UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

A PROJECT MANAGEMENT PLAN PROPOSAL FOR THE DIGITAL ENHANCEMENT OF THE ELECTORAL VOTING PROCESS IN THE FEDERATION OF ST. KITTS AND NEVIS

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DEDICATION

This final graduation project is not just a culmination of my efforts, but a testament to the love, support, and faith bestowed upon me by my family and friends. I dedicate this achievement to each of them, with heartfelt gratitude and profound appreciation. I also dedicate this project to my mentors and colleagues who have guided and inspired me along the way, shaping my passion for this field of study.

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I would like to express my deepest gratitude to God whose infinite grace and guidance have been the cornerstone of my journey throughout the final graduation project. I would also like to express my heartfelt appreciation to my tutor for her invaluable guidance, patience and support throughout this research process. I am deeply thankful to my family for their unconditional love, encouragement and sacrifices who also displayed an unwavering belief in me which has been a constant source of motivation and inspiration. I extend my sincere gratitude to my friends and colleagues for their encouragement, understanding and support that has made this journey more enjoyable and meaningful. Lastly, I would like to acknowledge the support of all the individuals and resources that have contributed to the completion of this project. Your contributions, whether big or small, have not gone unnoticed and are deeply appreciated.

ABSTRACT

The development of a project management plan relating to the digitalization of the electoral voting process in the federation of St. Kitts and Nevis is the main focus of study in the document. Currently, the country depends on manual counting of thousands of casted ballots which is susceptible to human error and tends to result in absurd wait times on the election results. We also live in a modern world that strives on innovation and so it is suitable that the effectuation of this project is underway. Furthermore, the project plan emanates from the need to facilitate a successful project which will not only strengthen the government's electoral system from the local, regional and international perspectives, but it may also appease the stakeholders to a great extent.

In this regard, the final product of the FGP which is the project management plan, depends on the incorporation of relevant subsidiary project management plans, project management concepts as well as adequate primary and secondary research procedures. The plan will also be compared to regenerative and sustainable development and local and regional electoral standards to improve its quality and success rate.

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ABBREVIATIONS AND ACRONYMS

GPM	Green Project Management
KPI	Key Performance Indicator
OAS	Organization of the American States
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
SMART	Specific, Measurable, Achievable, Relevant and Time-Bound
WBS	Work Breakdown Structure

EXECUTIVE SUMMARY

Representational democracy is a form of governance where the populace selects the government through elections (Dahl et al., 2023). Fortunately, this type of governance is exercised by the federation of St. Kitts and Nevis where the fundamental freedoms and human rights are protected and people's freedom of expression is enjoyed. The evolution of democracy and universal suffrage in the country has enabled a fairer system where citizens and eligible residents over the age of 18 years can vote. However, there are still many areas of improvement also known as electoral reform.

According to Tausanovitch (2023), electoral reform refers to the beneficial modifications to election procedures to encourage better democracy and increase the process' ability to adapt to the needs and expectations of the general public. Over the years, there have been some progress in electoral reform such as improved training of election officials; vulnerable individuals are given priority at polling stations and increased voting marketing campaigns in efforts of reducing the number of rejected ballots. There were even attempts to modify the voting boundaries as some constituencies are denser than others. This leads to wide disparity among registered voters per constituency. However, the methods in which it was done have not been ideal nor truly impartial. Moreover, there has been the trend to perform ad hoc activities that will enhance the electoral process which can lead to less desired results.

Resultantly, it is imperative that going forward, projects associated with the Electoral Officer are organized and timely. Fortunately, the general objective of this FGP which was the development of a project management plan that aimed to solve the issue of overbearing wait times for elections' results and the antiquity of the current ballot counting system while respecting local and regional electoral standards. The plan further centered on the digitalization of the electoral votes' tabulation process which has provided a high level of organization and timeliness to the project.

The specific objectives of the FGP encompass a comprehensive array of tasks aimed at facilitating project management. Firstly, it seeks to establish a project charter to outline the project's scope, goals, objectives, and resource requirements, providing a foundational understanding for the project manager. Additionally, it endeavors to craft a scope management plan, delineating the necessary steps for project execution while ensuring adherence to defined boundaries. A schedule management plan is also developed, furnishing guidance on scheduling methodologies and facilitating effective schedule creation, maintenance, and control to meet stakeholder deadlines. Furthermore, a cost management plan is formulated to aid in cost calculation, resource allocation, and expenditure control. Similarly, a quality management plan is designed to fulfill client needs and project criteria, while a resource management plan addresses resource acquisition, distribution, tracking, and management. Communication across the project is governed by a communication management plan, outlining requirements and expectations. Additionally, a risk management plan is devised to identify, evaluate, and mitigate potential project risks, promoting project success. Procurement management is addressed through a comprehensive plan ensuring stakeholder awareness and adherence to procurement processes. Stakeholder management aims to address key stakeholders' goals and demands throughout the project life cycle. Finally, a sustainable management plan is created, integrating environmental, social, and economic considerations to foster long-term viability and responsible business practices.

The methodological approach to this research involved both primary and secondary resources. There were also analytical, descriptive, qualitative and quantitative research

methods used to aid the quality of the research. The PMBOK guide, interviews and meetings were also tools utilized to gather data and information on the subject matter.

The conclusions summarized how the project is built upon ten comprehensive management plans. These plans ensured alignment with project objectives and stakeholder needs, providing frameworks for planning, execution and monitoring. Then, to ensure the success of the project, recommendations were provided to enhance each management plan. These recommendations, guided by a project manager aim to transform the electoral process, ensuring integrity, efficiency and stakeholder trust.

1 INTRODUCTION

1.1. Background

The Electoral Office of St. Kitts and Nevis was established a few decades ago to help preserve the integrity of the general elections. In single member districts, representatives are selected by a simple majority. The Governor-General appoints three senators, two on the recommendation of the Prime Minister and one on the recommendation of the Leader of the Opposition. The federation is small in size and as such, there were 50,933 persons eligible to vote in the year 2022. Currently, there are 11 constituencies, resulting in the election of 11 persons as ministers of government. Additionally, there are over 70 polling stations assigned to voters based on their residential addresses at the time of registration.

The voting process dated back to decades ago, started off with the use of paper ballots, which were then counted by election officials. At present, the manual counting process remains despite numerous advancements in technologies. Accordingly, individuals grow more impatient every election year as they tend to have to wait extended periods for election results.

Given the electoral office's responsibility for organizing, conducting, and supervising

elections in accordance with the constitution, as well as managing voter registration lists and resolving election-related issues, it's only fitting that the proposed solution revolves around government investment in digitalizing a crucial aspect of the electoral process.

1.2. Statement of the problem

The electoral process in the federation of St. Kitts and Nevis and its methods have lacked significant improvements and transformations throughout the years. A major issue which requires change is in the tabulation of votes aspect of the process. The current procedure involves the ballot boxes from the numerous polling stations being sealed and then transported to the relevant counting areas. The votes are then hand-counted by the assigned counters in the presence of observers.

This procedure is quite antique and is accompanied by lengthy wait times for the official results. Many voters are even disappointed that up to the 2022's general elections, the official results were not finalized until approximately 10 hours after the polling stations were closed. These key stakeholders are also baffled at the fact that the tabulation process is still manual.

Therefore, there is a need to eliminate the outdated antics and update the tabulation procedure. More specifically, electronic tabulation machines that are easy to install and navigate as well as possess a high level of durability, will likely enhance the system and appease the current and future voting population.

1.3. Purpose

The main purpose of this final graduation project is to create a project management plan that will modernize the tabulation feature of the electoral process. The project management plan will ensure that adequate project management principles as well as project management domains are applied. Furthermore, the project plan took into account

appropriate project management knowledge areas, processes, as well as regenerative and sustainable characteristics for the project plan. Fundamentally, the key components of an effective project management plan were evaluated for the successful completion of the project management plan.

The present manual tabulation procedure is simply outdated and tends to lead to unwanted delays regarding the elections' results. With the modernization of the counting of votes, it is projected to increase the efficiency and accuracy of the votes' tabulation process. This action will likely further preserve the honorability of the electoral system and prompt other smaller islands to advance their electoral procedures.

1.4. General objective

To develop a project management plan proposal that may act as a compendium for the use of electronic tabulation machines in the federation of St. Kitts and Nevis general elections that will comply with the national constitution and the OAS Electoral Commission standards.

1.5. Specific objectives

1. To create a project charter that will provide the project manager with a general idea of the scope, goals, objectives and resource requirements of the project.
2. To develop a scope management plan that describes the steps needed in carrying out the project and acts as a guide to maintain the project within certain limits.
3. To formulate a schedule management plan that contains details on the project's scheduling methodology and gives direction to the project manager and team regarding

the creation, maintenance and control of the project schedule to meet stakeholders' deadlines.

4. To develop a cost management plan that will help the project manager and team to calculate their costs, distribute resources appropriately and keep expenditures under control.
5. To create a quality management plan that will make it easier for the project manager and team to satisfy both the needs of the client and the project's criteria.
6. To develop a resource management plan that details how the resources are obtained, distributed, tracked and managed.
7. To formulate a communication management plan that describes the requirements and expectations for communication over the entire project.
8. To create a risk management plan that aids in identifying and evaluating potential project risks as well as describe how the team will strategize to reduce the potential risks to facilitate the project's success.
9. To develop a procurement management plan that outlines how the organization will manage the procurement process by ensuring that all stakeholders involved are aware of the steps that must be taken during the procurement cycle.
10. To formulate a stakeholder management plan that indicates how the team will handle the goals and demands of key stakeholders throughout the project life cycle.
11. To create a sustainable management plan that will address environmental, social and economic considerations to facilitate long-term viability and responsible business practices.

2 THEORETICAL FRAMEWORK

2.1 Company/Enterprise framework

2.1.1 Company/Enterprise background

The St. Kitts and Nevis Electoral Office carries out its operations under the aegis of the Office of the Attorney General. However, the Supervisor of Elections must provide constitutional oversight of its operations. The office has been in existence for over thirty-five years and has an office location each with one being stationed in Basseterre, St. Kitts and the other in Charlestown, Nevis. The organization has a firm devotion to empowering voters with appropriate electoral knowledge and providing organization to the federation's electoral system. Furthermore, in efforts of fulfilling the organization's duties, the staff generally interact with individuals enrolling to become registered voters, registration officers, representatives of political parties or candidates, registrar of deaths and the press. Accordingly, the Electoral Office understands that there is a need to engage in suitable project management practices to keep up with the changing times and maintain high-level standards.

2.1.2 Mission and vision statements

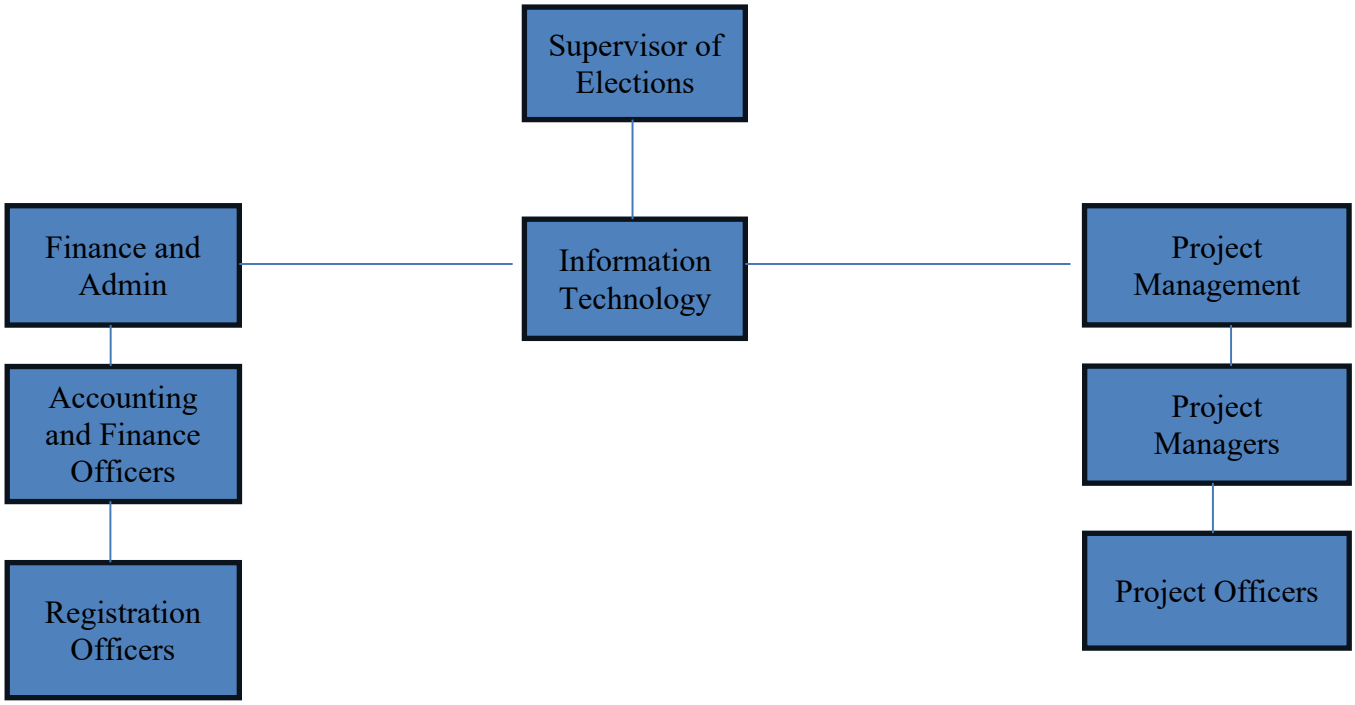
The Electoral Office's mission statement is "One person, One Vote, In the Right Place, and Fairness to All" (Electoral Office, n.d.). Accordingly, the final graduation project, which centers around the involvement of electronic tabulation machines in the voting process, supports the mission statement as it is expected to provide convenience and

equal opportunity to voters. For instance, the machines are expected to be accommodating to disabled persons ensuring that no voter is absolved of the opportunity to cast his or her ballot due to the digitalization aspect.

2.1.3 Organizational structure

The organizational structure relates to a framework that specifies how certain actions should be taken to facilitate the achievement of an organization's goals (Kenton, 2023). Moreover, the organization structure governs the company's internal information flow between levels.

Figure 1 Organizational structure (Note: Author of Study, 2023)



2.1.4 Products offered

The products offered by the Electoral Office include but are not limited to facilitating and managing the enrolment/voter registration process, data processing by gathering, compiling and archiving all pertinent data pertaining to voter enrolments and logistical support to the Supervisor of Elections with the organization of any election or referendum. Therefore, many of the product offerings further emphasize the need for the development of the stakeholder, communication, quality and risk management plans which are some of the specific objectives of the FGP.

2.2 Project Management concepts

Project management is a vast topic and the Guide to the Project Management Body of Knowledge is a reputable source of information concerning the respective project management concepts which will be discussed below.

2.2.1 Project management principles

According to PMI (2021), there are twelve project management principles which are the guidelines one might adhere to to ensure that the project is successfully executed.

Figure 2 Project Management Principles. (Note: Bansal, 2023)

The principles that are considered and should be operational for the FGP include but are not limited to:

1. Stewardship: This will involve the FGP taking a holistic approach by taking into account the financial, social, 'technological' and sustainable environmental aspects with a mindset centered around integrity. The registration officers will also serve as stewards among the project who will be responsible for carrying out their duties with integrity and expected to exert substantial effort among the project.

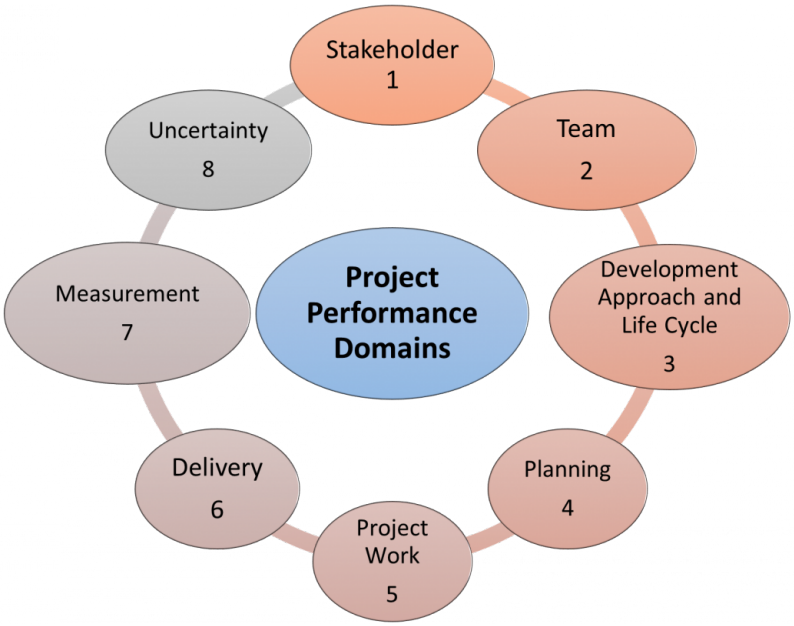
2. Team: The team principle is mandatory as all members of the project team have to collaborate effectively to achieve project success. Collaboration will be emphasized among the project. For instance, the communication management plan will outline the tools for communication and the types of communication.

3. Stakeholders: The FGP is one that will greatly affect the public which strengthens the need to involve the general public and other stakeholders involved in the project. In addition, a stakeholder analysis is performed to understand the categories of stakeholders and the ideal ways of incorporating them among the project.
4. Value: The FGP will prioritize value, as it is expected to greatly benefit the voting members. The project manager will implement a mechanism where the timing of the election results before and after the utilization of the tabulation machines can be calculated.

2.2.2 Project management domains

Fundamentally, project management domains are the set of abilities, tasks, actions that make up an effective project management approach as supported by PMI (2021). There are eight project management domains, namely, stakeholders, team, development approach and life cycle, planning, project work, delivery, measurement and uncertainty. The various domains are present throughout the FGP and related objectives. More specifically, the stakeholder domain will align with the stakeholder management plan, team with the communication and schedule management plans, delivery with scope and quality management plans, uncertainty with risk management plan and planning, project work and measurement with all of the management plans.

Figure 3 Project Performance Domains (Note: Iqbal, 2023).



2.2.3 Predictive, adaptative and hybrid projects

Organizations need to decide on a strategy, whether, predictive, adaptive or hybrid that is most suitable for the project in order to enhance its development procedures and processes. According to Michaels (2023), the construction of predictive development follows a linear iterative process, the adaptive development paradigm allows solutions and requirements to be developed iteratively through cooperation among self-organizing cross-functional teams and hybrid development models include components from both predictive and adaptive development tactics.

Accordingly, the predictive approach entails meticulously following a strategy that has been developed in advance for the entire behavior and works best for projects with clearly defined objectives and specifications when the project team can foresee probable

challenges or risks. Then, the adaptive approach occurs when projects are modified as needed to account for evolving needs and situations and therefore, it is ideal for projects where teams need to be adaptable and agile due to changing conditions or dynamic requirements as corroborated by Michaels (2023). Therefore, since the hybrid approach incorporates components of both predictive and adaptive development, it is more suitable for the final graduation project. In this way, the project team can prepare for anticipated risk while yet being adaptable to changes in project requirements.

2.2.4 Project management

Project management relates to the utilization of procedures, techniques, abilities, know-how and experience to accomplish certain project goals in accordance with the project acceptance standards and within predetermined bounds (Project Management Institute, 2021). Resultantly, proper project management practices can lead to numerous benefits such as increased staff productivity, control of budgets and timelines, reduction of project risks, stronger stakeholder relationships and increased customer satisfaction. Therefore, it is imperative that the FGP follows appropriate project management procedures.

2.2.5 Project management knowledge areas and processes

The project management knowledge areas are the fundamental elements of project management that serve as the cornerstone for overseeing projects and producing fruitful results as explained by PMI (2021). The key areas are integration, scope, time, cost,

quality, resource, communications, risk, procurement and stakeholder. Suitably, the objectives of the FGP align with the knowledge areas.

Then, the project management processes which all projects should go through are:

1. Initiating: In this phase, the project manager must provide a number of project management documentation to demonstrate the project's value and viability (PMI 2021). A popular document that is usually produced in this phase is the business case or project charter.
2. Planning: During this phase, a project plan is developed, which contains details on how the project will be executed as explained by PMI (2021).
3. Execution: This phase is the process of carrying out the project plan to achieve the project's goals and objectives (PMI, 2021).
4. Monitoring and Control: This phase occurs simultaneously with the project's execution phase and is quite comprehensive. It entails keeping an eye on the execution of the project to ensure that the project team remains within budget and schedule stipulations, procedures for quality control for quality assurance and reporting as corroborated by PMI (2021). The reporting element is typically done to keep stakeholders informed.
5. Closure: This is the final stage where stakeholders are presented with the final deliverables and the project results are approved (PMI, 2021). Resources are released, paperwork is finished, and everything is signed off on once it has been approved which indicate that the project is at the end of the cycle.

2.2.6 Project life cycle

Project initiation, project planning, project execution, monitoring and control, and project closing are the five stages that make up the project life cycle (Bridges, 2023). For the project to be delivered effectively, each of these phases is required. In the initiation phase, a business case, feasibility study, cost-benefit analysis and other sorts of research are typically conducted to ascertain whether the project is feasible and should be performed or not as corroborated by Bridges (2023). In addition, stakeholders are able to offer suggestions and a project charter, which gives a summary of the project and establishes the framework for the project plan is developed if the project is accepted. Then, there is the planning phase where the project plan is produced and adhered to by all parties involved, SMART (specific, measurable, achievable, realistic and timely) goals are set (Bridges, 2023).

Then, there is the execution phase which may include creating the team and allocating resources based on KPIs, carrying out the project plan, managing the procurement process, and monitoring overall progress as explained by Bridges (2023). Moreover, the monitoring and control phase ensure that the execution follows the timeline, scope, and budget guidelines. Bridges (2023) further explained that the closure phase involves closing up the work with contractors, ensuring that everyone has been paid, and seeing to it that all project records are approved and stored for use in future planning.

In accordance with the above information, the FGP is in the planning phase. The FGP has the specific objectives which allow it to understand the scope and path of the project.

Figure 4 Project Life Cycle (Note: Kumar, 2021)

2.2.7 Company strategy, portfolios, programs and projects

The company strategy relates to the actions the business takes to benefit itself and its stakeholders while gaining a competitive edge in the market (Boyles, 2022). The concept has also proved to be essential to a business' success. Therefore, the action to digitalize the votes' tabulation process is a commendable strategy as many Caribbean islands still have a manual process. Furthermore, when a business has a strategy, it helps the company to better understand how to allocate resources and how to obtain suppliers.

