planning Meeting | Discuss initial project requirements. | Face-to-Face meetings. | Once; before formal start | PM, Ministry, | Meeting minutes, |

| | | | | | |
|---|---|---|---|---|---|
| | | Email with Ministry. | | Beneficiary, SO, OA | Project requirements |
| Kickoff Meeting | The official start of project to reiterate project objectives. | Face-to-Face meetings. | Once; at the official start | PM, Beneficiary, SO, OA | Meeting minutes |
| Service provider Consultation | Finalize the equipment requirements and expectations for installation and training. | Face-to-Face meetings; phone calls; email | As needed during the Procurement phase | PM, SO, Service providers | Meeting minutes, Quotations, Bid documents |
| Status Reports | Give updates on the progress of the project. | Instant messages; email | Periodically, as needed. | PM, Beneficiary SO, Service providers | Progress reports, slides, spreadsheets. |
| Project Close & Retrospective | Formally close project and discuss the experience throughout the project. | Face-to-face meetings | Once; at the end of project | PM, Beneficiary, SO, OA | Acceptance forms, Checklists, Meeting minutes |

Face-to-Face meetings will be conducted between internal project members as well as with service providers as indicated above. The main goal of these is to get immediate feedback from those involved so that there is minimal room for ambiguity.

Emails will be used to communicate with the Ministry of Foreign Affairs as well as service providers as necessary. Emails will be preferred when communicating with the ministry due to the time difference between countries. As it relates to service providers, these will mostly be used to send document updates and quotations.

Phone calls and instant messages will be used for near instant communication with the intended recipient. These will be especially helpful in the event of an unexpected occurrence during the project's lifecycle.

### *4.7.3 Communication Control*

It is important for communication to be efficient and effective in conveying its intended meaning. The project will use the matrix to perform regular checks to ensure that the proper communication protocols are followed. Additionally, those involved in the communication of the project may raise concerns or preferences for communication medium and frequency as the project progresses. These will also be addressed in the change log (appendix 1).

In addition, the project manager will regularly check that metrics such as customer satisfaction and complain resolution time are being adhered to. The performance of these metrics can be directly linked to communication and engagement with the project stakeholders.

If any issues are brought up, it the responsibility of the project manager to address it immediately. The project manager is to use the communication matrix to identify the cause, whether it be the chosen medium being inadequate or infrequent updates, for example. The appropriate changes to these will be recorded. In certain circumstances, it would be appropriate to escalate issues to the office administrator then security officer for resolution.

## 4.8 Risk Management Plan

### *4.8.1 Risk Management Approach*

Managing risks is a crucial part of ensuring that the project's progress does not get negatively impacted. The risk management plan, therefore, is meant to create a guideline for the identification of risks and actions necessary to manage their impacts. Risk management will undergo a systemic approach as described by PMI. The primary responsibility of ensuring risk management is successful will fall to the project manager, with support from internal embassy staff and additional support from the service providers as necessary.

The initial identification and scoring of risks will occur early in the planning phase of the project's lifecycle. However, because risk management is a continuous and fluid process, new risks may arise or already identified risks may need updating. Acknowledging this, risks will be assessed at regular intervals, and as necessary, with the results of the assessments being recorded in a risk register. The actions required to address risks will be based on guidance from the ministry and security officer using the embassy's organizational policies to dictate acceptable bounds. Given that the embassy has limited experience with internal projects, however, the project manager will make recommendations for additional actions where necessary.

### *4.8.2 Risk Identification*

Risk identification will initially be conducted during the initial planning sessions with the internal project team. The process of identification will primarily utilize brainstorming sessions, assumption analysis, and discussions with stakeholders. Further identification of risks will largely rely on the results of the inspections throughout the project's lifecycle, but also the input from the service providers will be taken into consideration given their expertise. The results of

the identification process will be recorded in the risk register. A risk breakdown structure (RBS) will also be created to further organize and classify risks.

### *4.8.3 Risk Prioritization and Response*

To properly address the risks involved in the project, a standardized approach to prioritizing the risks based on severity will need to be established. To this end, a probability impact matrix will be created, assigning a value to each risk based on the project team's perception of the given risk.

**Chart 18: Risk Prioritization Matrix (G. Novelo, 2024)**

| Score | Probability | Impact |
|---|---|---|
| 1 | Event is very unlikely to occur | Event will have very low impact on project schedule/budget |
| 2 | Event is somewhat unlikely to occur | Event will have low impact on project schedule/budget |
| 3 | Event has a moderate chance to occur | Event will have moderate impact on project schedule/cost |
| 4 | Event is somewhat likely to occur | Event will have high impact on project schedule/cost |
| 5 | Event is very likely to occur | Event will have very high impact on project schedule/cost |

| | Impact | | | | |
|---|---|---|---|---|---|
| **Probability** | **Very low** | **Low** | **Moderate** | **High** | **Very High** |
| **Very likely** | 5 | 10 | 15 | 20 | 25 |
| **Somewhat likely** | 4 | 8 | 12 | 16 | 20 |
| **Moderately likely** | 3 | 6 | 9 | 12 | 15 |
| **Somewhat unlikely** | 2 | 4 | 6 | 8 | 10 |
| **Very unlikely to occur** | 1 | 2 | 3 | 4 | 5 |
| Key: | | | | | |

| |
|---|
| GREEN (1-5) = low severity risks<br>YELLOW (6-15) = moderate severity risks<br>RED (16-25) = high severity risks |

The severity of each risk, calculated by multiplying probability and impact, will be used to determine the appropriate action to take to address the specific risk. The responses will follow guidance from the project sponsor, beneficiary, and project manager. Generally, the risk responses will fall under the categories of avoid, mitigate, transfer, accept, or escalate. 'Risk avoidance' are actions that will attempt to avoid the risk altogether, 'mitigation' are actions that attempt to control the severity of the risk, 'transference' are actions that will place the responsibility of the risks to external parties, 'acceptance' actions are simply bearing the impact of the risks, and 'escalation' are actions that would require a higher authority to permit the response.

