UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

PROJECT MANAGEMENT PLAN FOR THE CONSTRUCTION OF ST. GEORGE'S MARKET

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DEDICATION

This thesis is dedicated to the memory of Jennifer Wiltshire who taught me the value of critical thought and education. Although she was my inspiration to pursue my master's degree, she was unable to see complete this achievement so this is for her.

I also dedicate this project to my family and friends who supported me and whose encouragement made sure that I did only my best to finish what I started.

I appreciate you all.

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First and foremost, I would like to thank God for blessing me with health and strength. I'm grateful to my all my lecturers who have been helping me on this educational journey. I must extend my gratitude to my professors who helped me through this journey so that I can complete my Final Graduation Project successfully.

To my tutors Carlos Brenes and Carlos Brenes Vega, I must acknowledge and say a special thank you to you both for your constant guidance, recommendations and support throughout this research project.

To Gabriela Zúñiga Calderón, I must say thank you for your constant support and efficiency towards solving matters throughout this course.

Last and most importantly, to my friends and my family specifically my parents for their continuous love and support during my educational journey. Many times I wanted to quit but they encouraged me to keep pushing forward and that is exactly what I did.

This thesis commemorates the end of my 2-year study journey at University for International Cooperation.

ABSTRACT

The purpose of this study is to create a project management plan for the construction of the St. George's Market which is to be constructed in the town area. The study recommended that by constructing the market, it would not only strengthen the economy, but also positively impact the buyers (customers) and sellers (farmers) by bringing fresh, organic and cheaper produce to the people of Grenada. The report also examined the island's second largest market to have a better idea of the financial resources needed to build the structure, social & economic impacts, organizational structure as well as operational costs and benefits it will bring.

Apart from the developmental aspect, farmers and vendors will have a year round reliable source of income which may be crucial towards the development and growth of their business. Once the structure is completed, all the issues such as lack of storage, inadequate parking, improper access will all be a thing of the past as the government seeks to make the shopping experience much better for the locals and tourists visiting the market.

Keywords: Project Management Plan, Market, Grenada, Farmers, Vendors

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ABBREVIATIONS AND ACRONYMS

- **COVID-19 – Corona Virus 2019**
- **EoI - Expression of Interest**
- **FGD – Focus Group Discussion**
- **HR – Human Resource**
- **HRM – Human Resource Management(er)**
- **MOIID – Ministry of Infrastructure Development**
- **PM - Project Manager**
- **PMI- Project Management Institute**
- **PMBOK – Project Management Body Of Knowledge**
- **RBS – Risk Breakdown Structure**
- **RFI – Request For Information**
- **RFP – Request for Proposal**
- **RFQ – Request for Quotation**
- **S.M.A.R.T - Specific, Measurable, Attainable, Relevant and Time-bound**
- **USD – United States Dollar**
- **WBS - Work Breakdown Structure**

EXECUTIVE SUMMARY

The main goal of a farmer's market is to serve as a centralized area where members of a community can visit to get fresh produce at reduced prices. This direct link between farmers and consumers will connect the urban and rural areas, which promotes a positive outcome, as well as contribute towards the local food drive in the island. This movement will encourage sustainable agricultural production, responsible consumerism and better access to affordable and healthy foods. Through the years, there has been a steady increase in the population and now there is a demand for locally grown and organic produce. This demonstrates that supply and demand are both moving in a lock-step fashion bringing these beneficial structures to fruition. This market will not only present an opportunity for consumers and producers, but also create cost effective investments in the town, as well as economic diversity, entrepreneurial success as well as greater support for them.

The main purpose of this final graduation project is to create a project management plan for the construction of the St. George's Market, which for many years have been neglected, and is in a dire need of renovation. As the world is going through this pandemic, the government of Grenada determined that it was the opportune time to take advantage and renovate the entire structure as well as to construct an additional building to house the increasing fruit, vegetable and craft vendors.

The paper provides an overview of the various benefits the market will bring to the people of Grenada, recommendations on the overall project, and ways government and community members can strengthen and support the market. This is with the aim of having a steady flow of income for primarily the farmers.

1 INTRODUCTION

1.1. Background

The market industry over the years have experienced a diverse set of changes regarding environmental consciousness, as well as stricter adherence to proper food safety standards and other hygienic conditions. The St. George's Market today is a critical contributing factor to the nation's fragile economy. This socio-economic infrastructure seeks to provide employment opportunities, as well as a serve as a trading ground where locals and tourists can come to get their fresh produce on a daily basis. This in return promotes a better quality of life for its residents. The market connects rural and urban communities, enables fresh and organic ingredients (fruits, vegetables) to be added to our daily diet and provides a direct line of contact between the farmer and the consumer.

It is evident that more money stays within the local economy whenever food is distributed, produced and processed in the same region. This leads to job creation for both farmers and vendors as well as economic development as it seeks to meet the growing demand of locally produced goods. Catering to the needs of the locals, gives the farmers more opportunities to earn an income without the added costs for shipping the goods, sorting or engaging in inventory control of any sort. Finally yet importantly, the St. George's market is a place where locals meet to socialize. A deep sense of community is fostered in suchlike settings and is felt throughout the island. That is why the Government of Grenada is seeking to address the issues with which the market is currently plagued, and to come up with better strategies to generate increased income for our farmers. This project management plan seeks to address those concerns.