Furthermore, the company portfolio refers to a document that includes vital characteristics about a company such as information on what it does, its objectives, resources and mission which are helpful in guiding leaders to make informed decisions as supported by Indeed Editorial Team (2023). Other pertinent information that is usually

present among a company's portfolio is the products, copies of certifications and specifics on strategic partnerships.

Then, the program is normally an employee program that the company or any subsidiary has ever maintained, sponsored, or to which they are obligated to contribute in any way. Organizations tend to engage in program management which supervises a collection of distinct projects that are connected by a common objective.

Additionally, a project is a collection of work that must be finished in a predetermined amount of time in order to achieve a particular set of objectives as explained by Malsam (2023). In a project, there is usually a project team which is directed by a project manager and responsible for project planning, scheduling and tracking. Appropriately, the FGP is a part of the project classification.

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

2.3.1 Current situation of the problem or opportunity in study

In the federation of St. Kitts and Nevis' 2022 general elections, there were 128 polling stations with the Electoral Office's records indicating that 50,933 individuals were eligible to vote ("OAS General Mission…, 2022). The elections are usually accompanied with numerous lengthy lines at the polling stations. Furthermore, voters are not processed quickly due to the solitary voting booth that is present in each polling place and the rule that one voter had to go through the complete process before another could be admitted.

The polling stations are closed at 6:00 p.m, however, the slow procedures in place may lead to some polling stations closing way beyond the aforementioned time due to the

high number of people who are present in the voting lines before 6:00 p.m but await their opportunity to vote. In order for the votes cast to be counted, the ballot boxes are sealed and transferred to the respective counting centers ("OAS General Mission…, 2022).

The results for the first seat declared in the 2022 election, Constituency 10 in Nevis, which had the fewest voting places and people (845 votes cast), were not made public until 12:45 AM, or seven hours after the polls closed ("OAS General Mission…, 2022). Unfortunately, results announcements may experience lengthy delays in St. Kitts and Nevis due to the requirement that all ballots for a constituency be transported to and counted by the Returning Officer at a single location.

Although many electoral observation bodies have recommended electoral reform, especially in the tabulation of ballots process, there is a lack of movement to rectify the issue.

One recommendation was to implement a policy which permits the presiding officer to count the votes at each polling station immediately after the polls close which has not occurred to date ("OAS General Mission..., 2022).

2.3.2 Previous research done for the topic in study

The research executed on the topic of study in the federation of Saint Kitts and Nevis is quite limited. The Organization of the American States Electoral Commission and other observation bodies have even noted that there needs to be electoral reform, especially in the tabulation of ballots process.

However, observations have revealed that many of the older population are extremely comfortable with the current tabulation process. This is due to their lack of interactions with modern technology and distrust of modern technology. Accordingly, many of them resisted the idea of the electronic tabulation machines being involved in the voting process when asked about the subject matter. On the contrary, the younger persons favored the use of the tabulation machines as they indicated that the current counting process is too slow. Many of them indicated that the system needs updating, particularly since we are in the 21st century.

Fortunately, the nearby island of Anguilla, which has a similar electoral system as well as a smaller population, held successful elections in 2020 using electronic tabulation machines for the first time. Research indicated that the majority of the process went smoothly and the general public was notified of all the polling station's results before midnight.

The major issues that were highlighted in Anguilla's elections were that voters should have the option of casting an unmarked ballot, therefore acknowledging their desire to abstain in private and voters should be informed about how to cast a ballot with insufficient markings well in advance of the election (Anonymous, 2020). It is imperative that St. Kitts and Nevis Electoral Office learn from these mistakes and ensure that the electronic tabulation devices are effectively programmed.

2.3.3 Other theory related to the topic in study

The Importance of Ethics

Ethics in project management are preconceived notions of what is morally right or proper and includes the principles of accountability, sincerity, decency and fairness (Simplilearn, 2023). The project manager was carefully selected as he has a stellar record of practicing ethics such as respect and integrity in past projects. Furthermore, the PMI Code of Ethics will be used as a reference guide for the project manager and his team to foster trust among the team and facilitate project success. In addition, the project leader will instill values among the project team by reminding them in status meetings about the importance of ethics.

It is quite important that ethics is stressed among the project due to its nature. Many persons believe that physical ballots are still in effect due to its ability to be manipulated while others believe that the electronic machines can be manipulated to skew the results. However, the FGP will ensure that it complies with the respective electoral laws and regulations.

Fairness will be a major part of the FGP. One reasonable concern that the public has in relation to the electronic tabulation machines is if one can place a spoiled ballot. The project manager and his team will ensure that the machine is tailored to accommodate as many ballot circumstances as possible to promote fairness. Honesty will also be present among the FGP as the team will be encouraged to be as transparent as possible. There will also be strategies in place to ensure that each project team member gets their fair accreditation to their performed duties.

3 METHODOLOGICAL FRAMEWORK

3.1 Information sources

An information source is a person, object or location from which knowledge originates, emerges or is derived (Thanuskodi, 2020). There are two major sources of information named primary and secondary.

3.1.1 Primary sources

The primary source is a document or other resource that contains firsthand information about its subject (Longe, 2023). Primary sources are referred to as the raw materials of history since they are authentic papers and artifacts made at the time of the event under consideration. The key primary sources used in this FGP were interviews and the St. Christopher and Nevis Chapter 2.01 National Assembly Elections Act and Subsidiary Legislation.

3.1.2 Secondary sources

A secondary source is something that was written after an event or development took place and is often evaluated or interpreted on a historical event (Longe, 2023). More particularly, the secondary source is a work that contains information about the original source but lacks first-hand information. The secondary information sources used in the FGP are academic books, journal articles, reputable organizations' reports and web research.

Chart 1 Information sources (Note: Author of Study)

Objectives	Information sources	
	Primary	**Secondary**
1. To create a project charter that will provide the project manager with a general idea of the scope, goals, objectives and resource requirements of the project.	- Interviews with relevant stakeholders (employees and registered voters) - Reviews of the OAS standards	- PMBOK Guide 7th edition - Journal articles - Internet resources
2. To develop a scope management plan that describes the steps needed in carrying out the project and acts as a guide to maintain the project within certain limits.	- Interviews with relevant stakeholders (employees and registered voters) - St. Christopher and Nevis Chapter 2.01 National Assembly Elections Act and Subsidiary Legislation.	- PMBOK Guide 7th edition - Journal articles - Internet resources

3. To formulate a schedule management plan that contains details on the project's scheduling methodology and gives direction to the project manager and team regarding the creation, maintenance and control of the project schedule to meet stakeholders' deadlines.	- Researcher's Observation - Interviews with relevant stakeholders	- PMBOK Guide 7th edition - Journal articles - Internet resources
4. To develop a cost management plan that will help the project manager and team to calculate their costs,	- Researcher's Observation - Interviews with relevant stakeholders	- PMBOK Guide 7th edition - Journal articles - Internet resources

distribute resources appropriately and keep expenditures under control.		
5. To create a quality management plan that will make it easier for the project manager and team to satisfy both the needs of the client and the project's criteria.	- Researcher's Observation - Interviews with relevant stakeholders - St. Christopher and Nevis Chapter 2.01 National Assembly Elections Act and Subsidiary Legislation.	- PMBOK Guide 7th edition - Journal articles - Internet resources
6. To develop a resource management plan that details how the resources are obtained, distributed, tracked and	- Researcher's Observation - Interviews with relevant stakeholders	- PMBOK Guide 7th edition - Journal articles - Internet resources

managed.		
7. To formulate a communication management plan that describes the requirements and expectations for communication over the entire project.	- Researcher's Observation Interviews with relevant stakeholders	- PMBOK Guide 7th edition - Journal articles - Internet resources
8. To create a risk management plan that aids in identifying and evaluating potential project risks as well as describe how the team will strategize to reduce the potential risks to facilitate the project's success.	- Researcher's Observation - Interviews with relevant stakeholders - St. Christopher and Nevis Chapter 2.01 National Assembly Elections Act and Subsidiary Legislation.	- PMBOK Guide 7th edition - Journal articles - Internet resources

9. To develop a procurement management plan that outlines how the organization will manage the procurement process by ensuring that all stakeholders involved are aware of the steps that must be taken during the procurement cycle.	- Researcher's Observation - Interviews with relevant stakeholders	- PMBOK Guide 7th edition - Journal articles - Internet resources
10. To formulate a stakeholder management plan that indicates how the team will handle the goals and demands of key stakeholders throughout the project lifecycle.	- Researcher's Observation - Interviews with relevant stakeholders (employees, registered voters, potential voters, etc.) - St. Christopher and Nevis	- PMBOK Guide 7th edition - Journal articles - Internet resources

	Chapter 2.01 National Assembly Elections Act and Subsidiary Legislation.	
11. To create a sustainable management plan that will address environmental, social and economic considerations to facilitate long-term viability and responsible business practices.	- Researcher's Observation - Interviews with relevant stakeholders	- - Journal articles - Internet resources

3.2 Research methods

Research methods refer to the methods, procedures, or strategies used to gather information or proof for analysis in order to learn more about a subject or have better knowledge of it ("Research Methods…, 2023"). Accordingly, there are various types of research methods to which some will be discussed below.

3.2.1 Analytical method

The analytical research method is a type of study that calls for abilities like critical thinking and the assessment of data and information pertinent to the research being conducted (Howell, 2021). To fully comprehend the topic under analysis, the goal is to identify its key components which were exercised for this FGP. In this way, the researcher is able to gather evidence to strengthen his or her research, thereby, making it more reliable.

3.2.2 Descriptive method

The descriptive research method explains the traits of the group, circumstance, or thing being investigated without changing factors or putting theories to the test (Dovetail Editorial Team, 2023). The descriptive method is conducive for effective research as it helps one to know the who, what, and where of a situation or target demography.

3.2.3 Qualitative method

The qualitative research method collects data on people's actual experiences, feelings, and actions as well as the meanings to give to these things (Bhat, n.d.). Furthermore, qualitative data collection enables the collection of non-numerical data, aids in the researcher's understanding of how decisions are made, and allows for the analysis of non-numeric data. Such judgments should only be drawn after rigorous analysis of the facts, which should be comprehensive, rich and nuanced. However, it is important to note that qualitative data collection process tends to produce a significant amount of data.

3.2.4 Quantitative method

The quantitative research method is a methodical examination of events by the collection of measurable data and the application of statistical, mathematical, or computational methods (Fleetwood, n,d.). The outcomes of this kind of research can be represented numerically, which is one of its key characteristics. It is also feasible to forecast the future of the good or service and make adjustments after carefully examining the numbers.

Chart 2 Research methods (Note: Author of Study)

Objectives		**Research methods**		
	Analytical Research	Descriptive Research	Quantitative Research	Qualitative Research
1. To create a project charter that will provide the project manager with a general idea of the scope, goals, objectives and resource requirements of the project.	Information from earlier studies and previous reports would be evaluated.	Available data from internet resources.	Empirical data would be collected.	Interviews and surveys will be used to obtain more information relating to the purpose of the project, etc..
2. To develop a scope management plan that describes the steps needed in carrying out the	Information from earlier studies and previous reports would	Available data from internet resources and interviews.	N/A	Information from the PMBOK guide will be used to better

project and acts as a guide to maintain the project within certain limits.	be evaluated.			understand the concepts.
3. To formulate a schedule management plan that contains details on the project's scheduling methodology and gives direction to the project manager and team regarding the creation, maintenance and control of the project schedule to meet stakeholders' deadlines.	Information from earlier studies and previous reports would be evaluated.	Available data from internet resources and interviews.	Empirical data would be collected.	Information from the PMBOK guide will be used to better understand the concepts.
4. To develop a cost management plan that will help the project manager and team to	Information from earlier studies and previous reports would	Available data from internet resources and interviews.	Empirical data would be collected.	Information from the PMBOK guide will be used to better

calculate their costs, distribute resources appropriately and keep expenditures under control.	be evaluated.			understand the concepts.
5. To develop a quality management plan that details how the resources are obtained, distributed, tracked and managed.	Information from earlier studies and previous reports would be evaluated.	Available data from internet resources.	Empirical data would be collected.	Information from the PMBOK guide will be used to better understand the related concepts.
6. To develop a resource management plan that details how the resources are obtained, distributed, tracked and managed.	Information from earlier studies and previous reports would be evaluated.	Available data from internet resources.	N/A	Information from the PMBOK guide will be used to better understand the concepts. The OAS electoral standards will be analyzed to ensure that the FGP is

				along the right path.
7. To formulate a communication management plan that describes the requirements and expectations for communication over the entire project.	N/A	N/A	Empirical data would be collected.	Information from the PMBOK guide will be used to better understand the concepts.
8. To create a risk management plan that aids in identifying and evaluating potential project risks as well as describe how the team will strategize to reduce the potential risks to facilitate the project's success.	Information from earlier studies and previous reports would be evaluated.	Available data from internet resources.	Empirical data would be collected using the Probability and Impact matrix.	Information from the PMBOK guide will be used to better understand the concepts. Interviews to determine the risks associated with the project.
9. To develop a procurement management plan	Information from earlier studies and	Available data from internet resources.	NA	Information from the PMBOK

that outlines how the organization will manage the procurement process by ensuring that all stakeholders involved are aware of the steps that must be taken during the procurement cycle.	previous reports would be evaluated.			guide will be used to better understand the concepts. Interviews to determine the risks associated with the project.
10. To formulate a stakeholder management plan that indicates how the team will handle the goals and demands of key stakeholders throughout the project lifecycle.	Information from earlier studies and previous reports would be evaluated.	Available data from internet resources.	NA	Information from the PMBOK guide will be used to better understand the concepts. Interviews to better understand stakeholders' views.
11. To create a sustainable management plan	NA	Available data from internet resources	Empirical data would be collected.	Information from the PMBOK

that will address environmental, social and economic considerations to facilitate long-term viability and responsible business practices.				guide will be used to better understand the concepts.

3.3 Tools

The research tool denotes a device, process, technology, biological substance, reagent, computer system or software, or analytical technique created to aid in the creation of an approved project ("Research Tools 1…," 2019). In addition, research tools are employed to gather data for a specific research issue or to measure a variable. The researcher can then accomplish his or her objectives and save time by making a careful choice of research instruments ("Research Tools 1…," 2019).

Chart 3 Tools (Note: Author of Study)

Objectives	Tools
1. To create a project charter that will provide the project manager with a general idea of the scope, goals, objectives and resource requirements of the project.	Brainstorming, interviews, meetings, Microsoft Word and Excel
2. To develop a scope management plan that describes the steps needed in carrying out the project and acts as a guide to maintain the project within certain limits.	Interviews, surveys, observations, Microsoft Word and Excel
3. To formulate a schedule management plan that contains details on the project's scheduling methodology and gives direction to the project manager and team regarding the creation, maintenance and control of the project schedule to meet stakeholders' deadlines.	Meetings, expert judgment, project management information system, Microsoft Word and Excel

4. To develop a cost management plan that will help the project manager and team to calculate their costs, distribute resources appropriately and keep expenditures under control.	Meetings, expert judgment, project management information system, cost aggregation, Microsoft Word and Excel
5. To develop a quality management plan that details how the resources are obtained, distributed, tracked and managed.	Meetings, cost-benefit analysis, check sheet, Microsoft Word and Excel
6. To develop a resource management plan that details how the resources are obtained, distributed, tracked and managed.	Meetings, organizational charts, negotiation skills, Microsoft Word and Excel
7. To formulate a communication management plan that describes the requirements and expectations for communication over the entire project.	Active listening, cultural awareness, presentations, communication technology, Microsoft Word and Excel
8. To create a risk management plan that aids in identifying and evaluating potential project risks as well as describe how the team will strategize to reduce the potential risks to facilitate the project's success.	Assumptions analysis, SWOT analysis, expert judgment, probability and impact matrix, risk categorization, Microsoft Word and Excel

9. To develop a procurement management plan that outlines how the organization will manage the procurement process by ensuring that all stakeholders involved are aware of the steps that must be taken during the procurement cycle.	Meetings, market research, expert judgment, Microsoft Word and Excel
10. To formulate a stakeholder management plan that indicates how the team will handle the goals and demands of key stakeholders throughout the project life cycle.	Interpersonal and team skills, meetings, stakeholder analysis, Microsoft Word and Excel
11. To create a sustainable management plan that will address environmental, social and economic considerations to facilitate long-term viability and responsible business practices.	P5 analysis, Microsoft Word and Excel

3.4 Assumptions and constraints

A project assumption is any project-related factor that is taken into account and thought to be true, real or certain without empirical support or demonstration (PMI, 2021). Fundamentally, project assumptions are the things you believe to be true in order for your project to succeed.

Project constraints are defined as the restrictions that a project must adhere to, including, time, money, scope, quality, resources and risks (Eby, 2022). To ensure that projects are completed successfully, managers must strike a balance between these restrictions.

Chart 4: Assumptions and constraints (Source Author of Study)

Objectives	Assumptions	Constraints
1. To create a project charter that will provide the project manager with a general idea of the scope, goals, objectives and resource requirements of the project.	The project understands the purpose and goals of the project.	There is intense pressure for the project to meet stakeholders' expectations especially since there is none like it in the federation.
2. To develop a scope management plan that describes the steps needed in carrying out the project and acts as a guide to maintain the project within certain limits.	The members of the project team will be able to handle the necessary responsibilities.	Insufficient information may lead to scope creep.
3. To formulate a schedule management plan that contains details on the project's scheduling methodology and gives direction to the project manager and team regarding the creation, maintenance and control of the project schedule to meet stakeholders' deadlines.	The project team will complete milestones according to the schedule.	The project must be completed within the stipulated timeframe.

Objectives	Assumptions	Constraints
4. To develop a cost management plan that will help the project manager and team to calculate their costs, distribute resources appropriately and keep expenditures under control.	Project expenses will not drastically change during the course of the project.	The project is operating within an environment of inflation that may cause changes to the budget.
5. To develop a quality management plan that details how the resources are obtained, distributed, tracked and managed.	The team will be willing to participate in corrective actions to meet the stipulated quality standards.	There is lack of historical data and examples to compare the quality of the project to.
6. To develop a resource management plan that details how the resources are obtained, distributed, tracked and managed.	Necessary resources will be available and accessible.	Resources may not be readily available or easily accessible.
7. To formulate a communication management plan that describes the requirements and expectations for communication over the entire project.	The project team will understand the communication requirements and their role in	Communication technology may shut down due to power failure.

Objectives	Assumptions	Constraints
	communication.	
8. To create a risk management plan that aids in identifying and evaluating potential project risks as well as describe how the team will strategize to reduce the potential risks to facilitate the project's success.	The inclement weather and other acts of God will not interfere with the progress of the project.	Low productivity of the team.
9. To develop a procurement management plan that outlines how the organization will manage the procurement process by ensuring that all stakeholders involved are aware of the steps that must be taken during the procurement cycle.	The machines suppliers will send the appropriate machines on time.	Suppliers may not be available due to strikes.
10. To formulate a stakeholder management plan that indicates how the team will handle the goals and demands of key stakeholders throughout the project life cycle.	Stakeholders will be cooperative and willing to share relevant input.	Stakeholders' expectations may change throughout the project.
11. To create a sustainable management plan that will address environmental, social and economic considerations to facilitate long-term viability and responsible business practices.	Key stakeholders will be supportive and engaged in sustainability	There may be legal or regulatory requirements that hinder the success of the plan.

Objectives	Assumptions	Constraints
	efforts.	

3.5 Deliverables

A project deliverable is defined as a product created as a result of a project (York, 2023). Therefore, the primary deliverable of the FGP is the project management plan for the utilization of electronic tabulation machines in the country's voting process.

Chart 5 Deliverables (Note: Author of Study)

Objectives	Deliverables
1. To create a project charter that will provide the project manager with a general idea of the scope, goals, objectives and resource requirements of the project.	A project charter which supplies a written reference throughout the duration of the project.
2. To develop a scope management plan that describes the steps needed in carrying out the project and acts as a guide to maintain the project within certain limits.	A scope management plan which contains the scope statement, requirements traceability matrix and WBS
3. To formulate a schedule management plan that contains details on the project's scheduling methodology and gives direction to the project manager and team regarding the creation, maintenance and control of the project schedule to meet stakeholders' deadlines.	A schedule management plan which includes the activity list, sequence of activities and activity durations.
4. To develop a cost management plan that will help the project manager and team to calculate their costs, distribute resources appropriately and keep expenditures under control.	A cost management plan which involves cost estimation and the project's budget.
5. To develop a quality management plan that details how the resources	A quality management plan which entails the process for reviewing data associated

are obtained, distributed, tracked and managed.	with deliverables and an evaluation criteria.
6. To develop a resource management plan that details how the resources are obtained, distributed, tracked and managed.	A resource management plan which involves responsibility assignments, requirements estimation and alternative options.
7. To formulate a communication management plan that describes the requirements and expectations for communication over the entire project.	A communication management plan which details how frequent the sender and receiver will communicate, the resources available for communication and the purpose of effective communication.
8. To create a risk management plan that aids in identifying and evaluating potential project risks as well as describe how the team will strategize to reduce the potential risks to facilitate the project's success.	A risk management plan which includes the risk breakdown structure and probability and impact matrix.
9. To develop a procurement management plan that outlines how the organization will manage the procurement process by ensuring that all stakeholders involved are aware of the steps that must be taken during the procurement cycle.	A procurement management plan which involves who will be responsible for the procurement processes and the contract type to allow the project manager to make better decisions for the future of the project.

10. To formulate a stakeholder management plan that indicates how the team will handle the goals and demands of key stakeholders throughout the project life cycle.	A stakeholder management plan which includes stakeholder identification and stakeholder power interest grid to help the project to meet stakeholder requirements.
11. To create a sustainable management plan that will address environmental, social and economic considerations to facilitate long-term viability and responsible business practices.	A sustainable management plan which includes the purpose, approach and p5 analysis to help the project be more sustainable.

4 RESULTS

4.1 Project Charter

Gillis (2023) explains that a project charter is a concise and formal document that certifies the existence of a project and grants project managers official permission to commence working on it. The formulation of a project charter occurs at the beginning stage of the project and during the project planning stage. Accordingly, the project charter outlines the project in order to establish a common understanding of its goals, objectives and resource requirements. Furthermore, this document is extremely critical to project management since it serves as a resource for the project's fundamentals as well as a resource for the duration of the project. In this FGP, data and information were gathered from interviews, observation and publications.

Chart 6 Project Charter (Note: Author of Study, 2023)

PROJECT CHARTER
Project Name
A Project Management Plan Proposal for the Digital Enhancement of the Electoral Voting Process in the Federation of St. Kitts And Nevis
Project Purpose/Justification
The project will simply help to modernize the tabulation feature of the electoral process while taking into consideration the suitable project management knowledge areas and processes and regenerative and sustainable characteristics. The present manual tabulation procedure is simply outdated and tends to lead to unwanted delays regarding the elections' results. With the modernization of the counting of votes, it is projected to increase the efficiency and accuracy of the votes' tabulation process. This action will likely further preserve the honorability of the electoral system and prompt other smaller islands to advance their electoral procedures.