### *4.8.4 Risk Breakdown Structure & Risk Register*

**Figure 5: Risk Breakdown Structure (G. Novelo, 2024)**

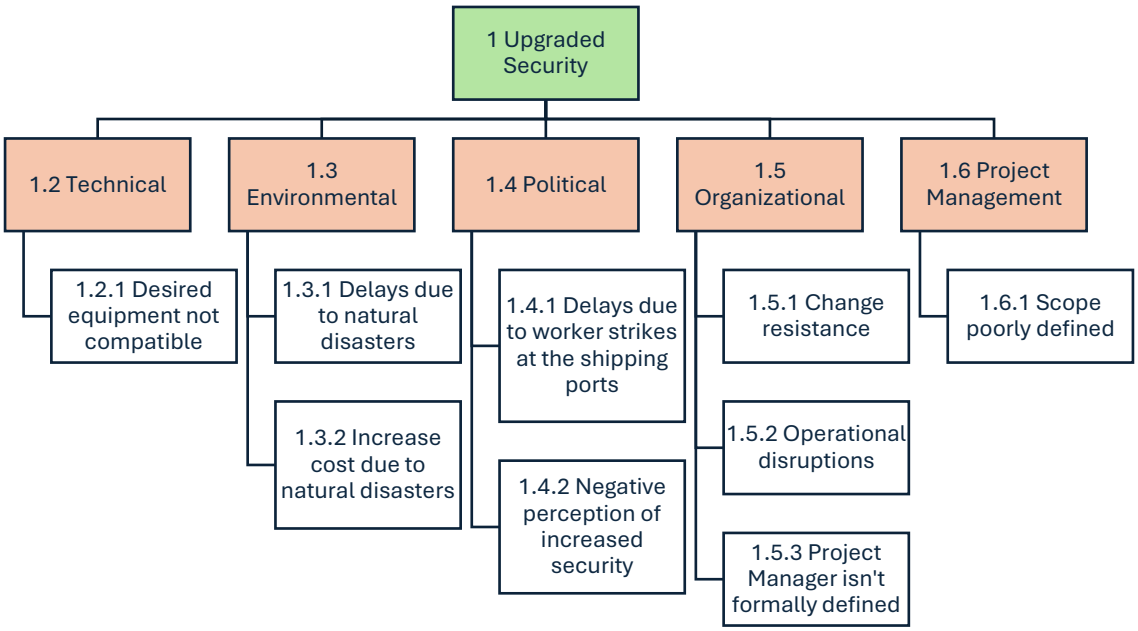


**Chart 19: Risk Register (G. Novelo. 2024)**

| RBS | Category | Description | P | I | PxI | Response |
|---|---|---|---|---|---|---|
| 1.2.1 | Technical | The desired equipment may not be compatible with the existing infrastructure and networking at the embassy. | 1 | 2 | 2 | Avoid – work alongside service provider to select equipment that can meet specifications and fit the current capability of the embassy. |
| 1.3.1 | Environmental | The project will take place during the hurricane season, so freight shipping may experience delays due to ocean conditions. | 4 | 5 | 20 | Transfer – it will be the responsibility of the service provider to assess conditions and make the best decision to avoid delays. |
| 1.3.2 | Environmental | The project will take place during the hurricane season, so additional costs may be incurred to expedite importation. | 4 | 3 | 12 | Accept – contingency reserve will be accessed to pay for faster shipping. Effects of hurricane are near unavoidable. |
| 1.4.1 | Political | The trade union at the port will sometimes organize workers strikes to protest working conditions and other labor disputes. | 3 | 4 | 12 | Accept – the embassy or service provider will be unable to take any action to address this issue. |
| 1.4.2 | Political | The diplomatic and public perception of an increase in security measures may create tension between the embassy and host country. | 1 | 5 | 5 | Mitigate – work with public relations branch of the embassy to resolve concerns. |
| 1.5.1 | Organizational | Current employees may feel discomfort with the additional measures being put in place since it is increased surveillance. | 3 | 3 | 9 | Mitigate – use ADKAR model to promote acceptance. |
| 1.5.2 | Organizational | The installation of equipment may require shutting down of power and networking capabilities. | 5 | 3 | 15 | Escalate – engage with Chief of Mission to activate non-emergency backup power supplies to continue operations. |
| 1.5.3 | Organizational | The role of project manager does not formally exist at the embassy, so | 5 | 2 | 10 | Mitigate – staff member undertaking the project will receive guidance from senior personnel to |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | responsibilities are ambiguously defined. | | | | minimize effects of ambiguity. |
| 1.6.1 | Project Management | The project team may poorly define its project objectives and scope given the relative novelty of an internal project. | 2 | 3 | 6 | Avoid – brainstorm possible areas of ambiguity and work to clarify. |

### *4.8.5 Contingency Reserves*

A contingency reserve of 5%, based on organizational guidance, will be used for this project. This equals BZD$3,765.53, which is accounted for in the cost management plan. The contingency reserve will be used to correct and mitigate the impact of the identified risks only in cases where the owner of said risk is an internal team member. The service provider or other third parties will assume full responsibility for bearing the costs of risks that are owned by them. Internal project team members will be given full authorization to access the contingency reserve to implement the defined risk responses. In doing so, the office administrator will need to be informed to complete the transaction.

## 4.9 Procurement Management Plan

### *4.9.1 Procurement Management Approach*

The procurement plan will cover all initial aspects relating to the acquisition of resources, both material and human, for the successful completion of the project. The project manager will work alongside the SO, OA, and beneficiary to identify the procurement needs of the project. The project manager will also be the main person responsible for ensuring that procurement activities are completed successfully.

It is the expectation that as the project progresses, make or buy analyses will need to be conducted to determine whether certain material resources will need to be procured. In particular, the embassy does carry certain tools and equipment that may provide utility throughout the installation process. Their efficacy, however, will need to be determined using the expertise of the service providers. Procurement for these items will occur only if the service provider cannot supply the appropriate items themselves and a ‘buy’ decision is deemed the most appropriate action.