Final Project Deliverable
The final deliverable for this project will be the ability to use 80 electronic tabulation machines that can work with or without electricity to foster enhanced security, aid versatility and lead to cost savings.
Project Objectives (General and Specific)
- To provide 80 quality electronic tabulating machines to the Electoral Office for the upcoming general elections in St. Kitts and Nevis. - To ensure that the electronic tabulating machines can operate error-free with and without electricity. - To increase the speed of the counting of the ballots and the delivery of the results by at least 10 hours. - To improve the country's ranking by obtaining a score of at least 10 on the Global Competitiveness Index (GCI). - To enhance the reputation of the federation's electoral process by scoring an Electoral Integrity Index score of 75 and above. - To instill voter confidence by increasing voter turn-out from 58% to 75%.
Assumptions
- It is assumed that there will be an adequate supply of qualified labor over the project's duration. - It is assumed that the overall project's expenses will not be greatly impacted by inflation or currency fluctuations. - It is assumed that sufficient funds will be available to execute the project including acquisition and installation of machinery. - It is assumed that the machinery will be available at the time for acquisition. - It is assumed that the electoral legislation will not change to prohibit the use of the tabulation machines.
Constraints
- The project should be executed in no more than 18 months. - The project attracts an exorbitant cost.

- The procedures should comply with the electoral standards.

Preliminary Risks

- The tabulation machines may become damaged along the journey to St. Kitts and Nevis due to the impact of natural disasters which may lead to increased costs.
- The general public may advocate against the change from manual tabulation to electronic tabulation due to misinterpretation of presented information which may cause project delays.
- The tabulation machines may be transported from Nebraska to St. Kitts longer than anticipated due to global supply chain disruptions which may cause project delays.
- The Information Technology project team members may misunderstand how to properly configure the device to meet local electoral needs which can compromise product quality.

Summary Milestone Schedule

Milestone	**End Date**
Project Initiation/Kick-Off	May 6, 2024
Hire Election Systems and Software LLC	June 3, 2024
Selection of local I.T. experts	July 31, 2024
Purchase and importation of ten DS200 tabulation machines	September 2, 2024
Training and educational sessions for the I.T. project team personnel	September 24, 2024
Software Configuration of machines	October 21, 2024
Inspection of machine	November 8, 2024
Series of educational sessions and mock election exercises being held throughout the island with the use of the singular machine	December 20, 2024

	Handover of machines to the Electoral Office	January 30, 2025

General Budget

Item		**Cost ($USD)**
Salaries and Allowances		**$65,000.00**
Procurement of machines		**$25,000.00**
Vendors		**$336,000.00**
Training and Materials		**$13,000.00**
		$439,000.00
Add Contingency Reserve 5%	$21,950.00	$460,950.00
Add Management Reserve 10%	$46,095.00	**$507,045.00**

Project Stakeholders

Direct Stakeholders: Project manager-Rénell M. Agard, The Electoral Office of St. Kitts and Nevis, Ministry of Information Communications Technology

Indirect Stakeholders: Residents and registered voters, media personnel, neighboring islands

Project Approval

Approved by:	**Signature:**
Project Manager: Rénell M. Agard	

4.1.1 Change Control Process

Change control refers to the procedure used to assess a change request and determine whether to move forward with it. The majority of modifications will likely impact the project's budget and/or schedule which are significant elements of a project. Therefore, in

this particular project, the project manager will bear the responsibility of detecting and monitoring the various changes throughout the project life cycle. Then, the Change Control Board (CCB) comprising the project sponsor, project manager, I.T. manager and election official will evaluate the change requests and decide whether to approve or reject them. The objective is to reduce change unless it is judge essential or advantageous and effective change control will be able to prevent the negative consequences that can arise from a project change.

4.1.2 Change Request Workflow and Approval Process

The workflow and approval process is in place to ensure that the introduction of tabulation machines to the federation's general elections is well-planned, technically feasible and aligns with the project's objectives.

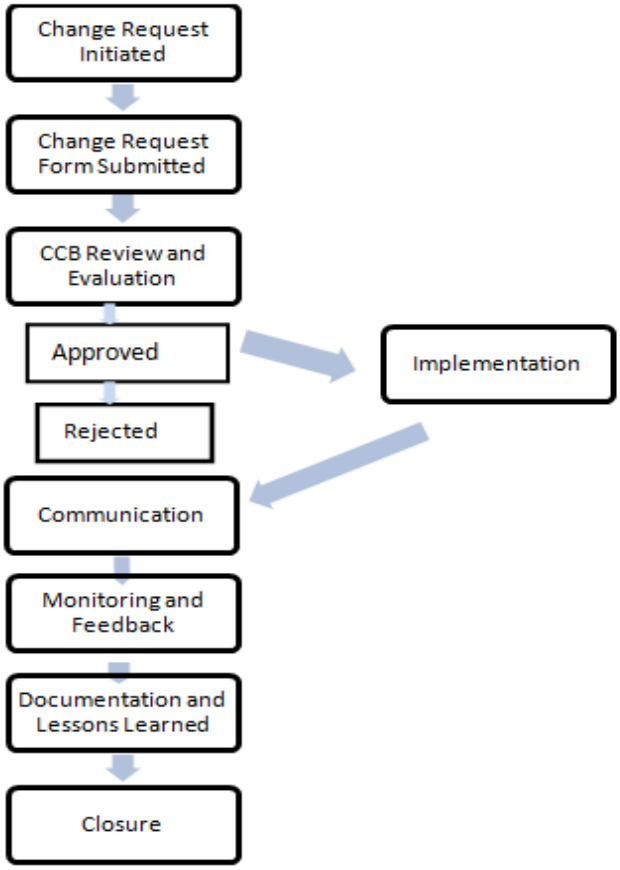
- Change Request Initiation: Project team members or relevant stakeholders identify the need for a change.
- Change Request Documentation: A change request form is completed, detailing the rationale, scope affected, risk assessment, cost-benefit analysis and proposed timeline for implementing the change. The form is submitted internally within the organization, specifically to the Change Control Board.
- Change Request Review and Approval: The CCB reviews the change request and evaluates the proposed change to ensure that it aligns with regulatory requirements and strategic objectives. The CCB then approves the change request while considering the technical feasibility and potential impact on the overall project timeline and project. If necessary, the approval may be subject to conditions that

must be met before the implementation can proceed. If the change request is rejected, the reasons for rejection are communicated to the relevant stakeholders, and revisions may be requested.

- Implementation: If the change request is approved, the relevant team members will implement the proposed changes. These may involve configuring additional tabulation machines, updating software or integrating new components.
- Communication: The project manager communicates the changes to relevant stakeholders.
- Monitoring and Feedback: The project manager monitors the performance of the updated processes, gathering feedback from users and stakeholders. The project manager will address any issues or concerns promptly and make further adjustments as needed to optimize performance.
- Documentation and Lessons Learned: The project manager documents the changes made, including any lessons learned or best practices identified during the process. This document serves as a reference for future projects or similar initiatives.
- Closure: Once the changes have been successfully implemented and validated, the change request is officially closed, and project team may proceed with ongoing monitoring and maintenance activities as necessary.

4.1.2.1 Change Approval Flow Chart

Figure 5 Change Approval Flow Chart (Note: Author of Study, 2024)



4.1.2.2 Change Request Form Template

Chart 7 Change Request Form Template (Note: Author of Study, 2024)

Change Request Form
Project Name:

Change Number:	Date:
Change Description:	
Reasons for Change:	
Change Impact	
Scope Affected:	
Resources:	
Risk Evaluation:	
Cost-Benefit Analysis:	
Timeline:	
Change Request Approval:	
Approved	
Approved with Conditions	
Rejected (Reason: _____)	
Comments: (Provide any additional comments relevant to the change request)	
Attachments: (Attach supporting documents related to the change request such as stakeholder feedback or technical specifications)	
Submitted By: (Name and Title)	
Approved By: (Name and Title)	
Date Approved:	

4.2 Scope Management Plan

4.2.1 Introduction

The scope management plan is an essential document that describes the methods, protocols and directives for managing a project's scope. Consequently, the scope management plan is critical to ensuring that the project stays on course and is completed

within the allocated time schedule and budget. This plan contains the roles and responsibilities, scope management approach, scope definition and statement, work breakdown structure and control.

4.2.2 Roles and Responsibilities

The project sponsor, manager and team will all be crucial in managing the project's scope. To guarantee that the work done on the project stays within the defined scope throughout the project life cycle, the project sponsor, manager, team and key stakeholders should be informed of their roles and duties. The respective roles and duties for this project's scope management are outlined in the chart below.

Chart 8: Scope Management Roles and Responsibilities (Note: Author of Study, 2023)

Role	**Responsibility**
Project Sponsor	- Approve or Disapprove change requests. Accept the final project deliverable.
Project Manager	- Facilitate requests for scope changes. Verify project scope. Evaluate the effects of proposals for scope changes. Plan and lead regular meetings for change control. Report to the project team the results of the requests for scope changes as necessary. Update project documentation when scope changes are approved.
Project Team	- Participate in recommending change solutions. Determine whether scope changes are required and notify the project manager of any changes that are required.
Other Project Stakeholders including suppliers and community training team	- Recommend change requests where necessary Carry out the directives

	derived from the approved change requests.

4.2.3 Scope Management Approach

The main individual responsible for the scope management is the project manager. The scope definition, scope statement and work breakdown structure will all outline the project scope. Then, the project sponsor and project manager will work close together in situations where events are affecting the project scope. The project team will work closely with the project manager by sharing any change that needs to be executed for the betterment of the project.

4.2.4 Scope Definition

The overall amount of work required to complete a project is known as the project's scope. The project's scope has been established through an extensive requirement gathering process. Furthermore, the input from employees and other stakeholders as well as a detailed examination of the company's present software applications and business processes were considered for the scope definition. The project aims to deliver 80 tabulation machines to account for the 80 polling stations that the federation of St. Kitts and Nevis uses in its general elections.

4.2.5 Project Scope Statement

A project scope statement is a written document that outlines the components of the project scope. Resultantly, the project statement acts as a guide and point of reference for

stakeholders and collaborators to appropriately gauge the success of the project. The following table displays the project scope statement.

Chart 9: Project Scope Statement (Note: Author of Study, 2023)

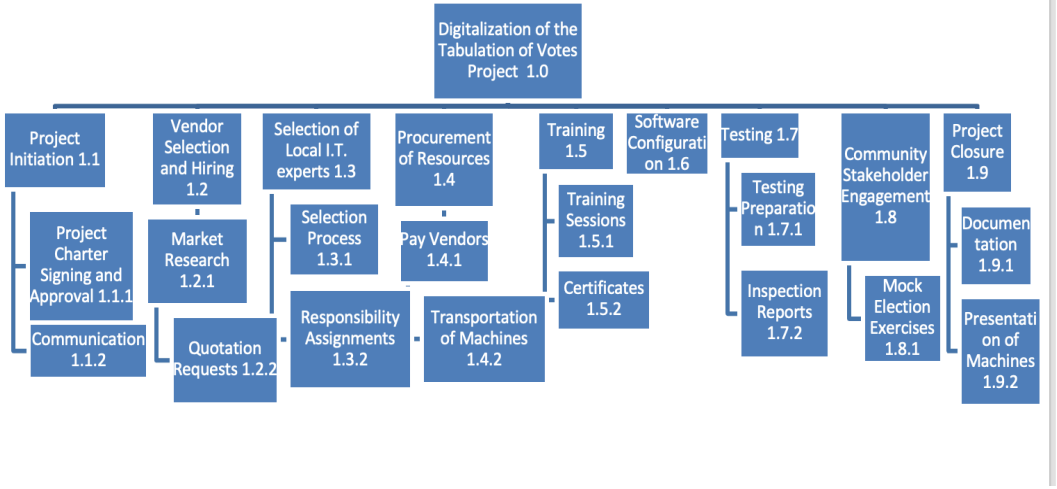
Project Name
A Project Management Plan Proposal for the Digital Enhancement of the Electoral Voting Process in the federation of St. Kitts and Nevis
Product Scope Description
The main product of this project is the delivery of 80 tabulation machines to the local Electoral Commission to be used in future general elections. This will lead to a more robust and efficient elections system.
Project Deliverables
- Hire Election Systems and Software LLC - Selection of local I.T. experts - Purchase and importation of DS200 tabulation machines - Training and educational sessions for the I.T. project team personnel - Inspection of machine - Series of educational sessions and mock election exercises being held throughout the island with the use of the singular machine - Configuration of machines - Handover of machines to the Electoral Office
Project Assumptions
- It is assumed that there will be an adequate supply of qualified labor over the project's duration. - It is assumed that the overall project's expenses will not be greatly impacted by inflation or currency fluctuations. - It is assumed that sufficient funds will be available to execute the project including acquisition and installation of machinery. - It is assumed that the machinery will be available at the time for acquisition. - It is assumed that the electoral legislation will not change to prohibit the use of the tabulation machines.

Project Constraints
- The project should be executed in no more than 18 months. - The project attracts an exorbitant cost. The procedures should comply with the electoral standards.
Project Exclusions
Items Excluded: i. None
Project Acceptance Criteria
The project will be accepted when: - The project complies with local and regional electoral standards. - The project contains sustainable features. - The project is completed within the stipulated time frame and budget. - The project sponsor approves the project management plan document.

4.2.6 Work Breakdown Structure (WBS)

The WBS is a deliverable-oriented hierarchical breakdown of the tasks that the project team must perform. It is considered as one of the most critical project management documents as it allows one to divide a job into smaller tasks so that they are more manageable. It combines scope, cost and schedule baselines to ensure that the project plans are in alignment. For this project, a phase-based work breakdown structure is used. The phase-based work breakdown structure is used since it demands that work related to several elements be separated into the task specific to every Level 1 element.

Chart 10 WBS (Note: Author of Study, 2023



Fundamentally, a WBS dictionary provides detailed information about the components and work packages of the WBS. In a WBS dictionary, one can specify each step of the WBS and how to execute and achieve the project's ultimate deliverable. Therefore, the project manager formulates the WBS dictionary which is displayed in the chart below.

Chart 11: WBS Dictionary (Note: Author of Study, 2023)

Level	WBS Code	Element Name	Description	Resources	Budget
1	1.1	Project Initiation	The first phase of the project cycle which involves defining the project's purpose, objectives, scope and deliverables and identifying key stakeholders.		**$0.00**
2	1.1.1	Project Charter Signing and Approval	The project sponsor reviews the project charter and signs it	Pens, Paper, Project Sponsor	
2	1.1.2	Communication	Establish communication channels with project members.	Phone, email, Internet access, Project Charter	
1	1.2	Vendor Selection and Hiring of	Commencement of the working relationship		**$10,000.00**

		External Company			
2	1.2.1	Market Research	Identification of suitable vendors for the project.	Internet access, Zoom software, conference room	
2	1.2.2	Quotation Requests	Obtaining quotation prices from the top vendors and selecting the best one for the project.	Internet access, Zoom software	
2	1.2.23	Contractual Agreements	Negotiations and Signing of Contracts	Computer, printer, pens	
1	1.3	Selection of local I.T. experts	Recruitment of key project team members		
2	1.3.1	Selection Process	Collaboration with the government's ICT department to identify and select the most suitable I.T. personnel	I.C.T Manager, project manager	
2	1.3.2	Responsibility	Assignment of	I.C.T	$55,000.0

		Assignments	roles and responsibilities to the various project team members including signing of contracts.	Manager, project manager, Computer, Printer, Pens	0
1	1.4	Procurement of Resources	Supply and logistics of resources		
	1.4.1	Pay Vendors	Ensuring that the vendors are paid according to the contractual agreement	Bank, project leads	$336,000.00
	1.4.2	Supply and transportation of Machines	Safe and secure delivery of the tabulation machines to the federation.	Vessel for the transportation of machines, security personnel to guard machines	$25,000.00
1	1.5	Training	Training of Personnel		
2	1.5.1	Training Sessions	A series of training sessions	External consultant,	$10,000.00

			explaining how the machines work and how to configure the machines.	internet, zoom	
2	1.5.1.2	Certificates	Granting of certificates to the trainees who participate and understand how to operate the machines.	Computer, printer, certificate paper	$3,000.00
1	1.6	Software Configuration	Ensure that the machine is appropriately configured	Local I.T project team members	
1	1.7	Testing			
2	1.7.1	Testing Preparation	Ensure that each machine is operational and can work with or without electricity as promised	Local I.T. project team members	
2	1.7.2	Inspection Reports	Submission of inspection reports to the project leads.	Computer, printer	
1	1.8	Community	Public awareness		

		Stakeholder Engagement	and education about the machines		
2	1.8.1	Mock Election Exercises	Each constituency receives a demonstration of how the machine will work during an election	Local I.T. Project team members, community centers, social media	
2	1.8.2	Communication with stakeholders	Addressing concerns of stakeholders	Local I.T. Project team members, community centers, social media	
1	1.9	Project Closure	Finalization of project deliverables		
2	1.9.1.1	Documentation	Documenting and communicating project outcomes and recommendations for future projects and initiatives.		

2	1.9.1.2	Presentation of Machines	Official presentation handing over the machines from the I.C.T department to the Electoral Office	Media, Project Manager, key stakeholders including Supervisor of Elections, government officials, etc.	

4.2.7 Requirements Traceability Matrix

This Requirements Traceability Matrix establishes the link between customer needs, functional requirements, technical requirements, priorities, and the overall project objective for the introduction of 80 tabulation machines in the island's general elections voting system. It ensures alignment between customer expectations and project components.

Chart 12: Requirements Traceability Matrix (Note Author of Study, 2023)

Customer Needs	Functional Requirements	Technical Requirements	Priority	Project Objective	WBS ID	Work Package	Acceptance Criteria
Improved Election Efficiency	Ballot Processing	Compatibility with local and regional electoral standards	High	Enhance the efficiency of the island's general elections voting system through the introduction of 80 tabulation	1.4	Procurement of Resources	Machines comply with all local and regional electoral standards.

Customer Needs	Functional Requirements	Technical Requirements	Priority	Project Objective	WBS ID	Work Package	Acceptance Criteria
				machines.			
User-Friendly Operation	Intuitive User Interface	User-friendly design and easy-to-understand controls	Medium	Ensure that 100% of tabulation machine controllers can successfully operate the tabulation machines with ease after receiving a week's training.	1.5	Training	100% of tabulation machine controllers can operate the machines effectively after one week of training.
Reliability and Availability	Minimal Downtime and High Reliability	Redundancy features and regular maintenance	High	Guarantee the reliability and continuous availability of tabulation machines during the election process.	1.7	Testing	Tabulation machines demonstrate high reliability with 10% downtime or less.
Transparency in Tabulation Process	Audit Trail and Reporting Features	Transparent data processing and reporting mechanisms	High	Enhance transparency in the tabulation process, providing a clear audit trail and comprehensive reporting	1.6	Software Configuration	Reporting features faultlessly reflect processed data and results.

Customer Needs	Functional Requirements	Technical Requirements	Priority	Project Objective	WBS ID	Work Package	Acceptance Criteria
				features.			
Minimal Environmental Impact	Energy-Efficient Design	Eco-friendly materials and power-saving features	Medium	Minimize the environmental impact of tabulation machines through energy-efficient design and materials.	1.7.1	Testing and Inspection	Power saving features are effective in reducing energy consumption during operation.

4.2.8 Scope Validation

The scope validation process facilitates the formal acceptance of completed projected deliverables. Furthermore, the scope validation will occur during the monitoring and controlling stages. One benefit is that it is important in ensuring that the tabulation machines satisfy the needs of the users and other designated stakeholders. In order to carry out the scope validation process, the comprehensive project management plan will be an input. Moreover, the project manager will use the work breakdown structure, work breakdown structure dictionary, and project statement as reference to ensure that the project deliverables are being completed as planned. When the completion of the deliverables are in line with the project management plan, the project manager and project sponsor will sign an acceptable deliverables document confirming that the project remains within the scope. Then, the inspection of the machines according to industry standards and electoral regulations will be a technique used to help validate the scope of the project.

4.2.9 Scope Control

Scope control is the technique of managing modifications to the scope baseline while keeping an eye on the project scope. Essentially, scope control helps to preserve the scope baseline throughout the project's life cycle. The project manager and project team will work closely to control the scope of the project via the process of continuous monitoring. They will encourage the relevant stakeholders to use the WBS dictionary and project scope statement to better understand the requirements and deliverables that need to be executed. The use of the same documents as a means to monitor the progress of the project provides

project managers with the opportunity to pinpoint areas that need extra care and help to lessen the impact of scope creep. If the project scope requires change, then the appropriate change request procedure will be followed.

4.3. Schedule Management Plan

4.3.1 Introduction

The schedule management plan is described as a document that entails the creation, tracking and administration of a project schedule. It establishes the guidelines that will be used to construct and manage the project schedule, making it the initial stage in the project scheduling process as explained by Malsam (2022). Accordingly, the project management plan is incredibly useful in handling deviations and helping keep the project on schedule.

4.3.2 Schedule management approach

The Project Libre will be used to produce the project schedule. Each deliverable's specific schedule tasks that must be completed will be categorized by the activity specification. Based on previously established linkages between project tasks, activity sequencing will be used to determine the order of scheduled activities. To determine how many work periods will be required to finish the scheduled activities, activity time approximation will be utilized. To create a more comprehensive project plan, resource estimates will be used to assign resources to work activities. A working schedule will be produced, and the project manager will carefully go over it to validate the precise tasks and resources involved. After that, the resource allocations, activity durations, and timetable will be examined, verified, and approved by the whole project team.

4.3.3. Roles and Responsibilities

The project manager organizes the tasks, creates and keeps track of the assigned tasks' due dates. Accordingly, the project manager owns the project schedule. In addition, the project manager has the ability to make changes and updates to the schedule in the Project Libre software. In this project, the project team members are able to update the schedule with their progress when working on different tasks. However, the project manager is responsible for reviewing the changes and communicating changes to the project sponsor. The project sponsor will then grant or not grant the final approval of major changes to facilitate a smoother schedule execution.