The project manager will have the primary responsibility of authorizing purchases, with supporting guidance from SO and OA. Procurement activities will follow the embassy’s policy of preferential selection bias for local suppliers and service providers. As such, the project manager will source service providers from the local business directory. In addition, the embassy will strongly encourage the service providers to source their own supplies from local vendors. However, it is acknowledged that the nature of the project will necessitate some importation.

### *4.9.2 Procurement Items*

Resources that will need to be procured will be fully identified as more formal planning takes place and will primarily rely on the results of the meetings among internal project members, with additional expert input from the service providers at later stages of the project. At this stage, the project will consider the procurement of services and equipment:

**Chart 20: Procurement Items Definitions (G. Novelo, 2024)**

| ID | Item | Description | Funding Source |
|---|---|---|---|
| P01 | Service provider | To provide technical services that cannot be provided internally. Should provide security equipment, installation services, and training services. | Project budget |
| P02 | Equipment | The physical items required to upgrade the existing system. Includes the cameras, alarms, and other items. | Project budget |

### *4.9.3 Procurement Selection Criteria*

The procurement selection process will make use of the selection criteria found in appendix 6. A weighted average will be determined based on selected key criteria. The service provider with the highest value will be awarded the contract.

### *4.9.4 Procurement Contract*

Three types of contracts are being considered for use in this project. Namely: fixed-cost, cost-reimbursable, and time-and-material contracts. The project manager will work alongside the other internal team members to decide on a contract based on discussions with the service providers. However, there is a strong preference for the use of a time-and-material contract

because it will give the embassy the greatest flexibility in determining terms and conditions. Regardless of the type of contract, an incentive will be given to the service provider if the project is completed ahead of schedule and under budget, which will be based on the remaining project budget.

## 4.10 Stakeholder Management Plan

### *4.10.1 Stakeholder Management Approach*

The stakeholder management plan will describe the actions necessary to successfully interact with the project stakeholders. A focus will be placed on classifying and prioritizing stakeholders so that appropriate engagement strategies can be developed.

The project manager will be primarily responsible for the processes and activities involved in stakeholder management with support from the SO.

New stakeholders and updates to existing stakeholders may occur as the project progresses to reflect new scenarios throughout the project's lifecycle. To acknowledge these changes, updates to stakeholder classification and prioritization are permitted and must be recorded in a change log (appendix 1) with appropriate details.

### *4.10.2 Stakeholder Identification*

Identification will be conducted mainly through brainstorming sessions. Each member of the internal project team will be considered their own stakeholder given the differences in their functional departments and main concerns and expectations throughout the project. Moreover, given the scope and nature of the project, it will be expected that there will be limited external stakeholders.

**Chart 21: Stakeholder Register (G. Novelo, 2024)**

| ID | Stakeholder | Functional Area | Role/Responsibility | Expectations | Requirements | Influence/Impact |
|---|---|---|---|---|---|---|
| 1 | Ministry of Foreign Affairs | Foreign relations, diplomacy | Main sponsor who will ensure that funds are made available when needed. | All project activities completed within policy | Be informed of project status, risks, and changes. | Medium/Medium |
| 2 | Embassy | Foreign relations, diplomacy, foreign aid | Beneficiary of the project who will approve project timeline. | Upgrade to security within schedule and budget | Security measures meet requirements. Inspections are completed. Project is delivered. | High/High |
| 3 | Security Officer | Security management, | Project team member making, reviewing, and authorizing changes to the project | Development of management plans to gain sponsor approval | Approved equipment specifications, budgets, and schedules. | High/High |
| 4 | Office Administrator | Administrative, finance, accounting | Project team member tracking progress and providing support as necessary | Security measures will be non-disruptive to operations | Security measures meet policy requirements and are accessible | Low/Medium |
| 5 | Project Manager | Project management, security management | Project team member that manages the project | Support is given when needed. Activities completed without delays | Manage activities and resources to meet project objectives. | Medium/High |
| 6 | Service Providers | Technical expertise, | Consultants in charge of executing the technical activities of the project. | Clear requirements are given. Budget provided for additional tools | Relevant project plans, blueprints, and designs are provided. | Low/High |

**Chart 22: Stakeholder Power-Interest Matrix (G. Novelo, 2024)**

| | | | |
|---|---|---|---|
| **POWER** | **HIGH** | **KEEP SATISFIED:**<br>Ministry | **MANAGE CLOSELY:**<br>Embassy, Security Officer |
| | **LOW** | **MONITOR:**<br>Service Provider | **KEEP INFORMED:**<br>Office Administrator, Project Manager |
| | | **LOW** | **HIGH** |
| | | **INTEREST** | |

### *4.10.3 Stakeholder Engagement Strategy*

The appropriate engagement strategy can be designed using the preliminary stakeholder identification. Engagement will be conducted throughout the project's lifecycle to gain and maintain stakeholder cooperation.

Based on the identification, the embassy and security officer will be key stakeholders who will require the most amount of engagement. The success of the project is of great concern to the function of the embassy and a direct responsibility of the SO. In contrast, the service providers will require the least amount given their low power and interest. As the project sponsor, the Ministry of Foreign Affairs will require some engagement but mostly as it relates to ensuring its guidelines are followed and issued addressed to avoid delays or over expenditure.

The office administrator and project manager will also need to be kept up to date on project progress to make decisions and resolve issues as they arise.

**Chart 23: Stakeholder Engagement Strategy (G. Novelo, 2024)**

| Stakeholder | Quadrant | Strategy | Medium |
|---|---|---|---|
| Ministry of Foreign Affairs | Keep Satisfied | Submit progress reports to the ministry on a regular basis. Request support as necessary to ensure compliance. | Emails |
| Embassy | Manage Closely | Engage frequently giving updates on progress status and receive feedback. Follow directions for project details. | Meetings, emails |
| Security Officer | Manage Closely | Engage frequently giving updates on progress status and receive feedback. Follow directions for project details. | Meetings, emails, instant messages |
| Office Administrator | Keep Informed | Give major milestone update. Receive feedback and request support as necessary. | Meetings, emails |
| PM | Keep Informed | Requires frequent updates on project progress to execute project activities. | Phone calls, emails |
| Service Providers | Monitor | Minimal action necessary. Engage as needed to completed project activities. | Instant messages, phone calls, emails, meetings |

The engagement strategy will be revisited and revised, if necessary, throughout the project as new situations occur. Any changes to the strategies will be recorded in the change log (appendix 1) after first going through the establish change procedure.

# 5 CONCLUSIONS

The project management plan for the implementation of new and upgraded security features at the embassy has been developed with a focus on the initiating and planning stages of the project lifecycle. It is acknowledged that this plan reflects the current preliminary understanding of the project's scope and requirements. The details of the project may change as the proposed start date draws near to incorporate new information as they arise. The processes described in the management plans were designed using the guidance of the PMBOK Guide and are intended to be used conjointly. However, given the novelty of internal projects at the embassy, care was taken to tailor each process to suit the complexity of the project, the experience of the internal project team, and project environment. Consequently, the management plan is intended to serve as a guide to successfully execute the project.

The project charter, for example, is the primary document describing the project. It provides a high-level understanding of what is expected of the project. It also facilitates the authorization of the project. To complete this, the template previously provided by UCI was adapted since it allowed for the provision of all the necessary details, including milestones, budgets, objectives, and assumptions.

The scope management plan utilized the initial conversations held by the beneficiary expressing interest in expanding the embassy's security capabilities. To aid in the execution of the project, the scope plan described the roles and responsibilities of initially identified stakeholders, as well as set the boundaries in which the project is to operate. Likewise, it describes the work that is to be carried out and the details of identified activities. It also includes how project changes are to be handled by the project team.

The schedule management plan considered the time frame given to the beneficiary by the project sponsor to create what it considers to be a realistic timeframe for delivering the project. To foster better understanding of this timeframe, a Gantt chart, accompanied by an activity list, was developed to fully identify project activities as well as set deadlines for deliverables. The order of activities was also made clear so that project activities can be completed in a sequential and logical manner to avoid delays.

Similarly, the cost management plan also intends to provide a realistic cost estimate of anticipated expenditures. It uses the WBS and activity durations to calculate costs per activity. The initial estimate reflects these initial costs, also taking into account the management and contingency reserves that are needed for project execution as required by the project sponsor. It is important to note that the project sponsor has strict guidelines for managing over expenditure, which is why the performance of the project's costs will be wholly monitored at prescribed intervals utilizing the CPI as the indicator.

The quality and resource management plans set forth the requirements for assessing the degree to which the activities and deliverables met objectives, as well as defining the resources that are required to achieve the objectives. In it, the metrics for measurement, frequency, and activities were described as per what was ascertained from the WBS. To ensure quality of the project is met, the human and material resources of the project were identified, and utilization was described.

This document also includes a communication management plan which aims to define communication strategies as well as to provide guidance to the project team about frequency of communication and adequate medium. The communication plan includes details on the types of

communication that are expected, the objectives of each, the medium, and frequency necessary to accomplish the objectives.

The risk management plan considered the initial discussions with the beneficiary and security personnel to identify potential areas of concern as the project progresses. These were then categorized based on the perceived area of concern. Further prioritization used a Probability-Impact Matrix to quantitatively decide the severity of the risks. A risk breakdown structure was developed to better demonstrate the decomposition of risks. Likewise, response strategies were developed and recorded in a risk register to better elaborate on risk activities.

Next, the procurement management plan was developed using one of the organization's principles of participating in the host country's economy wherever possible. To this end, procurement activities had a Belizean-first approach. The service provider and materials were sourced locally, with a few exceptions where necessary. The use of selection criteria and contracts provided clear boundaries for choosing a service provider and dictating the work that is expected of them.

The final management plan created to guide the implementation of this project is the stakeholder management plan. It was developed to facilitate smooth engagement with the different stakeholders in the project. Identification and classification of stakeholders were accomplished via a preliminary brainstorming session where their level of involvement in the project was defined. Engagement strategies were subsequently developed using this information. This plan is intended to be used in conjunction with the communication management plan to inform the project team how each stakeholder should be treated.

# 6 RECOMMENDATIONS

In creating the project management plan, a couple key points of interest arose as they relate to organizational and project management deficiencies at the embassy which resulted in added hurdles for completing this document.

Namely, the embassy does not have adequate experience implementing internal projects. As a result, there were no historical information or organizational process assets that could be relied upon to act as inputs for the various management plans. The recommendation, therefore, is for a broader range of templates, forms, and guidelines to be created and added to the project management knowledge repository to aid in this project and future projects.

Similarly, there is a lack of standardization in internal project management strategies and processes at the embassy. Accordingly, this project management plan is a partial response to this dilemma, and it is recommended to utilize this as a foundation to guide not only this project, but future projects as well. Formalizing project management in this manner would allow for iterative improvements in succeeding projects.

As it relates to the project itself, it would be beneficial for an additional, independent entity to conduct inspections along with the project manager and beneficiary. Considering that both project manager and beneficiary have limited experience with the installation process of security measures, the quality of the activities are judged largely based on perception and what the service provider says. In this manner, an additional inspector who is experienced in this process can provide additional unbiased feedback.

Lastly, acknowledging that this management plan focuses on initiating and planning phases of the project, it will be recommended to reevaluate the project timeline as the project

progresses to ensure that adequate time is given for other phases of the project and their related activities.

The project management plan does address the key areas necessary to move forward with the project; however, there are remaining gaps due to inexperience, lack of data, and narrow focus on certain project phases. Addressing these issues using PMI standards as much as possible will improve not only on the execution of this, and future projects, but also improve on the organization's capacity to carry out more complex projects as the embassy continues to grow and expand its staff and services.