4.3.4 Chart 13: Project Schedule (Note: Author of Study, 2023)

Activity ID	Name	Duration	Start Date	Finish Date
1	Digitalization of Tabulation of Votes Process	194 days	5/6/2024	01/30/25
1.1	Project Initiation	9 days	5/6/24	5/16/24
1.1.1	Project Charter Signing and Approval	4 days	5/9/24	5/14/24
1.1.2	Establish Communication channels	2 days	5/15/24	5/16/2024
1.2	Vendor Selection and Hiring of External Company	30 days	6/3/24	7/12/24
1.2.1	Market Research	11 days	6/3/24	6/17/24
1.2.2	Quotation Requests	6 days	6/19/24	7/124
1.2.3	Contractual Agreements	9 days	7/2/24	7/12/24
1.3	Selection of local I.T. experts	10 days	7/18/24	7/31/24
1.3.1	Recruitment Process	6 days	7/18/24	7/25/24
1.3.2	Responsibility Assignments	4 days	7/26/2024	7/31/24

1	Procurement of Resources	20 days	8/6/24	9/2/24
1.4.1	Payment of Vendors	3 days	8/6/24	8/8/24
1.4.2	Supply and Transportation of Machines	16 days	8/12/24	9/2/2024
1.5	Training of Personnel	12 days	9/9/24	9/24/24
1.5.1	Training Sessions	12 days	9/9/24	9/24/24
1.5.2	Certificates for Training Participants	3 days	9/25/2024	9/27/24
1.6	Software Configuration	15 days	10/1/24	10/21/2024
1.7	Testing	12 days	10/24/2024	11/8/2024
1.7.1	Testing of machines	12 days	10/24/24	11/1/2024
1.7.2	Inspection Reports	7 days	11/4/24	11/8/24
1.8	Community Stakeholder Engagement	5 days	11/16/24	12/20/24
1.8.1	Mock Election Exercises	25 days	11/16/24	12/20/2024
1.8.2	Communication with Stakeholders	25 days	12/23/24	01/24/25
1.9	Project Closure	18 days	01/07/25	01/30/25
1.9.1	Documentation of Lessons Learned	14 days	01/07/25	01/24/25
1.9.2	Official presentation and handover of machines	1 day	01/30/25	01/30/25

Chart 14: GANTT Chart (Author of Study, 2024)

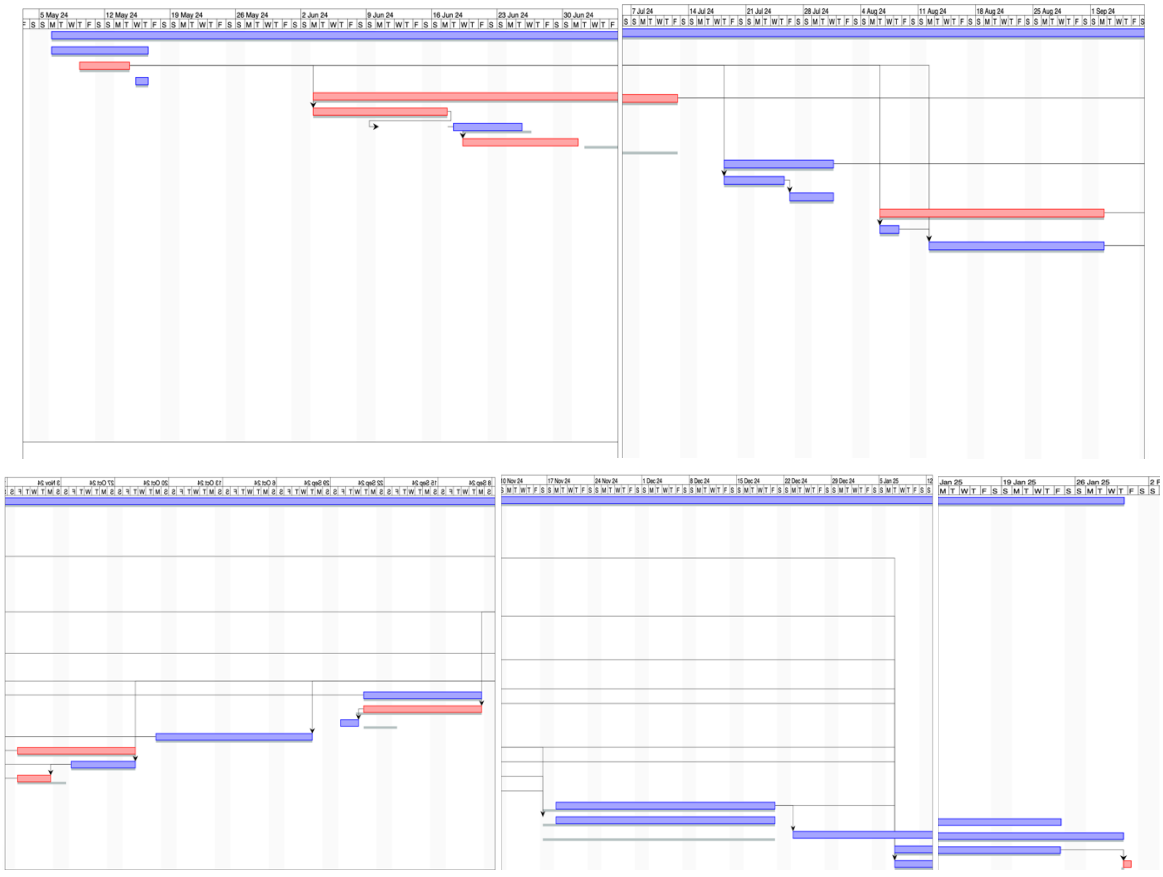


Chart 15: Project Schedule Network Diagram (Author of Study, 2024)

4.3.5 Schedule Control

The project manager is responsible for tracking and overseeing the project's progress in efforts of ensuring that the project is meeting its stipulated deadlines. Accordingly, the project manager is in charge of scheduling revisions, organizing review meetings and creating schedule modifications that comply with the communication plan. Furthermore, every Monday, the schedule will be reviewed and revised to account for unanticipated

circumstances. If there are changes to be made to the actual start and finish dates, they must be communicated to the project manager by the project team who is also responsible for participating in relevant schedule reviews and updates. Then, the project manager notifies the project sponsor of any deviations from the schedule and, if required, offers suggestions for bringing the schedule under control. The project sponsor will have the authority to accept or reject any requests for schedule modifications.

4.3.6 Schedule Changes and Thresholds

The project manager will convene with the team to discuss and assess any schedule modifications that any team member deems essential. To ascertain how the proposed change may influence the scope, schedule, and resources, the project manager and team must ascertain which tasks should be affected, variance resulting from the change, and any alternatives or variance resolution actions they may use. A request for a schedule adjustment must be made, if, after this review is finished, the project manager finds that any changes will go beyond the specified boundary conditions.

If any of the following two circumstances applies, a schedule change request must be submitted to the project sponsor for approval:

i. It is predicted that the suggested modification will result in a 9% or greater duration reduction or increase for each individual work package.
ii. It is expected that the modification will result in a 9% or more reduction in the total baseline schedule's duration or an increase in it.

If a change request falls short of these requirements, it can be sent to the project manager for approval. The project manager is in charge of modifying the schedule and informing the project team, project sponsor, and stakeholders of any changes and their implications after the change request has been examined and authorized. In addition, the project manager should ensure that all change requests are properly recorded and archived in the project records repository.

4.4 Cost Management Plan

4.4.1 Introduction

A Cost Management Plan is a fundamental component of project management that systematically outlines the strategies, methodologies, and guidelines for estimating, budgeting, allocating, and controlling costs throughout the life cycle of a project. This comprehensive document serves as a road map to ensure that financial resources are utilized efficiently and effectively to achieve project objectives within the defined constraints. The primary goal of a Cost Management Plan is to provide a structured approach for managing project costs, addressing financial aspects from the initial planning stages through project execution, monitoring, and closure. By establishing clear processes and controls, the plan facilitates informed decision-making, minimizes financial risks, and enhances overall project success.

4.4.2 Cost Management Tools

- The earned value management (EVM) was implemented to assess project performance and variances between planned and actual costs. EVM is quite useful

since it integrates scope, schedule and cost data to assess project performance and progress.

- Cost estimate tools were also employed to calculate accurate estimates for different project components.

- Expert judgment refers to the input and insights provided by individuals or groups with specialized knowledge, skills, and experience in the field of project cost management. These experts contribute their judgment and expertise to enhance the accuracy, reliability, and effectiveness of various processes within the cost management framework. Expert judgment is a valuable resource in developing, analyzing, and validating cost-related components of a project.

4.4.3 Cost Management Approach:

The cost management approach for the introduction of tabulation machines involves rigorous planning, monitoring, and control of project expenses. Regular reviews of actual costs against the budget will be conducted to ensure that the project stays within financial constraints.

4.4.4 Response Strategies

If the project experiences unfavorable CV, SV, CPI and SPI there will be certain corrective actions in place to bring the project back on track.

These include:

- **Analyze Root Causes:**

  The project manager and project team will conduct a thorough analysis to identify the root causes of the unfavorable variances and indices. More specifically, the project manager will look into the issues in project planning, execution, resource allocation or unexpected changes in scope.

- **Reassess Project Plan:**
- The project manager will review the project plan and identify areas where adjustments can be made to improve performance. This may involve revising the schedule, reallocating resources, or reevaluating cost estimates.
- **Implement Cost-Cutting Measures:**

  If the project is over budget, the project manager will consider implementing cost-cutting measures by looking for ways to optimize resource usage, negotiating with vendors for better rates, or finding alternative solutions that reduce costs without compromising quality.

4.4.5 Project Cost Estimation:

The budget for the project is as follows:

WBS Code	Element Name	Budget	Quantity/Description	Purpose
1.1.1	Project Charter	$5,000.00	As needed	Labor

1.1.2	Communication	$1,000.00	As needed	Labor
1.2.1	Market Research	$2,000.00	As needed	Labor
1.2.2	Quotation Requests	$300.00	As needed	Labor
1.2.3	Contractual Agreements	$1,000.00	As needed	Labor
1.3.1	Recruitment of local I.T. project members	$1,000.00	As needed	Labor
1.3.2	Responsibility Assignments	$20.00	As needed	Materials
1.4.1	Payment for the procurement of machines	$336,000.00	80	Materials
1.4.2	Supply and Transportation of Machines	$25,000.00	As needed	Transportation and Storage costs
1.5.1	Training of personnel	$12,880.00	As needed	Labor

1.5.2	Certificates	$100.00	5	Printing and Materials
1.6	Software Configuration	$19,700.00	As needed	Labor
1.7.1	Testing of machines	$5,000.00	As needed	Labor
1.7.2	Inspection Reports	$2,000.00	As needed	Labor
1.8.1	Mock Election Exercises	$20,000.00	As needed	Labor (incl. Marketing)
1.8.2	Communication with stakeholders	$5,000.00	As needed	Labor
1.9.1	Documentation of Lessons Learned	$1,000.00	As needed	Labor
1.9.2	Presentation of Machines Ceremony	$2,000.00	As needed	Labor
	Total	$439,000.00		
	Contingency	$21,950.00		

	Reserve (5%)			
	Management Reserve (10%)	$46,095.00		
	Total with Reserves	$507,045.00		

The Contingency Reserve of 5% is added to the total budget to account for unforeseen expenses, bringing the total budget to $460,950.00. Additionally, a Management Reserve of 10% is added to cover any strategic changes or unforeseen costs, resulting in a final budget of $507,045.00.

4.5 Quality Management Plan

4.5.1 Introduction

The Quality Management Plan outlines the approach, tools, and responsibilities for ensuring the successful introduction of 80 tabulation machines to the island's general elections process. The plan focuses on delivering high-quality machines that meet or exceed the stakeholders' expectations. This Quality Management Plan further serves as a guide to ensure that the introduction of tabulation machines to the island's general elections process meets the highest standards of quality. Regular reviews and updates will be conducted throughout the project life cycle to optimize quality processes and deliver a successful outcome.

4.5.2 Quality Management Tools and Techniques

- Checklists: Utilize checklists for inspecting and verifying the quality of tabulation machines at different stages of the project.
- Quality Audits: Conduct periodic quality audits to ensure adherence to established quality standards.
- Process Improvement Models: Apply continuous improvement models to enhance the quality of processes and deliverables.

4.5.3 Quality Management Approach

The approach to quality management emphasizes prevention over correction. Proactive measures will be taken to ensure that quality is built into every stage of the project, from procurement and development to testing and deployment.

4.5.4 Quality Objectives

- Achieve a machine accuracy rate of at least 99% to ensure reliable tabulation of votes.
- Maintain a tabulation machine reliability with an MTBF of at least 500 hours to minimize disruptions during the election process.
- Ensure a minimum user satisfaction rating of 4 out of 5 from election officials and voters through user-friendly design and effective training programs.
- Ensure compliance with all electoral regulations and standards set by the electoral commission and other relevant authorities.

- Implement robust data security measures to prevent any unauthorized access or tampering with voting data, achieving compliance with international data security standards.

4.5.4 Roles and Responsibilities

- Project Sponsor: Provides overall support and commitment to quality objectives.

- Project Manager: Oversees the entire quality management process and ensures alignment with project goals.

- Project Lead: Directly responsible for implementing and monitoring quality processes.

- Project I.T. Team: Ensures the technical aspects of the tabulation machines meet high-quality standards.

- Media: Provides input on public perception and expectations related to the quality of the machines.

- Voters: Represent the end-users and contribute to defining quality expectations and requirements.

4.5.5 Quality Activities

- Testing and Calibration: Conduct rigorous testing and calibration of tabulation machines to ensure accurate and reliable performance.

- Inspection: Incoming Inspection: Before deployment, each tabulation machine will undergo a thorough inspection to verify conformity with specification. Final

Inspection: The I.T. team conducts a comprehensive inspection where reports are generated before the machines are deployed to ensure all quality standards are met.

- Training and Education: Provide comprehensive training programs for election officials and voters to ensure they understand how to use the tabulation machines effectively.
- Regular Maintenance: Implement a proactive maintenance schedule to ensure tabulation machines are in optimal condition throughout the election period.
- Compliance Audits: Conduct regular audits to ensure compliance with electoral regulations and standards.
- Security Measures: Implement stringent security protocols, including encryption and access controls, to safeguard voting data against unauthorized access or tampering.

4.5.6 Quality Requirements

- Performance: Tabulation machines must accurately and efficiently process election data.

- Reliability: The machines should operate reliably under normal and expected conditions.

- Security: Robust security measures must be in place to prevent tampering or unauthorized access.

- Usability: The machines should be user-friendly, ensuring ease of operation for election officials.

- Compliance: Adherence to legal and regulatory requirements related to election processes.

4.5.7 Quality Control and Quality Improvement

- Control Measures: Implement controls to monitor and verify the quality of tabulation machines continuously.

- Feedback Mechanisms: Establish channels for stakeholders, including media and voters, to provide feedback on perceived quality.

- Continuous Improvement: Regularly assess and enhance quality processes based on lessons learned and feedback.

4.5.8 Quality Metrics for the Tabulation Machine

- Machine Accuracy Rate: Percentage of correctly tabulated votes compared to manual counting.
- Machine Reliability: Mean Time Between Failures (MTBF) of the tabulation machines.
- User Satisfaction: Feedback from election officials and voters regarding ease of use and effectiveness of the tabulation machines.
- Compliance with Standards: Adherence to electoral regulations and standards set by relevant authorities.
- Data Security: Level of protection against unauthorized access or tampering with voting data.

4.6 Resource Management Plan

4.6.1 Introduction

The resource management plan is a plan for the distribution, use, and scheduling of resources during the course of the project. The resources tend to include the raw materials, software and the human capital. This particular plan includes the responsibility assignments, project organization chart, staff acquisition, training and rewards, and the materials to be used. Furthermore, it is a crucial component of the project management plans an ineffective resource management plan can pose negative impacts on the project costs and schedule. More specifically, the plan plays a vital role in determining the resources' availability and any limitations, offers openness and visibility and organizes the workload of the staff. The project manager will be responsible for overseeing the resource management plan.

4.6.2 Roles and Responsibility Assignments

To prevent misunderstandings and disagreements, it is crucial to define each team member's specific duties and responsibilities when working on a project. The roles and responsibilities for the digitalization of the votes' tabulation process is outlined below which comprises the roles played by each team member, the responsibilities they have been given and the tools they need to complete their respective tasks.

- Project Manager (PM): There is one project manager who has the complete responsibility for the project's success. The project manager will implement track project budget requirements and risk management techniques to avoid losses such

as ensuring that all expenditures are authorized before any payment occurs. In addition, the PM will be responsible for assigning the specific tasks and work packages among the project team. Furthermore, the PM will engage in performance management of the project team members. Then, the PM will be responsible for ensuring that the proper and sufficient physical resources are provided for the project.

- Project Sponsor: The project sponsor is the ultimate person responsible for the funding and approval of the project. The project sponsor also does not participate in micromanaging which helps the project manager to have more flexibility. However, the project sponsor is consulted about decisions relating to scope, schedule and costs that have an impact on modifications to external commitments.

- Tabulation Machine Expert: The Tabulation Machine Expert will be responsible for training the I.T. project team members on the various technical functions of the machine and its software. The expert should also evaluate the personnel's knowledge on the machine in order for the member to pass the training. This information should be communicated to the project manager in accordance with the communication management plan.

- Local I.T. Personnel (5): The Information Technology Team is responsible for operating, configuring and fixing technical issues that may arise pertaining to the tabulation machines. They are also responsible for ensuring that the machines

remain within working condition throughout the project life cycle. They will also recommend necessary changes to the project manager.

- Electoral Office Personnel: The Electoral Office Personnel is responsible for ensuring that the operation of the machines comply with the electoral standards.

4.6.3 Project Organization Chart

Chart 16: RACI Matrix (Note: Author of Study, 2023)

	Project Manager	Project Sponsor	Tabulation Machine Expert	I.T. Personnel	Electoral Office Personnel	Stakeholders
Project Communications	A	I	R	R	I	I
Machine configuration	A	I	I	R	C	I
Procurement	A	C				
Change Requests	A	C	C	R	I	I
Project Quality	A	I	R	R	I	I
Stakeholder management	A	I			I	I
Project Scope	A	C	R	R	I	I
Status Reports	A	I		R	I	I

Key:

R- Responsible for working and completing the project deliverable.
A- Accountable for ensuring that the work is completed and satisfies all the project objectives.
C- Consulted before decisions are made surrounding project tasks.
I- Informed of project's decisions or actions.

4.6.4 Staff Management

4.6.4.1 Staff Acquisition

Staff acquisition simply involves obtaining the necessary human resources to engage in the project. This project is sponsored by the government and therefore, many of the human resources will be internal. The Information Technology team, that is a major human resource of the project comprises eight (8) persons including Systems Analyst, Network Specialist, Software Engineer, Programmer and an I.T. technician who works at the Office of Information and Communication Technology. There will also be outsourcing associated with this project. The project staff will have to sign contracts with the sponsoring organization before project work commences.

4.6.4.2 Resource calendar

In addition to the baseline schedule outlined in the Schedule Management Plan, a detailed resource calendar will be established to effectively manage the allocation of personnel and equipment resources for the introduction of 80 tabulation machines to the island's general elections process project. The project's core, focusing on Information Technology implementation, is slated to require 90 days of labor. To ensure seamless

execution, all necessary resources will be procured prior to project initiation, with additional resources acquired as the project progresses.

The resource calendar will serve as a comprehensive record, documenting the types and quantities of personnel and equipment available to fulfill the predefined tasks outlined in the schedule. This calendar will include details such as staff availability, skill sets, and equipment availability, allowing for efficient resource allocation and scheduling of project activities. Additionally, it will account for any potential dependencies or constraints that may impact resource availability, enabling proactive adjustments to maintain project timelines and objectives.

Regular updates and reviews of the resource calendar will be conducted throughout the project life cycle to monitor resource utilization, identify any gaps and optimize resource allocation as needed. By maintaining a well-managed resource calendar, the project team will ensure that the necessary resources are effectively utilized to meet project deadlines and deliver high-quality outcomes for the successful implementation of tabulation machines in the island's general elections process.

4.6.4.3 Training

All the local Information Technology team members will undergo training. This training will be conducted by the external Tabulation machine expert who will explain how the machines operate and other necessary software knowledge and information. The I.T. staff along with other project staff will also be given a project overview to better

understand their roles in the project. The project manager will manage the scheduling of the training sessions to ensure that they align with the availability of the human resources.

4.6.4.4 Recognition and Rewards

There are a few planned activities for recognizing and rewarding the staff for their contributions to the project. For instance, the I.T. staff will be rewarded with certificates for passing the training relating to the machines. Another method would be to highlight the workers and their contributions on popular media outlets' social pages. There will be an open atmosphere that allows the team members to recommend changes to the project scope which help them to feel a part of the decision-making process which further boost their productivity. There will also be a celebratory dinner at the successful completion of the project.

4.6.4.5 Physical Resources

Fortunately, the project does not require the acquisition of a lot of the materials and equipment needed for the project. The Office of the Information Communication and Technology will provide the computers, printers and even pens needed for the duration of the project. In an effort to manage this arrangement, an agreement with just terms will be signed between the I.C.T department and the project leads which cover when and the condition in which the equipment will be returned. Then, in order to manage the use of the materials during the project, a system will be in place to showcase the availability of the different equipment.

4.7 Communication Management Plan

4.7.1 Introduction

The communication management plan specifies how key information will be shared with project participants at key intervals. The plan establishes who will get the communication, how, when and how frequently those recipients should anticipate receiving that information. The aim is to optimize team communications through definition and simplification. It is further an important medium to maintain alignment between teams and stakeholders. Since this project will involve persons among different locations, effective communication is a top priority. This is mainly because the presence of a project communication plan guarantees that all stakeholders, regardless of their location, receive the information they require at the appropriate time.

4.7.2 Communication Management Approach

The project manager will be heavily involved in the communication management process. Accordingly, the project manager is in charge of overseeing all alterations to the communication management plan that are suggested and approved. Following the approval of the changes, the project manager will modify the plan and any supplementary materials, sending the revisions to the stakeholders and the project team.

4.7.3 Project Team Directory

The project team directory contains a list of project team members, their positions in the project and their contact information. The following chart shows the directory.

Chart 17: Project Team Directory (Note: Author of Study, 2023)

Position	Name	Organization	Email	Phone No.
Project Sponsor	Elvin Bailey	Department of Legal and Justice	Ebailey4321@yahoo.com	869-662-0503
Project Manager	Rénell Agard	Consultancy Firm	ragard@hotmail.com	869-663-1094
Tabulation Machine Expert	Zion Shanee	Election Systems and Software	ZshaneeESS@gmail.com	725-432-5498
Procurement Manager	Chris Thomy	Election Systems and Software	cthormyESS@gmail.com	702-315-0875
Lead I.T. Personnel	Rawlin Hull	Office of Information and Communication Technology	rhull@yahoo.com	869-662-2001
Lead Electoral Officer	Reniyah Shelton	Electoral Officer	sheltonr@yahoo.com	869-661-3598

4.7.4 Communication Matrix

The communication matrix which is displayed below is an effective diagram that displays the necessary communication between the relevant individuals and is a great mechanism of informing the project team on what needs to get done and when.

Chart 18: Communication Matrix (Note: Author of Study, 2023)

Communication Type	**Medium**	**Frequency**	**Purpose of Communication**	**Audience**	**Owner**
Introduction Meeting	Face to Face and Zoom	Once	To introduce the project team and the reason for the project.	Project Sponsor, Project Team, Tabulation Machine Consultant	Project Manager
Personal Communication	Face to Face, Zoom meetings, e-mails, telephone calls	Weekly or as the need arises.	To keep abreast of the project status.	Project Sponsor, project team, other stakeholders	Project Manager
Status Reports	Email, Shared Drive	Monthly	To provide a report on how the project is performing compared to the project	Project Sponsor, Project Team, Stakeholders	Project Manager

			management plan.		
Project Team Meetings	Zoom	Weekly	To address project issues between meetings and discuss future steps.	Project Team	Project Manager

4.7.5 Project Communication Escalation Plan

4.7.5.1 Introduction

The project escalation plan offers a way to recognize, monitor, and address project issues as they arise and making sure that problems are effectively communicated to all parties involved. Any point of contention, discussion, issue or worry that would negatively impact the project's success is considered an issue. Problems can be found at any organizational level, and they ought to be fixed at the lowest feasible level. To make sure the right people are informed of a problem that is not fixed at a specific organizational level, it needs to be escalated. In order to effectively escalate the project issues, the below procedure will be followed.

- Identify the issue: This is where the project manager, project team member or any other stakeholder may share an issue via email or verbal communication. The problems that the project team is unable to resolve right away need to be recorded in an Issue log on the shared drive. The relevant owner of the problem will be responsible for regularly updating and resolving the issue.

- Communicate the issue: The project manager will update the team members using emails and the shared drive on the status of the issues on a regular basis and report on them until they are resolved.
- Escalate the issues: Assess if the issue needs to be escalated. If so, the project manager will advise the person responsible for solution that the status of the issue has been updated to escalated.
- Resolve the issue: Notify the issue owner that the issue has been resolved as soon as it has been achieved. The project manager will ensure that the issue log is updated, noting any discrepancies between the resolution target date and the actual date closed, as well as changing the status to closed.
- Learn from the problem: The project manager will examine the core causes and vulnerabilities of the issue, then take corrective action for the upcoming initiatives.

4.8 Risk Management Plan

4.8.1 Introduction

Risk management is the process of locating, evaluating, and controlling project risks. Therefore, the risk management plan aims to assist in recognizing, assessing and making plans for potential risks that might emerge during the project. Thus, the first step in the risk management plan is identifying the risks. After the risks have been recognized, they will be evaluated to ascertain what effects they have on the project. It will also assist in ranking the risks so that, should they arise during the project, one will be able to decide whether to address them immediately,

put them on hold, or even ignore them. Then, a risk response strategy will be devised to enhance risk response.

4.8.2 Risk Management Approach

Our rigorous approach to risk management for this project involves the project team identifying, rating and ranking the different risks. The most likely and highest impact risks were included to the project schedule to facilitate more suitable mitigation reactions at the proper time during the schedule. In the project team meetings, the project manager and project team will be able to report on the current state of their assigned risks.

4.8.3 Risk Identification

Risk identification is a crucial component of the risk management plan. It helps one to make wise judgments based on factual knowledge and enables one to see possible risks before they cause harm. In this project, the main tools for risk identification are brainstorming, interviewing and lessons learned from previous similar projects.

- Brainstorming: This is where the project team work together to compile a list of every possible risk that may impact the project.
- Interviewing: The process of finding out what the stakeholders, including the supplier think about the potential risks.
- Lessons learned: The project team reviewed past similar initiatives to identify the most prevalent risks and the tactics used to reduce the impacts of them.

4.8.4 Risk Prioritization

Probability and impact are two aspects of risks. Probability is a measure of the likelihood that a specific risk event will occur while impact refers to the magnitude of the

consequences or effects if a risk event materializes. Therefore, the probability and impact matrix is used which combines the two dimensions to help prioritize risks and guides risk response planning. Risks with high probability and high impact generally require immediate attention while those with low probability and low impact may receive less focus.

Chart 19: Probability Scale (Note: Author of Study, 2024)

Scale	Very Low	Low	Medium	High	Very High
Probability	0.1	0.3	0.5	0.7	0.9
Description	Very unlikely to occur	Unlikely to occur	Possible	Likely to occur	Very likely to occur

Chart 20: Impact Scale (Note: Author of Study, 2024)

Scale	Very Low	Low	Medium	High	Very High
Impact	**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
Scope	Barely noticeable scope change.	Minor scope change.	Major scope change.	Unacceptable Scope change.	Extreme change to project's objectives.
Cost	Insignificant Cost increase.	Less than 10% cost increase.	10-20% cost increase.	21-40% cost increase.	More than 40% cost increase.
Schedule	Can be accepted.	Less than 5% change.	6-10% change.	11-20% change.	More than 20% change.

4.8.5 Risk Register

Chart 21: Risk Register (Note: Author of Study, 2023)

RBS Code	Risk	Root Cause	Category	Consequence/Impact	Probability	Impact	Pxl	Level of Impact	Risk Response	Response Strategy

1	Hardware/Software Malfunctions	Poor quality control during manufacturing	Technical	Project delays, such as time will be needed to identify the issue, implement fixes and retest the affected systems. Increased costs due to repairing or replacing malfunctioning hardware and software.	0.5	0.7	0.35	Medium	Regular maintenance and testing	Mitigate
2	Insufficient training of I.T. team	Limited resources allocated for training	Operational	Staff frustration and morale decline as staff may feel overwhelmed or unable to meet project expectations. Reputational	0.3	0.5	0.15	Low	Comprehensive training program	Accept

				damage as insufficiently trained IT staff may result in project outcomes that do not meet expectations which can harm the project team's reputation and erode stakeholder trust.						
3	Logistics challenges during deployment	Inaccurate assessment of transportation needs	Operational	Logistics challenges may result in breaches of contractual agreements, especially if delivery timelines are not met. This can lead to legal disputes, financial penalties, or other contractual consequences.	0.3	0.7	0.21	Medium	Detailed logistical planning	Mitigate

4	Public mistrust in new technology	Lack of transparency in the selection process	Political	This can contribute to a negative perception of the project and the technology it introduces as well as impact the project's reputation. This can further lead to negative media coverage, social media discussions or word-of mouth.	0.3	0.5	0.15	Low	Public awareness campaigns and transparent system design and testing	Accept
5	Legal and regulatory changes	Rapidly evolving landscape	External	This may require modifications to the project scope.	0.3	0.9	0.27	Medium	Stay informed and adapt quickly	Mitigate
6	Cybersecurity Threats	Vulnerabilities in the tabulation machines' software or network infrastructure	Technical	Financial loss due to the costs associated with incident response, recovery and potential legal consequence.	0.3	0.9	0.27	Medium	Implement robust cybersecurity measures	Mitigate
7	Inadequate testing and quality	Rushed testing schedule	Operational	Project delays due to the discovery	0.1	0.7	0.7	High	Rigorous testing protocols	Transfer

	assurance	s due to tight project timelines		of critical issues during or after deployment.						
8	Natural Disasters	Geographic location being prone to hurricanes	External	Increased costs due to the costs associated with potential relocation of project activities and physical damage repairs.	0.5	0.7	0.35	Medium	Disaster recovery and contingency plans	Mitigate
9	Resistance from political parties	Opposition to the introduction of new technology for the electoral process	Political	This can strain relationships with key stakeholders.	0.5	0.5	0.25	Medium	Engaged with political parties in the planning phase	Mitigate
10	Maintenance Challenges	Limited availability of spare parts or technical support	Technical	Reduced machine reliability, increased downtime, potential delays in tabulation process	0.3	0.5	0.15	Low	Establish a proactive maintenance schedule, provide comprehensive training to local technicians for routine maintenance checks, maintain a stock of spare	Mitigate

									parts	
11	Power Outage	Unreliable of insufficient power infrastructure	Planning	Disrupted tabulation process, potential loss of election data, compromised election integrity	0.5	0.1	0.5	Medium	Implement better backup system	Mitigate
12	Interference or tampering	Inadequate security measures to prevent tampering	Technical	Undermined election integrity, loss of public confidence in the electoral process	0.1	0.7	0.7	High	Implement stringent measures to safeguard tabulation machines	Transfer
13	Staff turnover	Termination of personnel	Planning	Loss of knowledge about the project, project delays, decreased team morale	0.1	0.5	0.5	Medium	Document processes and procedures	Transfer
14	Budget overruns	Inadequate cost estimation during project planning	Financial	Reduced funds for other essential project activities, potential project cancellation	0.3	0.9	0.27	Medium	Implement rigorous budget monitoring and control mechanisms	Transfer
15	Supply chain disruptions	Dependence on single-source suppliers for critical	Operational	Delayed project timeline, increased costs	0.3	0.7	0.21	Medium	Maintain close communication with supplier	Mitigate

		components								
16	Cultural difference between team in St. Kitts and Nevis and the supplier in the USA	Variances in work culture, communication styles, and decision-making processes	Operational	Miscommunication, delays in decision-making	0.3	0.3	0.9	High	Establish clear communication channels, foster mutual respect	Mitigate
17	Unnecessary foreign involvement	Lack of trust in foreign vendors and consultants	Operational	Loss of public trust in the electoral process, protests	0.3	0.7	0.21	Medium	Engage in transparent communication with the public, Provide demonstrations and educational sessions to alleviate concerns about foreign influence	Transfer
18	Socio-political instability	Heightened political tensions	Operational	Potential damage to equipment, safety concerns for project personnel	0.1	0.7	0.7	High	Ensure the safety of personnel	Mitigate
19	Favoritism in the selection	Perception of bias or unfair	Planning	Allegations of Impropriety	0.3	0.5	0.15	Low	Ensure transparency in	Transfer

	process for tabulation machines vendors	advantage given to certain vendors							vendor selection process	
20	Ineffective internal communication strategies	Lack of clear channels for communication and information sharing	Planning	Misinformation, crucial errors, delayed project, decreased project quality	0.3	0.7	0.21	Medium	Develop a comprehensive communication plan, provide clear and accurate information about project goals and progress	Mitigate

NB. There are three (3) main levels of impact, namely, high, medium and low.

- A risk is identified as high risk if the risk earned a combined probability impact score of 0.51 and above.
- A risk is identified as medium risk if the risk earned a combined probability impact score of 0.2 to 0.5.
- A risk is identified as low risk if the risk earned a combined probability impact score of 0.1 to 0.19.

4.8.6 Plan Risk Response

Strategy/Response	Explanation
Accept	Continue with project as defined.
Mitigate	Take proactive measures to reduce the likelihood or impact.
Transfer	Transfer of risk to a third party.

4.8.7 Earned Monetary Value (EMV)

Chart 22: EMV Calculations (Note: Author of Study, 2024)

Risk	Probability	Impact	EMV
1	0.5	0.7	$0.35
2	0.3	0.5	$0.15
3	0.3	0.7	$0.21
4	0.3	0.5	$0.15
5	0.3	0.9	$0.27
6	0.3	0.9	$0.27
7	0.1	0.7	$0.07
8	0.5	0.7	$0.35
9	0.5	0.5	$0.25
10	0.3	0.5	$0.15
11	0.5	0.1	$0.05
12	0.1	0.7	$0.07
13	0.1	0.5	$0.05
14	0.3	0.9	$0.27
15	0.3	0.7	$0.21
16	0.3	0.3	$0.09
17	0.3	0.7	$0.21
18	0.1	0.7	$0.07
19	0.3	0.5	$0.15
20	0.3	0.7	$0.21

Total EMV = $0.35 + $0.15 + $0.21 + $0.15 + $0.27 + $0.27 + $0.07 + $0.35 + $0.25 + $0.15 + $0.05 + $0.07 + $0.05 + $0.27 + $0.21 + $0.09 + $0.21 + $0.07 + $0.15 + $0.21 = $3.07

The total contingency reserve needed for the project is $3.07.

5% contingency reserve based on the project's total budget:

Contingency Reserve = 5% of Total Budget = 5% * $439,000 = $21,950

4.8.8 Earned Value Management (EVM) Calculations:

The four EVM metrics that will be used:

- Schedule Variance (SV)- It represents the difference between the earned value (EV) and the planned value (PV) of the work scheduled to be performed. If $SV>0$, it indicates that the project is ahead of schedule. If $0SV<0$, it suggests that the project is behind schedule.
- Cost Variance (CV) - It represents the difference between the earned value (EV) and the actual cost (AC) of the work performed. If $CV>0$, it indicates that the project is under budget.

  If $CV<0$, it suggests that the project is over budget.
- Schedule Performance Index (SPI)- The SPI measures schedule efficiency. An SPI greater than 1 indicates favorable performance.

- Cost Performance Index (CPI)- The CPI measures cost efficiency. A CPI greater than 1 indicates favorable performance.

4.8.9 Risk Monitoring and Control

A robust risk monitoring and control process is crucial for the introduction of tabulation machines to the country's voting system project. After each risk has been identified by key stakeholders, the risks will be assessed based on its likelihood, impact and consequences. In addition, there will be weekly risk review meetings with relevant stakeholders to assess the effectiveness of the risk mitigation strategies, update risk assessments, and adjust risk responses as needed. There will also be a concerted effort to maintain thorough documentation of the risk assessments, mitigation strategies and outcomes. Finally, there will be a culture of continuous improvement where the project manager and the project team lead will regularly revisit the risk management plan and adjusting strategies based on evolving project conditions, stakeholder feedback and emerging risks.

4.9 Procurement Management Plan

4.9.1 Introduction

The procurement management plan outlines the approach, roles, responsibilities, and processes for the procurement of tabulation machines for the island's general elections from Election Systems and Software LLC, located in Nevada. The plan encompasses budgeting, risk management, vendor management, and change control procedures to ensure a successful procurement process. This procurement management plan serves as a guide to

effectively manage the acquisition of tabulation machines. Adherence to this plan will ensure that procurement activities align with project goals, stay within budget, and mitigate potential risks. Regular reviews and updates will be conducted throughout the project life cycle to accommodate changes and optimize the procurement process.

4.9.2 Procurement Management Approach

The project will follow a centralized procurement management approach. All procurement activities will be coordinated by the designated procurement manager, ensuring consistency, transparency, and adherence to project goals.

4.9.3 Roles and Responsibilities

- Project Manager: Responsible for overseeing the entire procurement process, including vendor selection, contract negotiation, and compliance. Align procurement activities with project objectives and timelines**.**
- Technical Team: Assists in defining technical requirements and evaluating vendor proposals.
- Legal Team: Ensures that contracts comply with legal standards and project requirements.
- Financial Team: Manages budgeting, cost estimation, and financial aspects of procurement.

4.9.4 Procurement Goods and Services

Product	**Service**
DS 200 machines	Training by I.T. Expert at Elections System and Software LLC

Figure 6 DS200 Tabulation Machine (Note: Election Systems & Software, 2018)

4.9.5 Types of Contracts

The primary contract will be a fixed-price contract with Election Systems and Software LLC for the procurement of tabulation machines. Additional contracts may be required for training services and ongoing technical support.

Chart 23: Types of Contracts (Note: Author of Study, 2024)

Type of Contract	Definition
Fixed-Price Contract	An agreement between the organization and the vendor where the seller agrees to provide their goods and services at a predetermined price. In this type of contract, the price is fixed and does not change, regardless of the actual costs incurred by the seller during the project's execution.
Time and Materials Contract	Where the buyer pays the seller based on the actual time spent by the seller's personnel and the materials used to complete the project, along with an agreed-

	upon rate for labor and materials. This type of contract allows for flexibility in accommodating additional services or changes in project scope while providing transparency regarding costs.

4.9.6 Procurement and Risk Management

- Risk Identification: Identify potential risks such as delivery delays, budget overruns, and technical issues.
- Risk Mitigation: Develop strategies to address identified risks, including contingency plans, alternative vendors, and clear communication channels with the selected vendor.

4.9.6 Cost Determination

The budget for procurement is USD $460,950.00, inclusive of salaries, machine procurement, vendor costs, and training. A 5% contingency reserve ($21,950.00) and a 10% management reserve ($46,095.00) have been added to account for unforeseen expenses and project management needs.

4.9.7 Procurement Management Change Process

- Change Request: Any changes to the procurement plan require a formal change request submitted to the project manager and project sponsor as needs be.
- Approval Process: Changes will be reviewed, approved, or rejected by the project sponsor to ensure alignment with project objectives.

4.10 Stakeholder Management Plan

4.10.1 Introduction

Creating the stakeholder management plan is essential for the success of this project. This plan helps identify, analyze, and engage with individuals or groups who have an interest in or are affected by the project.

4.10.2

Stakeholder Identification:

- Internal stakeholders:
    - Election Commission
    - IT Department
    - Government Officials
    - Project Team Members
- External stakeholders:
    - Political Parties
    - Voters
    - Election Observers
    - Media
    - Tabulation Machine Vendors

4.10.3 Stakeholder Analysis:

- Electoral Office:
    - High Influence, High Interest

        - Engage closely, involve in decision-making
- Political Parties:
    - High Influence, High Interest
    - Regular consultations, transparent communication
- Voters:
    - High Interest, Low Influence
    - Provide information and updates, address concerns
- Media:
    - High Influence, High Interest
    - Frequent updates, press briefings, and transparency
- Tabulation Machine Vendors:
    - High Influence, Low Interest
    - Periodic updates and collaboration on technical aspects

4.10.4 Stakeholder Communication Plan:

- Project Sponsor
    - Regular progress updates meetings
    - Project status reports
    - Open for quick discussion, updates or escalations
- Project Manager
    - Meetings with stakeholders

    - Document sharing
    - Regular progress reports
- Electoral Office
    - Weekly progress meetings
    - Bi-monthly detailed reports
- Political Parties:
    - Monthly briefings
    - Immediate updates on critical issues
- Voters:
    - Public awareness campaigns
    - Regular updates through official channels
- Media:
    - Press conference and informational sessions
- Tabulation Machine Vendors:
    - Immediate communication for critical issues

4.10.5 Stakeholder Engagement Plan:

- Project Sponsor
    - Involvement in decision-making
- Project Manager
    - Oversees all aspects of the project
- Electoral Office:

    - Involvement in system testing and decision-making processes
- Political Parties:
    - Consultation on system specifications
    - Involvement in mock elections
- Voters:
    - Information sessions on how the new system works
    - Feedback mechanisms through town hall meetings
- Media:
    - Access to demonstrations and test phases
    - Regular updates on project milestones
- Tabulation Machine Vendors:
    - Collaboration in system integration and testing

4.10.6 Stakeholder Expectations:

- Clearly define the goals, benefits, and potential risks of the new tabulation system.
- Address concerns related to transparency, security, and accuracy.

4.10.7 Issue Resolution and Escalation

- Establish a clear process for identifying, escalating, and resolving issues.
- Define points of contact for each stakeholder group in case of concerns.

4.10.8 Risk Assessment

- Identify potential risks, such as technical failures, data security breaches, or resistance from political parties.
- Develop mitigation strategies and contingency plans.

4.10.9 Stakeholder Feedback Mechanism

- Implement surveys and feedback sessions at the community center meetings for voters and political parties.
- Monitor media coverage and address concerns raised by election observers.

4.10.10 Review and Update

The project manager will schedule regular reviews of the stakeholder management plan and update the plan as the project progresses and stakeholder dynamics change.

4.10.11 Stakeholder Matrix

This stakeholder matrix outlines key information about each stakeholder group, including their influence-interest classification and the proposed engagement strategy. The matrix serves as a reference for the project team to effectively manage and communicate with stakeholders throughout the project life cycle.

Chart 24: Stakeholder Register (Note: Author of Study, 2023)

Name	Influence-Interest Classification	Engagement Strategy	Communication Method
Project Sponsor	High influence, High interest	Engage closely and involve in decision-making, provide regular updates on project progress, and address any concerns or issues promptly. The project sponsor plays a critical role in providing support, resources, and guidance to ensure the project's success.	In-person meetings, Email updates, Project status reports, Phone Calls
Project Manager	High Influence, High Interest	Lead the project team effectively, communicate project objectives, expectations, and timelines clearly, and actively involve stakeholders in decision-making processes. The project manager is responsible for overseeing all aspects of	Team meetings, Stakeholder meetings, Progress reports, emails, telephone calls, Zoom videoconferences

Name	Influence-Interest Classification	Engagement Strategy	Communication Method
		the project and ensuring its successful delivery.	
Electoral Office	High Influence, High Interest	Engage closely in decision-making processes. Regularly involve in project updates and seek input on key decisions.	In-person meetings, Emails, phone calls, Zoom conferences
Political Parties	High Influence, High Interest	Conduct regular consultations to gather feedback. Maintain transparent communication to address concerns and ensure a non-partisan approach.	Phone calls, public forums, emails
Voters	High Interest, Low Influence	Provide comprehensive information and updates through various channels. Conduct awareness campaigns to address concerns and educate voters on the project.	Public informational sessions, social media
Media	High Influence, High Interest	Conduct frequent updates, press briefings, and interviews.	Public informational sessions and Email

Name	Influence-Interest Classification	Engagement Strategy	Communication Method
			updates
Tabulation Machine Vendor	High Influence, Low Interest	Provide periodic updates on project progress. Collaborate with vendor on technical aspects to ensure seamless integration and functionality.	Email updates, Zoom software, Shared documents

4.11 Sustainable Management Plan

4.11.1 Purpose

The purpose of this sustainable management plan is to guide the implementation of the project to introduce 80 votes' tabulation machines to the island's elections system in a manner that ensures environmental responsibility, social inclusivity, and economic sustainability. The plan aims to minimize the project's negative impact on the environment, enhance community engagement, and deliver long-term economic benefits.

4.11.2 Approach

Our approach involves integrating sustainable practices throughout the project life cycle. This includes sourcing eco-friendly tabulation machines, implementing energy-efficient technologies, fostering community involvement, and ensuring financial viability. We will collaborate with stakeholders to address concerns, prioritize transparency, and

adhere to ethical practices. By integrating these sustainability measures, the introduction of tabulation machines to the country's general elections system will not only enhance efficiency but also contribute positively to the environment and human well-being.

4.11.2.1 Sustainable Procurement

- Prioritize suppliers with recognized eco-friendly certifications.
- Evaluate suppliers based on their commitment to sustainability.

4.11.2.2 Energy Efficiency

- Source tabulation machines with high energy efficiency ratings.
- Implement energy-saving features and guidelines for machine usage.

4.11.2.3 Community Engagement

- Organize town hall meetings and forums to inform and engage the public.
- Establish feedback mechanisms to incorporate community input.