# 7 VALIDATION IN THE FIELD OF REGENERATIVE DEVELOPMENT

The project will be developed using the recommendations set forth by the Project Management Institute. However, in an effort to integrate sustainability into the various plans, Green Project Management's PRiSM Methodology will be used because of its heavy emphasis on considering various factors in the planning process. Its relevance to the project, therefore, mainly lies in the P5 Standard for Sustainable which analyzes sustainability through 5 key domains. This plan, however, will focus only on 4 relevant domains:

- Product and Process: evaluates the impact that product requirements and project management practices have on the project's environment.
    - For this proposal, this will be used to consider the lifecycle and servicing of the technologies chosen for use by the embassy. It will also be used to ensure the efficiency and fairness of management practices.
- People: evaluates the impact that project activities have on individuals and communities.
    - This will establish ethical practices, adherence to labor laws, and recognition of human rights in the planning phases.
- Planet: analyzes the impact of project activities on living and non-living systems
    - The project will use this domain to consider the impact of transportation used in procurement, energy consumption of technology, and waste management.

Although at first glance the project does not appear to be directly related to sustainability, the PRiSM methodology allows for considerations that go beyond the traditional sustainability

concerns (i.e., solely focusing on the environmental impacts). As a result, the project can now evaluate and integrate sustainability in a more holistic manner.

The project, therefore, promotes sustainability primarily through its considerations for environmentally friendly technologies that have low energy consumption and minimal waste generation. It also integrates sustainability through its acknowledgment of human rights and recognition of local labor laws to ensure ethical treatment of the project team and vendors. Finally, the project will give preference to local procurement options as it relates to service providers and equipment.

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# Appendices

APPENDIX 1: SAMPLE CHANGE CONTROL LOG

| **Project Name** | | Upgraded Security System | | | |
|---|---|---|---|---|---|
| **ID** | **Category** | **Description** | **Cost** | **Status** | **Notes** |
| SCO1 | Scope; Cost | Cameras need cloud storage | $250 | Pending | Cloud storage is subscription |
| | | | | | |
| | | | | | |

APPENDIX 2: SAMPLE CHANGE REQUEST

| **Project Name** | Upgraded Security System | **Change ID** | SCO1 |
|---|---|---|---|
| **Requested By** | OA | **Date of Request** | Sept 20 2024 |
| **Category** | Scope; Cost | **Contact No.** | (xxx) xxx-xxxx |
| **Description and Justification of Change** | | | |
| Add cloud storage solution to the security system. Cloud backup of security camera video gives extra layer of security in the event of local data loss. | | | |
| **Impact on Project** | | | |
| The primary impact will be on scope because it is an added requirement. Budget will be affected too due to cloud storage subscription fees. Schedule will not be affected because it is an instant delivery once payment is made. Cost of annual subscription is $250. | | | |
| **Approval 1** | PM | **Date Approved** | Sept 23 2024 |
| **Approval 2** | SO | **Date Approved** | Sept 23 2024 |

APPENDIX 3: SAMPLE DELIVERABLE ACCEPTANCE

| | | | |
|---|---|---|---|
| **Project Name** | Updated Security System | **Project Manager** | PM |
| **Sponsor** | Ministry | **Acceptor** | SO |
| **Deliverable** | Final Deliverable | **Submission Date** | - |
| **Acceptance Metrics Met** | | | |
| Equipment fully installed and meets functional requirements. Staff fully trained. | | | |
| **Areas of Improvement** | | **Additional Comments** | |
| | | | |
| **Acceptor Signature** | | **Date** | |

APPENDIX 4: SAMPLE QUALITY CHECKLIST – Customer Satisfaction

| | | | |
|---|---|---|---|
| **Project Name** | Updated Security System | **Inspector** | Beneficiary |
| **Deliverable** | Final Deliverable | **Date** | - |

*Instructions: For each of the statements below, give a rating between 1 and 10. 1 – "Extremely Dissatisfied"; 5 – "Neither Satisfied nor Dissatisfied; 10 – "Extremely Satisfied"*

**PROJECT PLANNING**

1. **Project objectives were clearly defined at the end of the meeting.**

1 2 3 4 5 6 7 8 9 10

2. **Project schedule was clearly defined at the end of the meeting.**

1 2 3 4 5 6 7 8 9 10

3. **Project requirements were clearly defined at the end of the meeting.**

1 2 3 4 5 6 7 8 9 10

4. **Project risks and constraints were discussed by the end of the meeting.**

1 2 3 4 5 6 7 8 9 10

**PROJECT DELIVERY**

1. **Status updates were provided in a timely manner.**

1 2 3 4 5 6 7 8 9 10

2. **Project resources were properly managed.**

1 2 3 4 5 6 7 8 9 10

3. **Project budget was properly managed and accounted for.**

1 2 3 4 5 6 7 8 9 10

4. **Project schedule was properly adhered to.**

1 2 3 4 5 6 7 8 9 10

**OVERALL**

1. **How satisfied are you with the overall execution?**

1 2 3 4 5 6 7 8 9 10

2. **How satisfied are you with the overall service provided by the project manager and team?**

1 2 3 4 5 6 7 8 9 10

3. **How satisfied are you with the training provided?**

1 2 3 4 5 6 7 8 9 10

APPENDIX 5: SAMPLE EQUIPMENT CHECKLIST

| **Project Name** | Updated Security System | **Inspector** | PM |
|---|---|---|---|
| **Equipment:** | Security Cameras | **Date** | - |
| Technical Specifications | | | |
| The devices fall within the desired specific and has the requested features. | Night vision | | |
| | Auto tracking & ID | | |
| | Cloud storage | | |
| | Energy savings certification | | |
| | Audio recording | | |
| | Weather resistant | | |
| General | | | |
| Equipment was received in good physical and working condition | | | |

| | |
|---|---|
| Certificates of Compliance for the equipment received | |
| Data sheets, user manuals, and other maintenance documents included | |
| Devices are powered using appropriate voltage | |
| Equipment is protected via surge protectors and UPS system | |
| **Comments:** | |
| **Signature** | |