4.11.3 Budget

The budget for this project will include the following items related to project sustainability management:

- Community engagement events: Additional compensation to the project team members who facilitate the awareness sessions. This helps to achieve the people dimension of the P5 analysis.

- Energy-efficient technologies: The purchase of energy-efficient tabulation machines that can fully function in the event of power outages.
- Employee recognition: The budget will consider additional financial and physical support to team members so that they remain motivated and empowered.

4.11.4 Potential Impact on Sustainability of Scope Exclusion

The exclusion of certain sustainability aspects may impact the overall success of the project. Therefore, it is essential to avoid excluding critical elements such as:

- **4.11.4.1 Environmental Impact Assessments:**
  - Inclusion of thorough assessments to identify and mitigate potential negative environmental impacts.
- **4.11.4.2 Community Feedback and Involvement:**
  - Regular engagement with the community to ensure their concerns and suggestions are considered throughout the project.

4.11.5 Reviews and Reporting

- **4.11.5.1 Regular Reviews:**
  - Conduct periodic reviews of sustainability initiatives' effectiveness.
  - Evaluate progress against established KPIs and adjust strategies accordingly.
- **4.11.5.2 Reporting:**
  - Publish regular sustainability reports outlining achievements, challenges, and future goals.

- Communicate openly with stakeholders through various channels, promoting transparency.

4.11.6 P5 Impact Analysis

4.11.6.1 People Dimension

4.11.6.1.1 Voter Accessibility:

- **Objective:** Ensure that all citizens can easily access and participate in the election process.
- **Metrics:**
  - Percentage increase in voter turnout.
  - Accessibility measures implemented for people with disabilities.
- **Action Steps:**
  - Conduct awareness campaigns about the new tabulation machines and how they improve the voting process.
  - Establish dedicated assistance points at polling stations for voters who require additional support.

4.11.6.1.2 Electoral Staff Training:

- **Objective:** Equip electoral staff with the necessary skills to operate and troubleshoot tabulation machines.
- **Metrics:**
  - Percentage of electoral staff trained on the new technology.
  - Evaluation of training effectiveness.

- **Action Steps:**
    - Develop comprehensive training programs for electoral staff including hands-on experience with the tabulation machines.
    - Implement regular refresher courses to keep electoral staff updated on technology advancements.
    - Establish a feedback mechanism to continuously improve training procedures.

4.11.6.1.3 Public Awareness:

- **Objective:** Ensure citizens are well-informed about the new tabulation machines and their benefits.
- **Metrics:**
    - Percentage of the population aware of the new technology.
    - Public perception surveys on confidence in the election process.
- **Action Steps:**
    - Launch a public information campaign using various channels (media, social media, community events).
    - Provide accessible and transparent information on the functioning of the tabulation machines.
    - Conduct town hall meetings and community forums to address concerns and answer questions.

4.11.6.1.4 Data Security and Privacy:

- **Objective:** Safeguard voter information and maintain the privacy of individual votes.

- **Metrics:**
    - Implementation of robust data security protocols.
    - Public trust in the security of the election system.
- **Action Steps:**
    - Collaborate with cybersecurity experts to ensure the highest level of data security.
    - Communicate transparently about security measures to build public trust.

4.11.6.1.5 Community Engagement:

- **Objective:** Foster a sense of community involvement in the electoral process.
- **Metrics:**
    - Number of community engagement events held.
    - Participation levels in voter education programs.
- **Action Steps:**
    - Organize town hall meetings and forums to engage with the community.
    - Establish partnerships with local organizations to promote civic education.
    - Facilitate open forums for citizens to voice their opinions and suggestions.

4.11.6.2 Planet Dimension

4.11.6.2.1 Energy Efficiency:

- **Objective:** Minimize the environmental impact of the tabulation machines' energy consumption.

- **Metrics:**
    - Energy efficiency ratings of the machines.
    - Percentage reduction in overall energy usage compared to manual processes.
- **Action Steps:**
    - Source machines with high energy efficiency certifications.
    - Implement power-saving features and practices during machine operation.

4.11.6.2.2 Waste Reduction:

- **Objective:** Minimize waste generated by the election process.
- **Metrics:**
    - Percentage reduction in paper usage.
    - Recycling initiatives for electronic components.
- **Action Steps:**
    - Promote the use of electronic communication to reduce paper wastage.
    - Establish partnerships for responsible electronic waste disposal.

4.11.6.2.3 Carbon Footprint:

- **Objective:** Reduce the carbon footprint associated with election-related activities.
- **Metrics:**
    - Carbon footprint assessments for the entire election process.
    - Adoption of eco-friendly practices in logistics and transportation.
- **Action Steps:**

- Encourage carpooling and eco-friendly transportation for election-related activities.
- Offset remaining carbon emissions through environmental initiatives.

4.11.6.2.4 Environmental Impact Assessments:

- **Objective:** Assess and mitigate any potential negative environmental impacts.
- **Metrics:**
  - Successful completion of environmental impact assessments.
  - Implementation of mitigation strategies.
- **Action Steps:**
  - Conduct thorough environmental impact assessments before implementing the project.
  - Implement mitigation strategies as recommended by environmental experts.

4.11.6.2.5 Biodiversity Conservation:

- **Objective:** Minimize the impact of election-related activities on local biodiversity.
- **Metrics:**
  - Adoption of practices to protect local flora and fauna.
  - Partnerships with environmental organizations for conservation efforts.
- **Action Steps:**
  - Implement measures to avoid disruption of local ecosystems during election-related activities.
  - Collaborate with local environmental organizations for conservation initiatives.

4.11.6.3 Prosperity Dimension

4.11.6.3.1 Economic Impact:

- **Objective***:* Enhance economic well-being through cost savings and increased efficiency.
- **Metrics***:*
    - Percentage reduction in election-related operational costs.
    - Increased productivity in terms of faster and more accurate results.
- **Action Steps***:*
    - Conduct a cost-benefit analysis to quantify potential economic benefits.
    - Monitor and report on the efficiency gains achieved with the new tabulation machines.

4.11.6.3.2 Job Creation and Workforce Impact:

- **Objective***:* Ensure positive effects on employment and workforce well-being.
- **Metrics***:*
    - Job roles affected by the introduction of machines.
    - Training programs implemented to equip staff with new skills.
- **Action Steps***:*
    - Develop comprehensive training programs for affected staff.
    - Monitor the transition process to identify and address workforce challenges.

4.11.6.3.3 Local Business Opportunities:

- **Objective:** Stimulate local business growth and opportunities.
- **Metrics**:
    - Percentage of procurement from local suppliers.
    - Number of local businesses involved in supporting the project.
- **Action Steps:**
    - Establish partnerships with local suppliers for machine procurement and maintenance.
    - Promote the involvement of local businesses in project-related services.

4.11.6.3.4 Technology Transfer and Innovation:

- **Objective**: Foster technology transfer and encourage innovation.
- **Metrics**:
    - Number of technological advancements introduced through the project.
    - Participation in research and development initiatives.
- **Action Steps**:
    - Collaborate with technology experts to ensure the latest advancements are integrated.
    - Encourage a culture of innovation within the project team.

4.11.6.3.5. Financial Inclusion:

- **Objective**: Ensure that the benefits of the project are inclusive and accessible to all.
- **Metrics**:

- Accessibility of election-related information to the public.
- Measures taken to address potential disparities in access.

- **Action Steps***:*
  - Implement communication strategies to ensure information accessibility for all citizens.
  - Monitor and address any disparities in the use of tabulation machines.

4.11.7 P5 Impact Further Analysis

4.11.7.1 Carpooling Initiative:

- **Relationship to FGP Deliverable:** Scope management
- **Benefits:** Reduced carbon footprint and air pollution.
- **Action Steps:**
  - Encourage project team members to carpool when traveling to project sites.
  - Promote the use of public transportation where feasible.

4.11.7.2 Paperless Communication:

- **Relationship to FGP Deliverable:** Communication management
- **Benefits:** Reduced paper wastage, minimized deforestation, and water conservation.
- **Action Steps:**
  - Establish email as the primary mode of communication within the project team.

- Implement document management systems to reduce reliance on physical memos and letters.

4.11.7.3 Eco-friendly Machines:

- **Relationship to FGP Deliverable:** Procurement, resource, risk, and stakeholder management
- **Benefits:** Reduced energy consumption, minimized waste, and increased safety.
- **Action Steps:**
  - Prioritize the procurement of machines with recognized eco-friendly certifications.
  - Collaborate with suppliers committed to sustainable practices.

4.11.7.4 Ethical and Transparent Project Management:

- **Relationship to FGP Deliverable:** Communication, quality, risk, scope, and stakeholder management
- **Benefits:** Adherence to Green Project Management principles, increased trust, and ethical decision-making.
- **Action Steps:**
  - Establish a code of conduct emphasizing integrity, transparency, and accountability.
  - Regularly communicate project progress and challenges to stakeholders.

4.11.7.5 Reduced Manpower:

- **Relationship to FGP Deliverable:** Quality, risk, stakeholder, scope, schedule, and resource management

- **Benefits:** Reduced costs, less staff burnout, and improved health and well-being (SDG4).
- **Action Steps:**
    - Develop comprehensive training programs for staff affected by changes in job roles.
    - Emphasize the positive impact on work-life balance.

4.11.7.6 Fair and Constitutionally Compliant Tabulation Machines:

- **Relationship to FGP Deliverable:** Stakeholder management
- **Benefits:** Enhances SDG16 and the doughnut economic model, promoting peace, justice, social equity, and political voice.
- **Action Steps:**
    - Collaborate with legal experts to ensure the machine's compliance with the constitution.
    - Conduct thorough testing to ensure the capacity to analyze all types of ballots.

4.11.7.7 Efficiency and Accuracy in Election Results:

- **Relationship to FGP Deliverable:** Stakeholder, schedule, and quality management
- **Benefits:** Happy and healthier population.
- **Action Steps:**
    - Implement a robust testing and quality assurance process for tabulation machines.
    - Conduct extensive training for election officials on the use of the new technology.

4.11.8 P5 Analysis Key Performance Indicators (KPIs)

4.11.8.1 Efficiency in Procurement and Resource Allocation:

KPI: Cost savings of at least 10%

Metric: Regularly evaluate procurement processes for cost-saving opportunities.

4.11.8.2 Ethical Behavior - Sustainable Procurement and Contracts:

KPI: Less than 5% reports of ballots not included in the tabulation.

Metric: Establish a reporting system for any irregularities in the tabulation process.

4.11.8.3 Harassment and Discrimination Prevention:

KPI: Less than 5% complaints from electoral officials about extreme tiredness.

Metric: Monitor and address complaints promptly, with a focus on improving working conditions.

4.11.8.4 Energy Efficiency KPIs:

KPI: Percentage reduction in overall energy usage compared to manual processes.

Metric: More than 50% reduction

4.11.8.5 Community Engagement KPIs:

KPI: Percentage of the population aware of the new technology.

Metric: More than 90% aware of new technology

4.11.8.6 Financial Sustainability KPIs:

KPI: Percentage reduction in operational costs through sustainable practices.

Metric: 20% cost savings achieved

4.11.9 Monitoring and Evaluation:

- Establish a dedicated team for monitoring the implementation of sustainable practices.
- Conduct periodic audits to ensure adherence to the sustainable development plan.
- Solicit feedback from project team members, stakeholders, and the public for continuous improvement.

4.11.10 Communication and Reporting:

- Regularly communicate the project's sustainability achievements and challenges through various channels.
- Provide transparent reporting on the progress of sustainability goals in project updates.

4.11.11 Continuous Improvement:

- Regularly review and update the sustainable development plan based on lessons learned and emerging best practices.
- Encourage innovation and research for the integration of cutting-edge sustainable technologies.

4.11.12 Conclusion

This sustainable management plan will guide the project team in achieving its objectives while minimizing its impact on the environment, maximizing community engagement, and ensuring long-term economic sustainability. Regular reviews and transparent reporting will enable continuous improvement and the successful realization of the project's triple-bottom-line objectives.

5 CONCLUSIONS

This section of the management plan consolidates the overarching goals outlined in the 10 individual management plans. It provides a detailed examination of the objectives of each plan and the tools utilized to support these objectives. The Project Management Institute (PMI) and by extension, the PMBOK® Guide were used as guidelines to assess the suitability of the contents of the said plans. The subsequent plans are elaborated below:

1. The project charter serves as the cornerstone document that outlines the purpose, objectives, stakeholders, constraints and scope of introducing 80 tabulation machines to the island's general elections. Stakeholder identification and analysis facilitated effective communication and engagement throughout the project life cycle, ensuring alignment with stakeholder expectations and needs. This foundational document and its level of thoroughness and clarity contributed significantly to the project's success by providing a solid framework for planning, execution, and monitoring.
2. The scope management plan plays a crucial role in ensuring the success of the project by defining, validating, and controlling the scope of the project. Through comprehensive stakeholder engagement and requirements gathering, the plan captures key deliverables and establishes clear boundaries for the project. Scope verification and change control procedures enable the project team to manage scope creep effectively and ensure that project objectives remain in focus. The plan's emphasis on scope control mechanisms facilitates adherence to project timelines

and budget constraints, ultimately contributing to the successful delivery of the project's intended outcomes.

3. The schedule management plan provides a road map for effectively managing time-related aspects of the project, ensuring timely delivery of key milestones. By integrating inputs such as resource availability and duration estimation, the plan facilitated the development of a realistic project schedule. The Project Libre software was used to produce the project schedule as well as the gantt chart which further helps the project team to identify and mitigate potential delays proactively. Regular monitoring and performance measurement against the baseline schedule, will ensure that the project remain on track, enhancing its overall success by enabling timely decision-making and adjustments to mitigate any deviations from the planned timeline.
4. The cost management plan plays a critical role in ensuring the fiscal success of the project by providing a framework for estimating, budgeting, and controlling costs. Through inputs such as cost estimates and expert judgment, the plan facilitates the allocation of financial resources in a manner that optimizes project outcomes while adhering to budgetary constraints. Cost control measures, including monitoring, allows the project team to track expenditures and identify potential cost overruns early, enabling timely corrective actions to be taken such as implementing cost-cutting measures.
5. The quality management plan plays a pivotal role in ensuring the success of the project by establishing processes and standards for delivering a high-quality

outcome. Inputs such as quality objectives, and metrics provides the foundation for defining quality requirements and expectations. The plan outlined quality assurance and control activities to be undertaken throughout the project life cycle, including quality inspections and testing protocols. By emphasizing continuous improvement, the plan facilitates the delivery of a solution that meets stakeholder expectations for accuracy, reliability, and performance.

6. The resource management plan is instrumental in ensuring the availability and optimal utilization of resources required for the project. By considering inputs such as resource requirements and availability, the plan facilitates the allocation of human, financial, and material resources in a manner that supports project objectives. Strategies for staff acquisition and management ensures that the project team had the necessary skills and expertise to execute tasks effectively. Additionally, a project organization chart was used to provide clear levels of authority and responsibility of the various project team members and stakeholders.
7. The communication management plays a vital role in ensuring effective communication and collaboration among stakeholders involved in the project. Inputs such as stakeholder analysis and communication requirements informed the development of the plan. The communication plan contained a project team directory and communication matrix which allow team members to understand who and how they can contact the relevant project personnel. By establishing clear channels of communication, roles, and responsibilities, the plan facilitates timely

exchange of information, decision-making, and issue resolution throughout the project life cycle.

8. The risk management plan plays a critical role in identifying, assessing, and mitigating potential risks associated with the project. Inputs such as risk registers, risk categories, and risk management strategies informed the development of the plan, which outlined processes for risk identification, analysis, response planning, and monitoring.
9. The procurement management plan was essential for the successful acquisition of goods and services necessary for the project. By considering inputs such as procurement requirements and contracts, the plan facilitates the identification and management of procurement needs throughout the project life cycle. Through processes such as procurement planning and contract administration, the plan ensures that procurement activities are conducted efficiently, transparently, and in accordance with relevant regulations and policies. Ultimately, the procurement management plan plays a crucial role in supporting project objectives by ensuring the availability of necessary resources and expertise to achieve successful project outcomes.
10. The stakeholder management plan is instrumental in ensuring the engagement, satisfaction, and support of stakeholders involved in the project. Inputs such as stakeholder analysis, engagement strategies, and communication preferences informed the development of the plan, which outlined processes for identifying, prioritizing, and managing stakeholder needs and expectations. By fostering

proactive communication, relationship building, and stakeholder involvement, the plan facilitates alignment with project objectives and mitigation of potential conflicts or resistance.

11. The sustainable management plan is essential for ensuring the long-term viability and environmental responsibility of the project. The P5 impact analysis is a main section which informed the development of the plan, as it assessed the external macro-environmental factors that can impact the project. This analysis also outlined strategies for minimizing resource consumption, waste generation, and carbon footprint, just to name a few.

6 RECOMMENDATIONS

The successful introduction of 80 tabulation machines to St. Kitts and Nevis' general elections presents a significant opportunity to enhance the integrity and efficiency of the electoral process. However, this endeavor comes with its unique set of challenges, particularly in a context where public mistrust in elections prevails. To address these challenges and ensure the project's success, it is essential to develop robust management plans across various domains. In this comprehensive strategy, we provide recommendations to enhance each management plan. By implementing these recommendations, the project team, led by a dedicated project manager, can navigate complexities effectively, build trust among stakeholders, and deliver a transparent and secure electoral process that meets the needs and expectations of the island's citizens.

1) Project charter: The project manager should periodically review and update the project charter as needed to reflect any changes in scope, objectives, or stakeholder requirements.
2) Scope management plan: Ensure that the scope management plan is communicated to all relevant stakeholders and integrated into other project management processes. There should also be a clear documentation of the deliverables and an acceptance criterion for the tabulation machines, ensuring that they meet the needs of the electoral process.
3) Schedule management plan: The project manager should implement contingency plans and buffers to account for unforeseen issues that may impact the project timeline.

4) Cost management plan: There should be an implementation of a robust cost tracking and reporting system to monitor expenditures and ensure that the project remains within budget.
5) Quality management plan: The project manager in collaboration with the I.T. experts should develop a comprehensive testing and validation process to ensure that the machines meet the specified quality.
6) Resource management plan: Conduct a thorough assessment of the current skill sets within the government's IT department to identify any gaps that need to be addressed through training or recruitment. Implement cross-training initiatives to enhance team members' versatility and flexibility in handling various aspects of the project.
7) Communication management plan: Utilize a variety of communication tools and platforms, such as social media, press releases, and public forums, to reach different segments of the population. Designate a communication liaison within the project team to oversee communication efforts and ensure consistency and coherence in messaging.
8) Risk management plan: Encourage open communication and collaboration among project team members and stakeholders to foster a culture of risk awareness and proactive risk management.
9) Procurement management plan: Conduct a thorough evaluation of potential suppliers to assess their reliability, track record, and ability to meet project

requirements. Negotiate clear and enforceable contracts with the selected supplier, specifying deliverables, timelines, quality standards, and pricing terms.

10) Stakeholder management plan: Proactively manage stakeholder expectations by providing regular updates on project progress, addressing concerns promptly, and seeking consensus on key decisions. Monitor stakeholder dynamics and adjust engagement strategies as needed to maintain positive relationships and ensure broad support for the project's goals and objectives. Develop tailored engagement strategies for each stakeholder group, focusing on building trust, fostering dialogue, and addressing their specific needs and priorities.
11) Sustainable management plan: Monitor and evaluate the project's environmental and social impacts, using performance indicators to track progress towards sustainability goals and identify areas for improvement. Implement energy-efficient and environmentally friendly technologies in the design and deployment of tabulation machines to minimize their ecological footprint.
12) Invite the CARICOM election observers to the demonstrations of the use of the machines. They will be able to provide impartial assessments of the machines and it facilitates full transparency in the oversight activities.
13) Post-Election Evaluation: The project manager should lead the process of conducting a comprehensive evaluation of the tabulation machine’s performance following the elections. It will solicit feedback from stakeholders and identify areas for improvement.

14) Security measures: The project manager should work closely with cybersecurity experts to conduct thorough risk assessments and implement appropriate safeguards.

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

It is imperative that the FGP incorporated features of both regenerative and sustainable development for more environmental protection and improved overall human wellbeing. Regenerative development refers to the process of adopting comprehensive strategies that maximize the Earth's ecologically productive land areas while minimizing our impact on the planet (Muller, 2017). Then, sustainable development relates to the strategies for a nation's economic growth without sacrificing the environment's quality for coming generations ("What is Sustainable…", n.d.).

Since the project focuses on the use of electronic machines, it relates to regenerative development in the following ways:

Chart 25 FGP and its relationship to Regenerative and Sustainable Development (Note: Muller, 2017 and Carboni, etc. 2018)

Regenerative and/or Sustainable Development Feature	**Relationship to FGP Deliverable**	**Benefits**
Carpooling will be encouraged when traveling to	Scope management	Reduced carbon footprint and reduced

the various project sites.		air pollution
Emails will be one of the preferred means of communication to reduce the use of paper memos and letters.	Communication management.	Reduced paper wastage, reduced need for deforestation, and water saving.
Eco-friendly machines will be sourced for the project.	Procurement, resource, risk and stakeholder management	Reduced energy usage, reduced wastage and increased safety capacity.
The project manager and staff will be committed to exhibiting certain principles such as integrity, transparency and accountability when carrying out their functions.	Communication, quality, risk, scope and stakeholder.	Adherence to the Green Project Management's principles, increased trust among stakeholders and the team and ethical decision-making.
The use of electronic tabulation machines will decrease the need for a high amount of manpower.	Quality, risk, stakeholder, scope, schedule and resource management.	Reduced costs associated with high amount of manual labor and less staff burnout

		leading to better health and well-being (SDG4)
The machine will be as fair as possible by complying with the Constitution and having the capacity to analyze all types of ballots.	Stakeholder management.	Enhances the achievement of SDG16 and the doughnut economic model (peace and justice), social equity and political voice.
The expected increased efficiency and accuracy in the elections' results.	Stakeholder, schedule and quality management.	Happy and healthier population.

The effects of the project on the success of the project in the regenerative and sustainable realm will be measured using aspects of the P5 analysis. For instance, the P5 domain of people with the lens of efficiency and the category of ethical behavior with the element of sustainable procurement and contracts KPI will be the efficiency in procurement and resource allocation. The metric will be at least 10% cost savings achieved. In a similar context, with the harassment and discrimination prevention element, the KPI will be reports of ballots not included in the tabulation with the metric being less than 5. Then, a KPI relating to the number of electoral officials who complain about extreme tiredness due to the tabulation process will be considered with the metric being less than 5% complaints.