APPENDIX 6: SAMPLE SERVICE PROVIDER SELECTION MATRIX

| **Project:** | Updated Security System | | | | **Date** | - | |
|---|---|---|---|---|---|---|---|
| **Reviewer:** | PM | | *Assign a score of 1-10 for each criterion. 1 is least desirable; 10 is most desirable. Highest total gets the bid* | | | | |
| | **Bid Total** | **Experience** | **Education** | **Tech. Spec.** | **Lifecycle Costs** | **Payment Terms** | **Total** |
| Weights | 0.20 | 0.15 | 0.10 | 0.25 | 0.15 | 0.15 | |
| **SP1** | 3 | 8 | 5 | 10 | 2 | 7 | 6.15 |
| **SP2** | 6 | 5 | 7 | 8 | 6 | 7 | 6.60 |
| **SP3** | 6 | 3 | 8 | 9 | 5 | 7 | 6.50 |

APPENDIX 7: EQUIPMENT PRICING BREAKDOWN

| **Item** | **Qty** | **Unit Cost** | **Total** | **Notes** |
|---|---|---|---|---|
| Solar powered security camera | 8 | $400.00 | $3,200 | Security camera kit includes solar panels, UPS, NVR w/ 1TB storage. |
| Cloud storage subscription | 1 | $400.00 | $400.00 | Billed annually. |
| Networked access control system | 1 | $40,000 | $40,000 | Perpetual license. |
| Fire alarm | 3 | $250.00 | $750.00 | Networked with access control. Auto-alert features enabled. |
| Carbon monoxide alarm | 3 | $250.00 | $750.00 | Networked with access control. Auto-alert features enabled. |
| | | | $45,100.00 | |
| | | | $67,875.50 | With taxes and estimated service provider margins included. |

APPENDIX 8: PHILOLOGIST REVISION DICTUM

**Sacred Heart Junior College**
Joseph Andrews Drive, San Ignacio, Belize C.A.
Gerardo Polanco Email: gpolanco@shc.edu.bz
Phone: 501-824-2102 / Mobile: 501-632-7211
*My Family, My Foundation*

May 21, 2024

Academic Advisor
Masters Degree in Project Management (MPM)
Universidad para la Cooperacion Internacional (UCI)

Dear Academic Advisor,

RE:

**PROPOSAL OF A PROJECT MANAGEMENT PLAN FOR THE IMPLEMENTATION OF SECURITY MEASURES AT A FOREIGN EMBASSY IN BELIZE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE MASTER IN PROJECT MANAGEMENT (MPM) DEGREE**

I hereby confirm that Gionnan Ravey Novelo has made all the corrections to the Final Graduation Project document as I have advised. In my opinion, the document does now meet the literary and linguistic standards expected of a student for a degree at the Masters level.

Gerardo Polanco, M.A.
Lecturer

APPENDIX 9: FGP CHARTER

1. Student name

| |
|---|
| Gionnan Ravey Novelo |

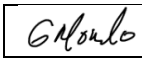
2. FGP name

| |
|---|
| Proposal of a Project Management Plan for the Implementation of Security Measures at a Foreign Embassy in Belize |

3. Application Area (Sector or activity)

| |
|---|
| Security Management, Diplomatic |

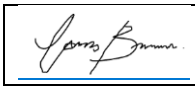
4. Student signature

| |
|---|
|  |

5. Name of the Graduation Seminar facilitator

| |
|---|
| Mr. Carlos Brenes Mena |

6. Signature of the facilitator

| |
|---|
|  |

7. Date of charter approval

| |
|---|
| January 2024 |

8. Project start and finish date

| | |
|---|---|
| January 2024 | ~ June 2024 |

9. Research question

What items and considerations must a project management plan contain to allow the successful implementation of reliable and comprehensive security measures for use by the embassy in question?

10. Research hypothesis

Is it possible to create a detailed and structured management plan for use by the embassy to provide reliable and comprehensive security measures for its staff and building?

11. General objective

To develop a Project Management Plan that can be used by the foreign embassy in Belize to successfully implement security measure to ensure the safety of the building and its staff.

12. Specific objectives

11. To develop a project charter that will be used to summarize and approve project details,
12. To create a project management plan that demonstrates how the project will be approached, including all five stages of the project lifecycle,
13. To develop a scope management plan that will define the bounds of the project and guide future management plans,
14. To develop a stakeholder management plan that will describe stakeholder requirement and expectations, and aid to prioritize and create communication strategies,
15. To create a schedule management plan that will list all project-related activities, expected time frame for project completion, and delegation of tasks,
16. To generate a cost management plan which will be used to estimate project cost, outline the distribution of funds, and create a budget for the project,
17. To develop a quality management plan that will serve to ensure all project deliverables meet the requirements as defined by the stakeholders,
18. To create a risk management plan that explores the risks and opportunities present in the project, as well as strategies to manage them,
19. To create a resource management plan which will be used to estimate resources required to complete activities along with their usage,

20. To generate a procurement management plan to outline the processes that will be used to acquire project resources,
21. To integrate sustainability practices in all aspects of project planning by using local suppliers, environmentally friendly technologies, and improving staff technical capacity.

13. FGP purpose or justification

The foreign embassy in Belize is a relatively new mission, with only approximately 4 years since its establishment, and only a year and a half in its new office in the capital city. Though the embassy does have some security measures in place, there are clear areas of improvement in the areas of the physical security of the building and the life safety of the staff inside.

The FGP is being developed with the goal of creating a comprehensive plan that will be used to guide the implementation of additional security measures at the embassy to increase security of the building and its staff. In doing so, the plan intends to fill a gap in the current security conditions of the embassy. This management plan also will serve to formalize the initiation and planning stages in the project lifecycle.

The current security measures that the embassy does have in place, including equipment and procedures, are maintained and reviewed on an as-needed basis, so the design of the project will also incorporate stipulations to ensure this deficiency is remedied. As a result, the FGP will be written with the aim of reducing the costs associated with upkeep by a minimum of 5% by using a preemptive approach to assessing and servicing equipment.

Finally, given the importance of maintaining amicable diplomatic relations, it is important for ensuring the security of the embassy be a collaborative effort between the embassy itself and government stakeholders. So, the FGP will develop stakeholder strategies to strengthen the relation between the two governments.

In Summary:

a. The FGP will serve to formalize the initiation and planning of the project to implement additional security measures,
b. The embassy lacks formal documentation to guide projects, so the FGP will develop the plan to guide the implementation of the project,
c. Given the relative recency of the Embassy, there are gaps in the security measures put in place,
d. The creation of the FGP will aim to reduce equipment maintenance costs by 5%.

Communication and engagement with government stakeholders need to strengthened to maintain favorable diplomatic relations.

14. Work Breakdown Structure (WBS).

| | WBS | Name |
|---|---|---|
| 1 | **1** | **Proposal of a Project Management Plan for** |
| 2 | **1.1** | **Graduation Seminar** |
| 3 | **1.1.1** | **FGP Deliverables** |
| 4 | 1.1.1.1 | FGP Charter |
| 5 | 1.1.1.2 | FGP WBS |
| 6 | 1.1.1.3 | Chapter 1 Introduction |
| 7 | 1.1.1.4 | Chapter 2 Theoretical Framework |
| 8 | 1.1.1.5 | Chapter 3 Methodological Framework |
| 9 | 1.1.1.6 | Chapter 7 Sustainability Validation |
| 10 | **1.1.1.7** | **Annexes** |
| 11 | 1.1.1.7.1 | Bibliography |
| 12 | 1.1.1.7.2 | Schedule |
| 13 | 1.1.1.8 | Graduation Seminar Approval |
| 14 | **1.2** | **Tutoring Process** |
| 15 | **1.2.1** | **Tutor** |
| 16 | 1.2.1.1 | Tutor Assignment |
| 17 | 1.2.1.2 | Communication |
| 18 | 1.2.2 | Adjustment of Previous Chapters |
| 19 | **1.2.3** | **Chapter 4 Development** |
| 20 | 1.2.3.1 | Project Charter |
| 21 | 1.2.3.2 | Project Management Plan |
| 22 | 1.2.3.3 | Scope Management Plan |
| 23 | 1.2.3.4 | Stakeholder Management Plan |
| 24 | 1.2.3.5 | Schedule Management Plan |
| 25 | 1.2.3.6 | Cost Management Plan |
| 26 | 1.2.3.7 | Quality Management Plan |
| 27 | 1.2.3.8 | Risk Management Plan |
| 28 | 1.2.3.9 | Resource Management Plan |
| 29 | 1.2.3.10 | Procurement Management Plan |
| 30 | 1.2.4 | Chapter 5 Conclusion |
| 31 | 1.2.5 | Chapter 6 Recommendation |
| 32 | **1.3** | **Reading by Reviewers** |
| 33 | **1.3.1** | **Reviewers Assignment Request** |
| 34 | 1.3.1.1 | Assignment of Two Reviewers |
| 35 | 1.3.1.2 | Communication |
| 36 | 1.3.1.3 | FGP Submission |
| 37 | **1.3.2** | **Reviewer's Work** |
| 38 | **1.3.2.1** | **Reviewer 1** |
| 39 | 1.3.2.1.1 | FGP Reading |
| 40 | 1.3.2.1.2 | Report 1 |
| 41 | **1.3.2.2** | **Reviewer 2** |
| 42 | 1.3.2.2.1 | FGP Reading |
| 43 | 1.3.2.2.2 | Report 2 |
| 44 | **1.4** | **Adjustments** |
| 45 | 1.4.1 | Report for Reviewers |
| 46 | 1.4.2 | FGP Update |
| 47 | 1.4.3 | Second Review by Readers |
| 48 | **1.5** | **Presentation to Board of Examiners** |
| 49 | 1.5.1 | Final Review by Board |
| 50 | 1.5.2 | FGP Grade Report |

15. FGP budget

| |
|---|
| Travel/Fuel…… $250 |
| FGP Printing & Binding……$300 |
| FGP Shipping……$80 |
| Language Review……..$200 |
| **Total……..$830** |

16. FGP planning and development assumptions

1. Stakeholders will be cooperative
2. Schedule for submitting deliverables will be adhered to by dedicating approximately 10-15 hours per week for the development of the FGP
3. Feedback will be effective and be given in a timely manner
4. Computer equipment, along with relevant software, will be made available for the creation of the FGP
5. Product information, including specifications and pricing, will be made readily available and sent in a timely manner.

17. FGP constraints

1. Academic information for safety of diplomatic missions in Belize will be limited and restricted.
2. For security purposes, information directly related to the embassy will remain classified/generalized/estimates. This includes information related to the names of employees, contractors, and costs. Also included in this is information relating to building floor plans, location of certain security equipment, and other related items.
3. The development of the FGP will be fully funded by the MPM candidate
4. There will be a language barrier when interacting with staff
5. No licensed philologist found in Belize

18. FGP development risks

1. The embassy retains the authority to revoke permission for the FGP to be based on them, which would result in the development of a new FGP topic
2. Data loss of the results and documentation of the FGP, which leads to the information gathering process to be repeated
3. Power outages may occur which may lead to the failure and damages of the equipment used to create the FGP, which would put a halt on the FGP
4. Cost estimates may be either under or over reported, so budget information may be inaccurate.

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 as well as for the readership).

| **Deliverable** | **Finish estimated date** |
|---|---|
| FGP Charter Items 1-10 | 1/14/2024 |
| FGP Charter Items 11 &12 | 1/21/2024 |
| FGP Charter Items 13-19 | 1/28/2024 |
| FGP Charter Item 20 | 2/4/2024 |
| FGP Charter Items 21 | 2/11/2024 |
| FGP Charter Items 22 | 2/18/2024 |
| Tutor Assignment | 3/4/2024 |
| Chapter 4: Development | 3/14/2024 |
| Chapter 5: Conclusion | 3/20/2024 |
| Chapter 6: Recommendation | 3/27/2024 |
| Tutor Approval | 3/31/2024 |
| First Reading by Reviewers | 5/10/2024 |

| | |
|---|---|
| Adjustments | 5/24/2024 |
| Second Reading by Reviewers | 6/8/2024 |
| Presentation to the Board of Examiners | 6/22/2024 |
| FGP End | 6/26/2024 |

20. Theoretical framework

20.1 Estate of the "matter"

Though the embassy has only been operational for four (4) years in Belize, it has had to double its staff and move locations to accommodate for this growth. Despite this, its security measures have not adapted to account for increased staff size and new building. The FGP will be undertaken to improve its security.