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APPENDICES

Appendix 1: FGP Charter

CHARTER OF THE PROPOSED
FINAL GRADUATION PROJECT (FGP)

1. Student name

Rénell Melvicia Agard

2. FGP name

A Project Management Plan Proposal for the digital enhancement of the electoral voting process in the federation of St. Kitts and Nevis

3. Application Area (Sector or activity)

Political

4. Student signature

5. Name of the Graduation Seminar facilitator

Carlos Brenes

6. Signature of the facilitator

7. Date of charter approval

October 10, 2023

8. Project start and finish date

August 29, 2023	March 26, 2024

9. Research question

What practical strategies may the Ministry of Justice and Legal Affairs, and by extension, the Electoral Office employ to improve the general populous' mindset towards electronic voting and comply with the National constitution and OAS Electoral Mission standards?

10. Research hypothesis

Is it feasible to create a project management proposal that will lead to the acceptance of the electronic voting machines and meet the OAS Electoral Commission standards in the 2025 general elections?

11. General objective

To develop a project management plan proposal that may act as a compendium for the use of electronic tabulation machines in the federation of St. Kitts and Nevis general elections that will comply with OAS Electoral Commission standards.

12. Specific objectives

Specific objectives must start with an action verb in infinitive form, that allows to assess its completion, must be clear and concise, should have complete sentences and must have a "what?" and a "for what?".

Specific objectives

The number of these objectives must be the one needed to achieve the general objective. Each one must be numbered in Arabic numbers and must be ordered in a logic sequence related to the project completion.

Example:
1.To create a project charter that will provide the project manager with a general idea of the scope, goals, objectives and resource requirements of the project.
2.To develop a scope management plan that describes the steps needed in carrying out the project and acts as a guide to maintain the project within certain limits.
3.To formulate a schedule management plan that contains details on the project's

scheduling methodology and gives direction to the project manager and team regarding the creation, maintenance and control of the project schedule to meet stakeholders' deadlines.
4.To develop a cost management plan that will help the project manager and team to calculate their costs, distribute resources appropriately and keep expenditures under control.
5.To create a quality management plan that will make it easier for the project manager and team to satisfy both the needs of the client and the project's criteria.
6.To develop a resource management plan that details how the resources are obtained, distributed, tracked and managed.
7.To formulate a communication management plan that describes the requirements and expectations for communication over the entire project.
8.To create a risk management plan that aids in identifying and evaluating potential project risks as well as describe how the team will strategize to reduce the potential risks to facilitate the project's success.
9.To develop a procurement management plan that outlines how the organization will manage the procurement process by ensuring that all stakeholders involved are aware of the steps that must be taken during the procurement cycle.
10.To formulate a stakeholder management plan that indicates how the team will handle the goals and demands of key stakeholders throughout the project life cycle.
11. To create a sustainable management plan that will address environmental, social and economic considerations to facilitate long-term viability and responsible business practices.

3. FGP purpose or justification

The purpose of the final graduation project is to produce a high-quality project management plan that will serve as the foundation for success of the use of electronic tabulation machines in the country's electoral process. For years, the public has expressed its frustration with the absurd amount of time associated with obtaining the election results due to the time-consuming hand counts. Therefore, the project is expected to increase the efficiency and accuracy in the votes' tabulation process which are critical to the honorability and integrity of the federation's electoral system.

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

1. FGP
    1.1 FGP profile
        1.1.1 Introduction
        1.1.2 Theoretical framework
        1.1.3 Methodological framework
        1.1.4 Preliminary bibliographical research
        1.1.5 Annexes (FGP schedule, FGP WBS, FGP Charter)
    1.2 FGP development
        1.2.1 Graduation Seminar
            1.2.1.1 FGP Deliverables
            1.2.1.2 FGP Charter
            1.2.1.3 WBS
            1.2.1.4 Chapter I. Introduction
            1.2.1.5 Chapter II. Theoretical Framework
            1.2.1.6 Chapter III. Methodological framework
            1.2.1.7 Annexes
                1.2.1.7.1 Bibliography
                1.2.1.7.2 Schedule
    1.3 Validation of Regenerative and Sustainable Development For Projects
2. Tutoring Process
        2.1 Tutor
        2.1.1 Tutor Assignment
        2.1.2 Communication with tutor
        2.2 Adjustments of Previous Chapters if necessary
        2.3 Chapter IV. Development (Results)
            2.3.1 Scope Management Plan
            2.3.2 Schedule Management Plan
            2.3.3 Cost Management Plan
            2.3.4 Quality Management Plan
            2.3.5 Resource Management Plan
            2.3.6 Communication Management Plan
            2. 3.7 Risk Management Plan
            2.3.8 Procurement Management Plan
            2.3.9 Stakeholder Management Plan
        2.4 Chapter V. Conclusions
        2.5 Chapter VI. Recommendation
    3. Reviewing by Readers
        3. 1 Reviewers assignment request
            3.1.1 Assignment of two reviewers

3.1.2 Communication with reviewers
3.1.3 FGP submission to reviewers
3.2 Reviewers work
3.2.1 Reviewer 1
3.2.1.1 FGP Reading
3.2.1.2 Report by Reviewer 1
3.2.2 Reviewer 2
3.2.2.1 FGP Reading.
3.2.2.2 Report by Reviewer 2
4. Adjustments
4. 1 Report for Reviewers
4.2 Necessary FGP Updates
4.3 Second Review by Reviewers
5. Presentations to the Board of Examiners
5. 1 Final Review by the Board of Examiners
5.2 FGP Grade Report
6. Conclusions
7. Recommendations
8. Reference Lists
9. Annexes
10. Tutor Approval for Reading
11.Reader's Review
12. Board of Examiners Evaluation

5. F
G
P budget

Software License Acquisition –	USD$ 2,000.00
In-person interviews -	USD$ 200.00
Printing, binding and mailing of FGP report –	USD$ 200.00
Fee payable to reviewers -	USD$ 600.00
Total -	USD$ 3,000.00

6. FGP planning and development assumptions

- The laws of the Elections Act will be readily available.
- Employees at the Electoral office will be helpful and a great source of information.
- The researcher will dedicate at least 16 hours per week to the FGP during the FGP development process.
- The professors and tutors will provide timely feedback and sufficient guidance

during the FGP development process and will clarify any issues to enhance the success of the deliverables.

7. FGP constraints

- The FGP is fast-paced with a maximum time frame of 12 weeks.
- The project will cost over US $600,000.00 to execute.
- The project requires external Information Technology experts.
- There is the threat of misinformation about the tabulation machines among the general public.

8. FGP development risks

- Insufficient resources which may lead to delayed completion of the project management plan.
- Lack of data from primary research sources which can negatively affect the comprehensiveness of the plan.
- Lack of guidance and clarity from the professors and tutors to successfully complete the FGP.
- The hurricane season producing a powerful hurricane that results in unwanted and long-winded power outages which can delay the completion of the project management plan.

9. 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**
1.FGP	26 March 2024
1.1 FGP Profile	16 October 2023
1.1.1 Introduction	9 October 2023
1.1.2 Theoretical Framework	25 October 2023
1.1.3 Methodological framework	2 October 2023
1.1.4 Preliminary bibliographical research	11 September 2023
1.1.5 Annexes (FGP schedule, FGP WBS, FGP Charter)	16 October 2023
1.2 FGP Development	23 October 2023
1.2.1 Graduation Seminar	23 October 2023
1.2.1.1 FGP Deliverables	16 October 2023
1.2.1.2 FGP Charter	9 October 2023

1.2.1.3 WBS	12 September 2023
1.2.1.7.1 Bibliography	16 October 2023
1.2.1.7.2 Schedule	16 October 2023
1.3 Validation of Regenerative and Sustainable Development for Project	9 October 2023
2. Tutoring Process	30 January 2023
2.1 Tutor	26 October 2023
2.1.1 Tutor Assignment	24 October 2023
2.1.2 Communication with Tutor	26 October 2023
2.2 Adjustments of Previous Chapters (if necessary)	2 November 2023
2.3 Chapter IV. Development (Results)	16 January 2024
2.3.1 Scope Management Plan	16 January 2024
2.3.2 Schedule Management Plan	16 January 2024
2.3.3 Cost Management Plan	16 January 2024
2.3.4 Quality Management Plan	16 January 2024
2.3.5 Resource Management Plan	16 January 2024
2.3.6 Communication Management Plan	16 January 2024
2.3.7 Risk Management Plan	16 January 2024
2.3.8 Procurement Management Plan	16 January 2024
2.3.9 Stakeholder Management Plan	16 January 2024
2.4 Chapter V. Conclusions	23 January 2024
2.5 Chapter VI. Recommendations	30 January 2024
3. Reviewing by Readers	20 February 2024
3.1 Reviewers Assignment Request	6 February 2024
3.1.1 Assignment of two reviewers	1 February 2024
3.1.2 Communication with reviewers	5 February 2024
3.1.3 FGP Submission to reviewers	6 February 2024
3.2 Reviewers work	20 February 2024

3.2.1 Reviewer 1	20 February 2024
3.2.1.1 FGP Reading	19 February 2024
3.2.1.2 Report by Reviewer 1	20 February 2024
3.2.2 Reviewer 2	20 February 2024
3.2.2.1 FGP Reading	19 February 2024
3.2.2.2 Report by Reviewer 2	20 February 2024
4.Adjustments	19 March 2024
4.1 Report for Reviewers	4 March 2024
4.2 Necessary FGP updates	5 March 2024
4.3 Second review by Reviewers	19 March 2024
5.Presentations to the Board of Examiners	26 March 2024
5.1 Final Review by the Board of Examiners	21 March 2024
5.2 FGP Grade Report	26 March 2024
6. Conclusions	19 March 2024
7. Recommendations	19 March 2024
8. Reference Lists	19 March 2024
9. Annexes	19 March 2024
10.Tutor Approval for Reading	30 January 2024

10. Theoretical framework

a. Estate of the "matter"

In the federation of St. Kitts and Nevis' 2022 general elections, there were 128 polling stations with the Electoral Office's records indicating that 50,933 individuals were eligible to vote ("OAS General Mission…, 2022). The elections are usually accompanied with numerous lengthy lines at the polling stations. Furthermore, voters are not processed quickly due to the solitary voting booth that is present in each polling place and the rule that one voter had to go through the

complete process before another could be admitted.

The polling stations are closed at 6:00 p.m, however, the slow procedures in place may lead to some polling stations closing way beyond the aforementioned time due to the high number of people who are present in the voting lines before 6:00 p.m but await their opportunity to vote. In order for the votes cast to be counted, the ballot boxes are sealed and transferred to the respective counting centers ("OAS General Mission…, 2022).

The results for the first seat declared in the 2022 election, Constituency 10 in Nevis, which had the fewest voting places and people (845 votes cast), were not made public until 12:45 AM, or seven hours after the polls closed ("OAS General Mission…, 2022). Unfortunately, results announcements may experience lengthy delays in St. Kitts and Nevis due to the requirement that all ballots for a constituency be transported to and counted by the Returning Officer at a single location.

Although many electoral observation bodies have recommended electoral reform, especially in the tabulation of ballots process, there is a lack of movement to rectify the issue.

One recommendation was to implement a policy which permits the presiding officer to count the votes at each polling station immediately after the polls close which has not occurred to date ("OAS General Mission..., 2022).

2.3.2 Previous research done for the topic in study

The research executed on the topic of study in the federation of Saint Kitts and Nevis is quite limited. The Organization of the American States Electoral Commission and other observation bodies have even noted that there needs to be electoral reform, especially in the tabulation of ballots process.

However, the nearby island of Anguilla who has a similar electoral system as well as a smaller population held a successful elections in 2020 using

electronic tabulation machines for the first time. Research indicate that the majority of the process went smoothly and the general public was notified of all the polling station's results before midnight.

The major issues that were highlighted in Anguilla's elections were that voters should have the option of casting an unmarked ballot, therefore acknowledging their desire to abstain in private and voters should be informed about how to cast a ballot with insufficient markings well in advance of the election (Anonymous, 2020). It is imperative that St. Kitts and Nevis Electoral Office learn from these mistakes and ensure that the electronic tabulation devices are effectively programmed.

b. Basic conceptual framework

List of the basic concepts to be included in the document.

Project management, The National Assembly Elections Act, OAS General Mission electoral standards, sustainable votes tabulation, etc.

11. Methodological framework

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
1. To create a project charter that will provide the project manager with a general idea of the scope, goals, objectives and resource requirements of the project.	Project Charter	Interviews with relevant stakeholders (employees and registered voters), Reviews of the OAS standards, PMBOK Guide 7th edition, Journal articles, Internet resources	Analytical Research: Information from earlier studies and previous reports would be evaluate Descriptive Research: Available data from internet	Brainstorming, interviews, meetings, Microsoft Word and Excel	There is intense pressure for the project to meet stakeholders 'expectations especially since there is none like it in the federation.

			resources Quantitative Research: Empirical data would be collected. Qualitative Research: Interviews and surveys will be used to obtain more information relating to the purpose of the project, etc..		
2. To develop a scope management plan that describes the steps needed in carrying out the project and acts as a guide to maintain the project within certain limits.	Scope Management Plan	Interviews with relevant stakeholders (employees and registered voters), St. Christopher and Nevis Chapter 2.01 National Assembly Elections Act and Subsidiary Legislation, PMBOK Guide 7th edition, Journal articles, Internet resources	Analytical: Information from earlier studies and previous reports would be evaluated Descriptive: Available data from internet resources and interviews Qualitative: Information from the PMBOK guide will be used to better understand	Interviews, surveys, observations, Microsoft Word and Excel	Insufficient information may lead to scope creep.

			the concepts.		
3.To formulate a schedule management plan that contains details on the project's scheduling methodology and gives direction to the project manager and team regarding the creation, maintenance and control of the project schedule to meet stakeholders' deadlines.	Schedule Management Plan	Researcher's Observation, Interviews with relevant stakeholders, PMBOK Guide 7th edition, Journal articles, Internet resources	Analytical: Information from earlier studies and previous reports would be evaluated Descriptive: Available data from internet resources and interviews. Quantitative: Empirical data would be collected. Qualitative: Information from the PMBOK guide will be used to better understand the concepts.	Meetings, Expert judgment, project management information system, Microsoft Word and Excel	The project must be completed within the stipulated time frame.
4. To develop a cost management plan that will help the project manager and team to calculate their costs, distribute resources appropriately and keep expenditures under control.	Cost Management Plan	Researcher's Observation, Interviews with relevant stakeholders , PMBOK Guide 7th edition, Journal articles, Internet resources	Information from earlier studies and previous reports would be evaluated Available data from internet resources and interviews.	Meetings, Expert judgment, project management information system, cost aggregation, Microsoft	The project is operating within an environment of inflation that may cause changes to the budget.

			Empirical data would be collected. Information from the PMBOK guide will be used to better understand the concepts.	Word and Excel	
5.To create a quality management plan that will make it easier for the project manager and team to satisfy both the needs of the client and the project's criteria.	Quality Management Plan	Researcher's Observation, Interviews with relevant stakeholders , St. Christopher and Nevis Chapter 2.01 National Assembly Elections Act and Subsidiary Legislation, PMBOK Guide 7th edition, Journal articles, Internet resources	Analytical: Information from earlier studies and previous reports would be evaluated Descriptive: Available data from internet resources Quantitative: Empirical data would be collected. Qualitative: Information from the PMBOK guide will be used to better understand the related concepts. -	Meetings, Cost-benefit analysis, check sheet, Microsoft Word and Excel	There is lack of historical data and examples to compare the quality of the project to.
6.To develop a resource	Resource Management	Researcher's Observation,	Analytical: Information	Meetings, organizati	Resources may not be

management plan that details how the resources are obtained, distributed, tracked and managed.	Plan	Interviews with relevant stakeholders, PMBOK Guide 7th edition, Journal articles, Internet resources	from earlier studies and previous reports would be evaluated-Descriptive: Available data from internet resources Qualitative: 1. Information from the PMBOK guide will be used to better understand the concepts. 2. The OAS electoral standards will be analyzed to ensure that the FGP is along the right path.	onal charts, negotiation skills, Microsoft Word and Excel	readily available or easily accessible.
7. To formulate a communication management plan that describes the requirements and expectations for communication over the entire project.	Communication Management Plan	Researcher's Observation, Interviews with relevant stakeholders PMBOK Guide 7th edition, Journal articles, Internet resources	Quantitative: Empirical data would be collected. Qualitative: Information from the PMBOK guide will be used to better understand the concepts.	Active listening, cultural awareness, presentations, communication technology, Microsoft Word and Excel	Communication technology may shut down due to power failure.

			-		
8.To create a risk management plan that aids in identifying and evaluating potential project risks as well as describe how the team will strategize to reduce the potential risks to facilitate the project's success.	Risk Management Plan	Researcher's Observation, Interviews with relevant stakeholders, St. Christopher and Nevis Chapter 2.01 National Assembly Elections Act and Subsidiary Legislation, PMBOK Guide 7th edition, Journal articles, Internet resources -	Analytical: Information from earlier studies and previous reports would be evaluated Descriptive: Available data from internet resources Quantitative: Empirical data would be collected using the Probability and Impact matrix. Qualitative: 1. Information from the PMBOK guide will be used to better understand the concepts. -2.Interviews to determine the risks associated with the project	Assumptions analysis, SWOT analysis, expert judgment, probability and impact matrix, 1risk categorization, Microsoft Word and Excel	Low productivity of the team.
9.To develop a	Procurement	Researcher's	-Analytical:	Meetings,	Suppliers

procurement management plan that outlines how the organization will manage the procurement process by ensuring that all stakeholders involved are aware of the steps that must be taken during the procurement cycle.	Management Plan	Observation, Interviews with relevant stakeholders, PMBOK Guide 7th edition, Journal articles, Internet resources	Information from earlier studies and previous reports would be evaluated -Descriptive: Available data from internet resources -Qualitative: 1. Information from the PMBOK guide will be used to better understand the concepts. -Interviews to determine the risks associated with the project.	Market research, expert judgment, Microsoft Word and Excel	may not be available due to strikes.
10.To formulate a stakeholder management plan that indicates how the team will handle the goals and demands of key stakeholders throughout the project life cycle.	Stakeholder Management Plan	Researcher's Observation Interviews with relevant stakeholders (employees, registered voters, potential voters, etc.) St. Christopher and Nevis Chapter 2.01 National	Analytical: Information from earlier studies and previous reports would be evaluated Descriptive: Available data from internet resources.	Interpersonal and team skills, meetings, stakeholder analysis, Microsoft Word and Excel	Stakeholders' expectations may change throughout the project.

		Assembly Elections Act and Subsidiary Legislation, PMBOK Guide 7th edition, Journal articles, Internet resources	Qualitative: 1. Information from the PMBOK guide will be used to better understand the concepts. 2.Interviews to better understand stakeholders' views.		
11.To create a sustainable management plan that will address environmental, social and economic considerations to facilitate long-term viability and responsible business practices.	Sustainable management plan	Journal articles, Internet resources	Descriptive: Available data from internet resources and interviews	Brainstorming, Microsoft Word and Excel	There may be resistance from internal stakeholders, including employees and management which may stem from a lack of awareness or skepticism about the benefits of sustainable practices.

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

How is the FGP to comply with the concepts of the regenerative and sustainable development? How adds the proposed project to the regenerative and sustainable development? Include potential indicators and way to measure them.

Regenerative and/or Sustainable Development Feature	**Relationship to FGP Deliverable**	**Benefits**
Carpooling will be encouraged when traveling to the various project sites.	Scope management	Reduced carbon footprint and reduced air pollution
Emails will be one of the preferred means of communication to reduce the use of paper memos and letters.	Communication management.	Reduced paper wastage, reduced need for deforestation, and water saving.
Eco-friendly machines will be sourced for the project.	Procurement, resource, risk and stakeholder management	Reduced energy usage, reduced wastage and increased safety capacity.
The project manager and staff	Communication, quality, risk,	Adherence to the Green

will be committed to exhibiting certain principles such as integrity, transparency and accountability when carrying out their functions.	scope and stakeholder.	Project Management's principles, increased trust among stakeholders and the team and ethical decision-making.
The use of electronic tabulation machines will decrease the need for a high amount of manpower.	Quality, risk, stakeholder, scope, schedule and resource management.	Reduced costs associated with high amount of manual labor and less staff burnout leading to better health and well-being (SDG4)
The machine will be as fair as possible by complying with the Constitution and having the capacity to analyze all types of ballots.	Stakeholder management.	Enhances the achievement of SDG16 and the doughnut economic model (peace and justice), social equity and political voice.
The expected increased efficiency and accuracy in the	Stakeholder, schedule and quality management.	Happy and healthier population.

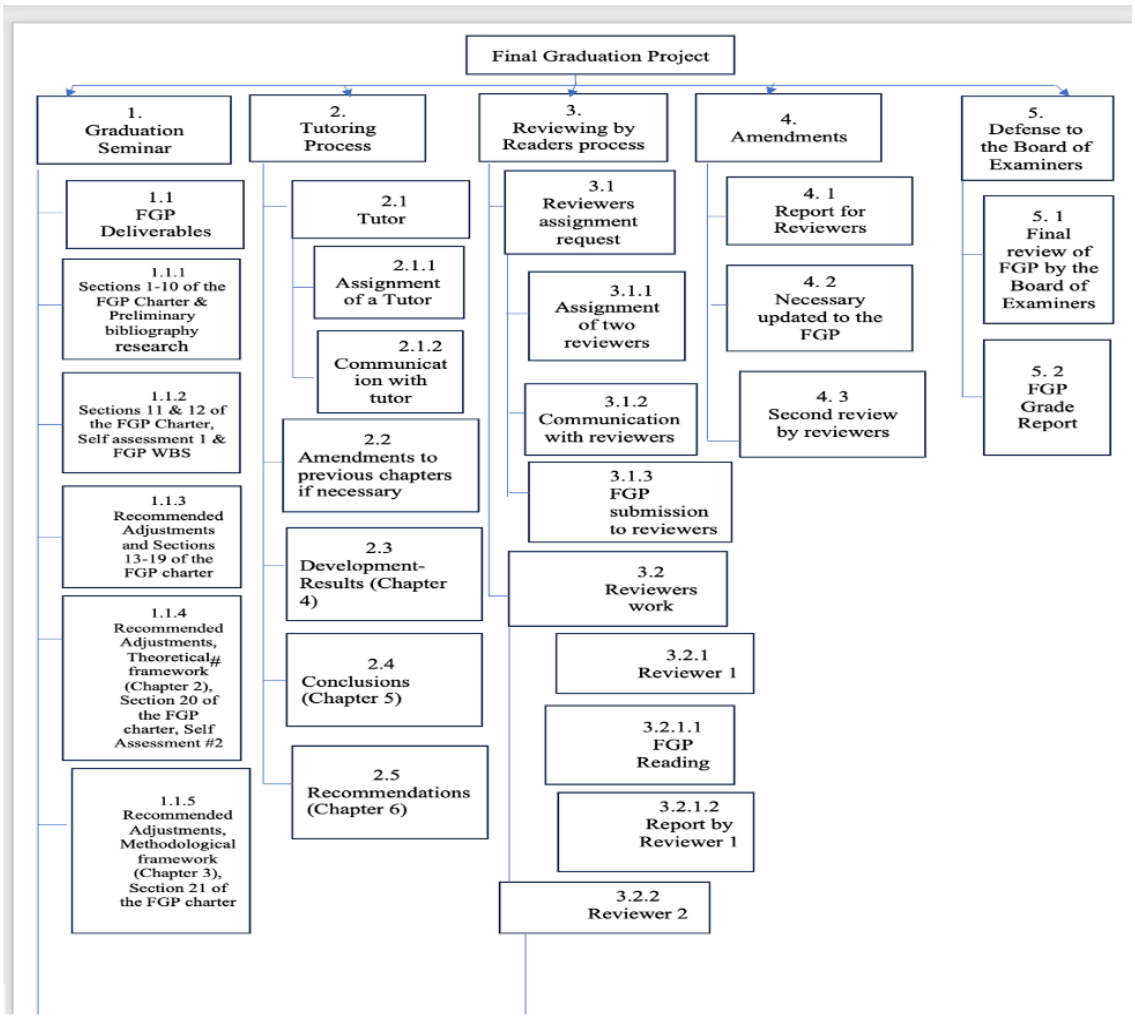
elections' results.		