In Belize, information relating to the wider diplomatic community is generally non-existent, so the FGP will mostly rely on what can be observed at the target embassy and other academic research that has been published relating to security in diplomacy.

The academic research relating to this topic can be divided into two parts: case studies and conceptual designs. Case studies such as Loeffler's 'Embassy Design: Security v. Openness' looks at the historical design of US Embassies, human and natural phenomena that has affected them, the embassy's response, and its effectiveness. Case studies will be used to gain a practical understanding of the importance and utility of security in diplomacy. Conceptual designs such as Gaydosh's 'Life Safety as a Design Driver' use a combination of architectural best practices and innovative technologies to create a modern embassy that places focus on safety. These will be used to explore and inspire the possibilities that are available to the embassy to improve their security.

The embassy recognizes the need to update their security measures but has thus far lacked the knowledge to improve on what is currently in place. The FGP aims to solve

this problem by using previous international research as a foundation and tailoring the security needs to what is practical in the Belizean context.

20.2 Basic conceptual framework

Project management, green/environmentally friendly technologies, security management, diplomatic relations

21. Methodological framework

| Objective | Name of deliverable | Information sources | Research method | Tools | Restrictions |
|---|---|---|---|---|---|
| To develop a project charter that will be used to summarize and approve project details | Project Charter | Discussions with Embassy and contractors.<br>UCI Project Charter template | Qualitative to gather data on stakeholder experience. Quantitative to calculate budgets and timelines. | UCI Project Charter template | Language barrier, cultural differences, information confidentiality. |
| To create a project management plan that demonstrates how the project will be approached, including all five stages of the project lifecycle | All subsequent management plans | Project documents, discussion with stakeholders | Qualitative to gather data on stakeholder experience. Quantitative to calculate budgets and timelines. | Templates, diagrams, interviews, project management software and word processing software | Development of PMP is time gated, information confidentiality, software license needs to be purchased. |

| | | | | | |
|---|---|---|---|---|---|
| To develop a scope management plan that will define the bounds of the project and guide future management plans | Requirements documentation, WBS, Scope management plan. | Interview with Embassy's Office Administrator and Security Officer | Qualitative to gather data on stakeholder experience. Quantitative to calculate and timelines. | Templates, diagrams, templates, interviews, observations, alternative analysis | Language barrier. Limited expertise with this type of project. |
| To develop a stakeholder management plan that will describe stakeholder requirement and expectations, and aid to prioritize and create communication strategies | Stakeholders register and analysis, stakeholder management plan. | Discussions with stakeholders. PMBOK® Guide, online templates | Qualitative to gather data on stakeholder experience and opinions. | Templates, interviews | Information confidentiality. Language barrier |
| To create a schedule management plan that will list all project-related activities, expected time frame for project completion, | Gantt chart, activity lists, Schedule management plan | Discussions with stakeholders | Qualitative to gather data on stakeholder experience. Quantitative to calculate timelines. | Project management software, diagrams, interviews. | Limited expertise with this type of project, shift in priorities as other consular activities arise. |

| | | | | | |
|---|---|---|---|---|---|
| and delegation of tasks | | | | | |
| To generate a cost management plan which will be used to estimate project cost, outline the distribution of funds, and create a budget for the project | Budgets, performance analysis, Cost management plan. | Discussion with stakeholders. PMBOK® Guide | Qualitative to gather data on stakeholder experience. Quantitative to calculate budgets and indices. | EMV analysis, project management software, templates. | Information confidentiality. Shift in priorities as other consular activities arise. |
| To develop a quality management plan that will serve to ensure all project deliverables meet the requirements as defined by the stakeholder | Quality checklists, metrics, quality management plan | Discussions with Security Officer and Office Administrator. Online templates. PMBOK® Guide. | Qualitative to gather data on stakeholder experience. Quantitative to calculate quality performance. | Templates, observation, discussions, checklists | Limited expertise with this type of project. |
| To create a risk management plan that explores the risks and opportunities present in the project, | Risk register, responses, risk management plan | Discussions with stakeholders. Local news sources. | Qualitative to gather data on stakeholder experience. Quantitative to calculate | Brainstorming, meetings, probability impact analysis | Information confidentiality. Access to information relating to |

| | | | | | |
|---|---|---|---|---|---|
| as well as strategies to manage them | | | risk impacts and budget. | | diplomatic security |
| To create a resource management plan which will be used to estimate resources required to complete activities along with their usage | Resource requirement, resource management plan | Internet. Local vendors. Discussions with stakeholders | Qualitative to gather data on stakeholder experience. Quantitative to calculate budgets and resource requirements | Diagrams, discussions, data analysis, bottom-up estimation, project management software | Information confidentiality. Access to information relating to diplomatic security |
| To generate a procurement management plan to outline the processes that will be used to acquire project resources | Procurement strategy, cost estimates, selection criteria, procurement management plan | Discussion with stakeholders. Online templates. | Qualitative to gather data on stakeholder experience. Quantitative to calculate budgets and timelines. | Templates, source selection analysis, data gathering. | Limited expertise with this type of project. |

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

Although the project management plan will be developed according to the PMI guidelines, Green Project Management's PRiSM methodology will be used as inspiration to integrate sustainability and regenerative practices into the various plans required.

In specific, the domains outlined in the P5 Standard for Sustainability will be used to ensure that the project plan takes into account the various factors and considerations in the field of sustainability and regeneration. These are:

- Product
- Process
- People
- Planet
- Prosperity

Because GPM uses a multi-faceted approach to sustainability, this will allow for more areas to be covered when integrated sustainability, not just greener technologies.