The effects of the project on the success of the project in the regenerative and sustainable realm will be measured using aspects of the P5 analysis. For instance, the P5 domain of people with the lens of efficiency and the category of ethical behavior with the element of sustainable procurement and contracts KPI will be the efficiency in procurement and resource allocation. The metric will be at least 10% cost savings achieved. In a similar context, with the harassment and discrimination prevention element, the KPI will be reports of ballots not included in the tabulation with the metric being less than 5. Then, a KPI relating to the number of electoral officials who complain about extreme tiredness due to the tabulation process will be considered with the metric being less than 5% complaints.

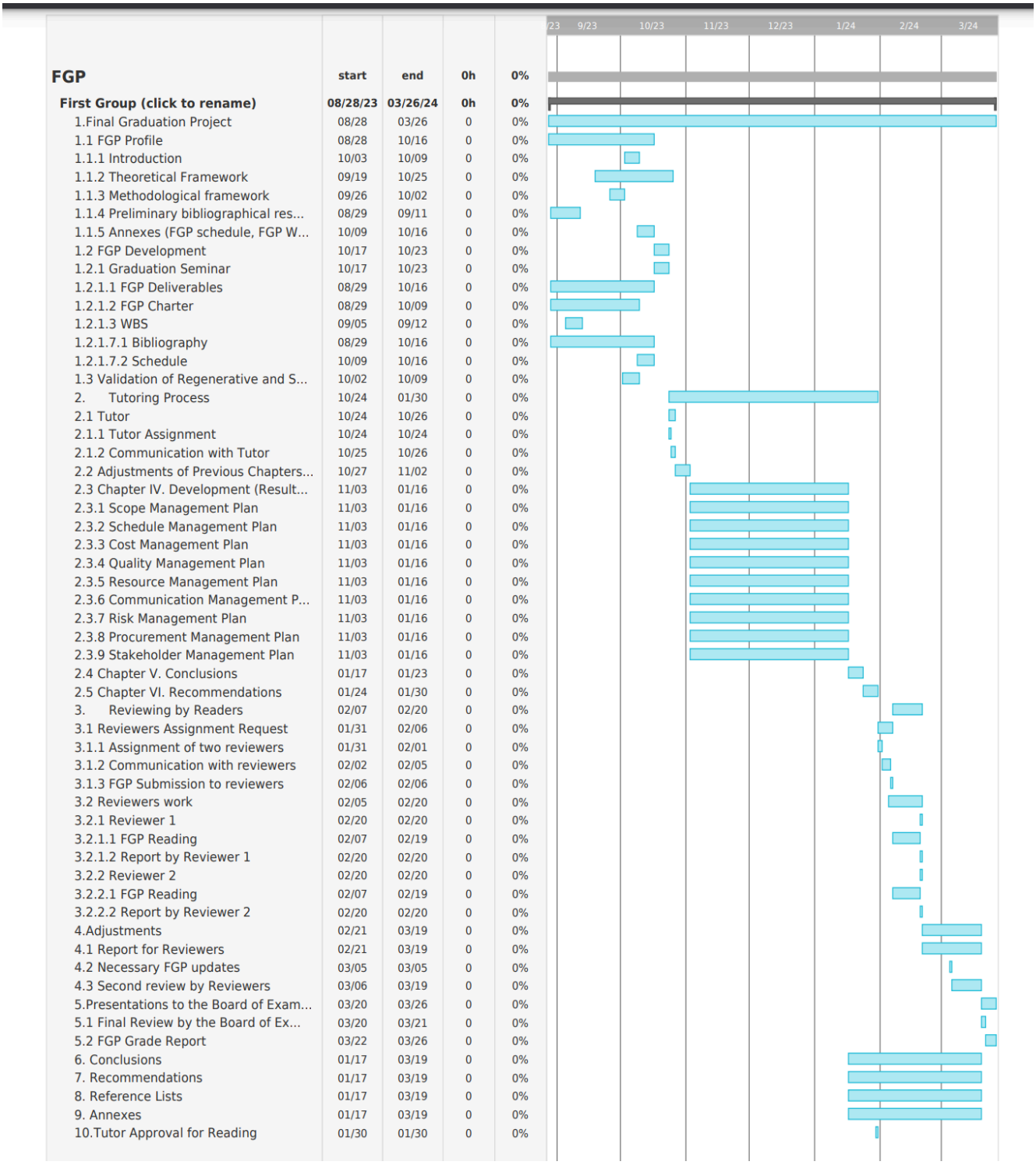
Appendix 2: FGP WBS

4. FGP
    4.1 FGP profile
        1.1.1 Introduction
        1.1.2 Theoretical framework
        1.1.3 Methodological framework
        1.1.4 Preliminary bibliographical research
        1.2.5 Annexes (FGP schedule, FGP WBS, FGP Charter)
    1.3 FGP development
        1.2.1 Graduation Seminar
            1.2.1.1 FGP Deliverables
            1.2.1.2 FGP Charter
            1.2.1.3 WBS
            1.2.1.4 Chapter I. Introduction
            1.2.1.5 Chapter II. Theoretical Framework
            1.2.1.6 Chapter III. Methodological framework
            1.2.1.7 Annexes
                1.2.1.7.1 Bibliography
                1.2.1.7.2 Schedule
        1.3 Validation of Regenerative and Sustainable Development For Projects
    2. Tutoring Process
        2.1 Tutor
        2.1.1 Tutor Assignment
        2.1.2 Communication with tutor
        2.2 Adjustments of Previous Chapters if necessary
        2.3 Chapter IV. Development (Results)
            2.3.1 Scope Management Plan
            2.3.2 Schedule Management Plan
            2.3.3 Cost Management Plan
            2.3.4 Quality Management Plan
            2.3.5 Resource Management Plan
            2.3.6 Communication Management Plan
            2. 3.7 Risk Management Plan
            2.3.8 Procurement Management Plan
            2.3.9 Stakeholder Management Plan
        2.4 Chapter V. Conclusions
        2.5 Chapter VI. Recommendation
    3. Reviewing by Readers
        3. 1 Reviewers assignment request
            3.1.1 Assignment of two reviewers

3.1.2 Communication with reviewers
3.1.3 FGP submission to reviewers
3.2 Reviewers work
3.2.1 Reviewer 1
3.2.1.1 FGP Reading
3.2.1.2 Report by Reviewer 1
3.2.2 Reviewer 2
3.2.2.1 FGP Reading.
3.2.2.2 Report by Reviewer 2
4. Adjustments
4. 1 Report for Reviewers
4.2 Necessary FGP Updates
4.3 Second Review by Reviewers
5. Presentations to the Board of Examiners
5. 1 Final Review by the Board of Examiners
5.2 FGP Grade Report
6. Conclusions
7. Recommendations
8. Reference Lists
9. Annexes
10. Tutor Approval for Reading
11.Reader's Review
12. Board of Examiners Evaluation


Final Graduation Project
1. Graduation Seminar
2. Tutoring Process
3. Reviewing by Readers process
4. Amendments
5. Defense to the Board of Examiners
1.1 FGP Deliverables
1.1.1 Sections 1-10 of the FGP Charter & Preliminary bibliography research
1.1.2 Sections 11 & 12 of the FGP Charter, Self assessment 1 & FGP WBS
1.1.3 Recommended Adjustments and Sections 13-19 of the FGP charter
1.1.4 Recommended Adjustments, Theoretical# framework (Chapter 2), Section 20 of the FGP charter, Self Assessment #2
1.1.5 Recommended Adjustments, Methodological framework (Chapter 3), Section 21 of the FGP charter
2.1 Tutor
2.1.1 Assignment of a Tutor
2.1.2 Communication with tutor
2.2 Amendments to previous chapters if necessary
2.3 Development-Results (Chapter 4)
2.4 Conclusions (Chapter 5)
2.5 Recommendations (Chapter 6)
3.1 Reviewers assignment request
3.1.1 Assignment of two reviewers
3.1.2 Communication with reviewers
3.1.3 FGP submission to reviewers
3.2 Reviewers work
3.2.1 Reviewer 1
3.2.1.1 FGP Reading
3.2.1.2 Report by Reviewer 1
3.2.2 Reviewer 2
4. 1 Report for Reviewers
4. 2 Necessary updated to the FGP
4. 3 Second review by reviewers
5. 1 Final review of FGP by the Board of Examiners
5. 2 FGP Grade Report
1.1.6 Recommended adjustments, Introduction (Chapter 10, Validation of the project according To sustainable and regenerative ideologies, section 22 of the FGP charter, FGP schedule
1.1.7 Recommended adjustments, Executive summary, abstract, bibliographical references, indexes, signed FGP Charter #
1.2 Graduation Seminar Approval
3.2.2.1 FGP Reading
3.2.2.2 Report by Reviewer 2

Appendix 3: FGP Schedule



FGP	start	end	0h	0%
First Group (click to rename)	**08/28/23**	**03/26/24**	**0h**	**0%**
1.Final Graduation Project	08/28	03/26	0	0%
1.1 FGP Profile	08/28	10/16	0	0%
1.1.1 Introduction	10/03	10/09	0	0%
1.1.2 Theoretical Framework	09/19	10/25	0	0%
1.1.3 Methodological framework	09/26	10/02	0	0%
1.1.4 Preliminary bibliographical res...	08/29	09/11	0	0%
1.1.5 Annexes (FGP schedule, FGP W...	10/09	10/16	0	0%
1.2 FGP Development	10/17	10/23	0	0%
1.2.1 Graduation Seminar	10/17	10/23	0	0%
1.2.1.1 FGP Deliverables	08/29	10/16	0	0%
1.2.1.2 FGP Charter	08/29	10/09	0	0%
1.2.1.3 WBS	09/05	09/12	0	0%
1.2.1.7.1 Bibliography	08/29	10/16	0	0%
1.2.1.7.2 Schedule	10/09	10/16	0	0%
1.3 Validation of Regenerative and S...	10/02	10/09	0	0%
2. Tutoring Process	10/24	01/30	0	0%
2.1 Tutor	10/24	10/26	0	0%
2.1.1 Tutor Assignment	10/24	10/24	0	0%
2.1.2 Communication with Tutor	10/25	10/26	0	0%
2.2 Adjustments of Previous Chapters...	10/27	11/02	0	0%
2.3 Chapter IV. Development (Result...	11/03	01/16	0	0%
2.3.1 Scope Management Plan	11/03	01/16	0	0%
2.3.2 Schedule Management Plan	11/03	01/16	0	0%
2.3.3 Cost Management Plan	11/03	01/16	0	0%
2.3.4 Quality Management Plan	11/03	01/16	0	0%
2.3.5 Resource Management Plan	11/03	01/16	0	0%
2.3.6 Communication Management P...	11/03	01/16	0	0%
2.3.7 Risk Management Plan	11/03	01/16	0	0%
2.3.8 Procurement Management Plan	11/03	01/16	0	0%
2.3.9 Stakeholder Management Plan	11/03	01/16	0	0%
2.4 Chapter V. Conclusions	01/17	01/23	0	0%
2.5 Chapter VI. Recommendations	01/24	01/30	0	0%
3. Reviewing by Readers	02/07	02/20	0	0%
3.1 Reviewers Assignment Request	01/31	02/06	0	0%
3.1.1 Assignment of two reviewers	01/31	02/01	0	0%
3.1.2 Communication with reviewers	02/02	02/05	0	0%
3.1.3 FGP Submission to reviewers	02/06	02/06	0	0%
3.2 Reviewers work	02/05	02/20	0	0%
3.2.1 Reviewer 1	02/20	02/20	0	0%
3.2.1.1 FGP Reading	02/07	02/19	0	0%
3.2.1.2 Report by Reviewer 1	02/20	02/20	0	0%
3.2.2 Reviewer 2	02/20	02/20	0	0%
3.2.2.1 FGP Reading	02/07	02/19	0	0%
3.2.2.2 Report by Reviewer 2	02/20	02/20	0	0%
4.Adjustments	02/21	03/19	0	0%
4.1 Report for Reviewers	02/21	03/19	0	0%
4.2 Necessary FGP updates	03/05	03/05	0	0%
4.3 Second review by Reviewers	03/06	03/19	0	0%
5.Presentations to the Board of Exam...	03/20	03/26	0	0%
5.1 Final Review by the Board of Ex...	03/20	03/21	0	0%
5.2 FGP Grade Report	03/22	03/26	0	0%
6. Conclusions	01/17	03/19	0	0%
7. Recommendations	01/17	03/19	0	0%
8. Reference Lists	01/17	03/19	0	0%
9. Annexes	01/17	03/19	0	0%
10.Tutor Approval for Reading	01/30	01/30	0	0%

Appendix 4: Preliminary bibliographical research

Anonymous. (2020). *CPA BIMR Election Expert Mission final report.* Commonwealth Parliament Association. https://www.uk-cpa.org/media/3705/final-report-cpa-bimr-eem-to-anguilla.pdf

Explanation: The Commonwealth Pa The CPA BIMR Election Expert Mission final report on Anguilla's 2020 elections is a good source of information on past use of electronic tabulation machines in the voting process in an island with similar voter attitude. It therefore acts as a lessons learned document.

Ayanyemi, T. (2023). Primary vs secondary research methods: 15 Key differences https://www.formpl.us/blog/primary-secondary-research

Explanation: Primary and secondary research are integral parts of the research paper. This source not only defines primary and secondary research but also details differences, advantages and disadvantages of each and how to use them. The website is also great for data collection and making online surveys which are all part of the research process.

Bansal, S. (2023). Project manager's role in adaptive life cycle. https://www.izenbridge.com/blog/project-managers-role-in-adaptive-lifecycle/

Bell, M. (2022). Introduction to project management basics. https://projectmanagementacademy.net/resources/blog/project-management-basics/

Explanation: This source is about the basics of project management which are necessary to comprehend to successfully complete the paper. The basics of project management also form the foundation of the paper.

Bhat, A. (n.d.). Qualitative research methods: Types & examples. https://www.questionpro.com/blog/qualitative-research-methods/

Boogard, K. (2022). What are project assumptions? https://www.wrike.com/blog/what-are-project-assumptions/

Explanation: Wrike is known as the most versatile platform for work management. Furthermore, it is highly unlikely that one can plan a project without making assumptions. Therefore, this particular post highlighted the definition of project assumptions and even provided examples which will make it easier for me to address the assumptions section of the document.

Bowcott, O. (2015). UK privy council overturns St Kitts and Nevis boundary changes ahead of polls. https://www.theguardian.com/world/2015/feb/12/st-kitts-and-nevis-electoral-rule-overturned-by-privy-council

Boyles, M. (2022). What is business strategy and why is it important? https://online.hbs.edu/blog/post/what-is-business-strategy

Bridges, J. (2023). What is the project life cycle? https://www.projectmanager.com/blog/what-is-the-project-management-life-cycle#:~:text=The%20project%20life%20cycle%20is,effective%20delivery%20of%20the%20project.

Brown, L. (2023). What is control scope, and how to control scope in a project? https://www.invensislearning.com/blog/control-scope-in-a-project/

Brown, L. (2022). What is a project management plan and how to develop one? https://www.invensislearning.com/blog/project-management-plan/

Explanation: This article details what exactly is a project management plan and how to develop one which is extremely useful to me since the basis of my research paper is centered around creating a project management plan. The article is quite informative and extensive as it also elaborates on the inputs, tools and techniques and outputs of the project management plan. In addition, the author has a wealth of knowledge and experience with successfully creating and guiding the project management plan process.

Carboni, J., Duncan, W., Gonzalez, M., Milsom, P. and Young, M. (2018). Sustainable project management: The GPM reference guide. https://omeka.campusuci2.com/biblioteca/files/original/931b7dc25982c3ae9c5558b23ff711b2.pdf

Dahl, R., Froomkin, D. and Shapiro. (2023). Democracy. https://www.britannica.com/topic/democracy

Dipinto, M. (2021). The benefits of electronic voting. https://www.getquorum.com/blog/the-benefits-of-electronic-voting/

Explanation: The article allows me to explore what exactly is electronic voting and the associated benefits. The article also addresses voter's attitude towards electronic voting which is a main issue to be discussed in the paper.

Dovetail Editorial Team. (2023). What is descriptive research? https://dovetail.com/research/descriptive-research/

Eby, K. (2022). How to identify and manage constraints in project management? https://www.smartsheet.com/content/project-constraints

Electoral Office. (n.d.). https://www.legal.gov.kn/electoral-office/

Fleetwood, D. (n.d.). Quantitative research: What it is, tips & examples. https://www.questionpro.com/blog/quantitative-research/

Homz. (2023). What are the advantages and disadvantages of sustainable development? https://www.homzglobal.com/city-partnership/advantages-and-disadvantages-of-sustainable-development/

Howell, J. (2021). Analytical research method: characteristics and examples. https://warbletoncouncil.org/metodo-analitico-sintetico-810

Indeed Editorial Team. (2023). What is a business portfolio? Definition and benefits. https://au.indeed.com/career-advice/career-development/business-portfolio

Iqbal, M. (2023). Project performance domains. https://mudassiriqbal.net/project-performance-domains/

Kent, W. (2023). Organizational structure for companies with examples and benefits. https://www.investopedia.com/terms/o/organizational-structure.asp

Kumar, V. (2021). Project management life cycle-Project life cycle secret. https://www.projectsmind.com/project-lifecycle-in-project-management/

Landau, P. (2023). Project scope statement: How to write one with samples. https://www.projectmanager.com/blog/project-scope-statement

Longe, O. (2023). Primary vs secondary sources: Meaning, examples & differences. Formplus. https://www.formpl.us/blog/primary-secondary-sources

Lopez, A. (2021). WBS dictionary: A quick guide with examples. https://www.projectmanager.com/blog/wbs-dictionary#:~:text=What%20Is%20a%20WBS%20Dictionary,%2C%20resources%2C%20cost%20and%20quantity.

Malsam, W. (2022). Schedule management plan: How to make & maintain one. https://www.projectmanager.com/blog/schedule-management-plan-how-to-make-maintain-one

Malsam, W. (2023). What is a project? Definition, types & examples. https://www.projectmanager.com/blog/project-definition

Michaels, B. (2023). Choosing an effective project development approach: Predictive, adaptive, or hybrid. https://www.linkedin.com/pulse/choosing-effective-project-development-approach-hybrid-michaels/

Explanation: There is a significant push for the presence of sustainable development among projects. It is imperative that I discuss how the project can incorporate sustainable development strategies and the pros and cons of doing such.

Muller, E. (2017). Regenerative development, the way forward to saving our civilization. https://www.ucipfg.com/Repositorio/GSPM/manuales/Regenerative_development_EM.pdf

Murray-Webster, R., & Dalcher, D. (2019). *APM Body of Knowledge*. (7th ed.) Association for Project Management.

OAS General Mission congratulates people of St. Kitts and Nevis on their participation in the General Elections. (2022). https://www.oas.org/en/media_center/press_release.asp?sCodigo=E-043/22

Orey, J., Thomas, C., & Gordon, Grace. (2022). How ballot tabulators improve elections. https://bipartisanpolicy.org/explainer/how-ballot-tabulators-improve-elections/

Explanation: The article compares the use of machine tabulation to hand counts which I intend to make a part of my research paper.

Project Management Institute. (2021). *A Guide to the project management body of knowledge (PMBOK® guide)* (7th ed.).

Explanation: The PMBOK guide contains the complete set of procedures, industry-accepted standards, terminologies, and directives that the Project management sector considers to be the norm. The guide also allows me to make wise decisions when diagnosing issues and making necessary recommendations. In addition, the source is the 7th edition which has been updated to accommodate the constantly growing body of knowledge.

Research methods: What are research methods? (2023). https://libguides.newcastle.edu.au/researchmethods

Research tools 1: Observation. (2019). https://icndbm.cikd.ca/research-tools-1-observation/

Simplilearn. (2023). PMI code of ethics: Importance of ethics in Project management. https://www.simplilearn.com/importance-of-ethics-in-project-management-article

Tausanovitch, A. (2023). It's time to talk about electoral reform. https://www.americanprogress.org/article/its-time-to-talk-about-electoral-reform/

Taylor, B. (2022). Persuading your team to embrace change. https://hbr.org/2022/04/persuading-your-team-to-embrace-change

Explanation: The project is one that will bring about major change. Many persons' natural reaction to change is resistance. Therefore, it is important that I mention how the public can embrace change. The article is from the prestigious Harvard Business Review and details how to persuade others to embrace change which will help me when I reach that topic of discussion.

Thanuskodi, S. (2020). Challenges and opportunities of open educational resources management. IGI Global.

What is sustainable development? (n.d.). https://byjus.com/commerce/meaning-and-features-of-sustainable-development/

York, A. (2023). Understanding project deliverables: A complete breakdown with examples. https://www.teamwork.com/blog/project-deliverables/

Appendix 5: Revision Dictum

ANGELA D. BELLO RUIZ

CERTIFIED ENGLISH TEACHER

Date 4/3/2024

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

Dear Academic Advisor,

Re: **Through Review and Proofreading of Final Graduation Project submitted by Rénell Melvicia Agard in partial fulfillment of the requirements for the Masters in Project Management (MPM) Degree**

I hereby confirm that Rénell Melvicia Agard has made all of 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.

Ángela D. Bello Ruiz
Certified English Teacher