1.2. Statement of the problem

For many years, the market has been on the government's commotion list of projects but due to the vendors constantly occupying the facility, it has been difficult to implement any renovation works. The number of vendors utilizing the facility grew but the physical structure of market remained the same. Its last upgrade was in 1994.

The problem is that vendor's stalls were disorganized and cramped. The facility was not welcoming to the eyes for both the locals and tourists visiting the area. For those reasons, a proper project management plan must be done so that when construction is completed, everyone will be contented with the finished product.

This study seeks to come up with an effective project management plan to correct the previously mentioned issues currently being faced by the users of the market, as well as to chart a way forward into incorporating proper project management practices into the project to ensure its success.

1.3. Purpose

Whenever undertaking any project, proper planning is crucial as it ensures that the project will be on the right track as well as meet the expectations of the stakeholders involved throughout its lifecycle. All project managers are required to prepare a solid project plan and follow this plan all the way to success. (Dvira, Razb & Shenharc, 2003). The project management team needs to adequately plan the work which is expected to be undertaken so that the project will run smoothly. Proper planning can also minimize the chances of costly mistakes or avoid panic whenever disasters strike.

The main goal of this research is to create a project management plan based on the specifications of the Project Management Institute. This seeks to provide justification for decisions which will be made regarding the scope, cost, time, quality and integration of the project so that, when implemented, it can help the market construction project achieve a higher chance of success in the long run.

1.4. General objective

In project management, project objectives are statements that describe the goals of the project, providing steppingstones to project success. It is important to ensure that the objectives are clear and achievable so that the project management which will enable the project to have a higher chance of success. In the case of this project management plan for the St. George's Market Construction, SMART framework was used when coming up with the objectives. The acronym translates to Specific,

Measurable, Achievable, Realistic and Time Bound (S.M.A.R.T). The effects will be workable and realistic objectives which will act as the perfect guide for the project.

The general objective is to formulate a project management plan based on the standards of the Project Management Institute for managing and constructing the St. George's Market.

1.5. Specific objectives

Specific objectives are as follows:

1. **Scope Management** – To produce a scope management plan which seeks to ensure that objectives and scope of works for the project are successfully carried out.
2. **Schedule Management** – To create a time management plan which will support the management of a project schedule to ensure that the project is completed within the stipulated time frame.
3. **Cost Management** – To create a cost management plan for developing and managing the overall costs, to ensure that the project is completed without being over budget.
4. **Quality Management** – To develop a quality management plan which seeks to ensure that the results meet expectations and that the quality is of good standard.
5. **Communication Management** – To develop a proper communication management plan to ensure that the status of the project and other key information are transmitted in a timely and effective manner to the relevant persons involved in the project.
6. **Risk Management** – To create a risk management plan which identifies risks and develop strategies to avoid or minimize the chances of the project running into risks.
7. **Procurement Management** – To develop a procurement management plan for identifying and contracting suppliers who are able to provide the required services and goods which the project management team cannot.

8. **Stakeholders Management** – To develop a Stakeholders management plan which seeks to identify key stakeholders, their interest level and how their influence might impact the project.
9. **Integration Management** – To develop an integration management plan which will act as a road map to ensure that all the processes involved work together and reaches a successful end.
10. **Human Resource Management** – To create a human resource management plan which seeks to indentify the most qualified and best suited individuals to perform important roles throughout the lifecycle of the project, as well as resolve any internal issues or conflicts once they arise.

2 THEORETICAL FRAMEWORK

2.1 Company/Enterprise framework

Must be subdivided in sections with the corresponding titles as shown below.
Must not be a copy of section 1.1 Background from chapter 1.

2.1.1 Company/Enterprise background

The St. George's market is a public facility where farmers and their representatives go to sell products, fruits, vegetables, which they have produced; directly to consumers. It facilitates personal connections as well as mutual benefits between shoppers, farmers and the community as a whole. The market is expected to be a multi-stall market where farmers and other local vendors can market and sell their freshly produced agricultural products to the public. This includes fruits, vegetables, spices, crafts, baked goods as well as beverages and food. The idea for such a market is to "cut out" the middleman (grocery stores) as this can have significant benefits to the consumer on a whole (e.g. cheaper prices & fresher produce).

2.1.2 Mission and vision statements

The mission and vision statements are always key in an organization as they seek to answer questions such as whom we are, what we value, where we are going and what we do. A mission statement is one which describes the primary objectives, goals and current state of the organization. It is short term and related to the vision statement, which will help in achieving in the future, that which the organization desires. Unlike the mission statement, the vision statement is long term and seeks to describe what an organization aspires to be in the future. It communicates the organization's purpose to stakeholders and employees, providing them with inspiration to ensure that it achieves its purpose.

Mission

The mission of the St. George's Farmers Market project is to establish a project management plant to construct a centralized facility, which seeks to provide a variety of high quality and organic products to the residents of Grenada as well as tourists. The aim is to also weave societal, commercial and educational activities. - Which will

make it a vital institution and not just an ordinary market. This way it will address the revitalization of economic activities around the market square in St. George's as well as within the town, to promote a sense of community.

Vision

Commit to designing and providing a facility where one can receive fresh, organic produce, which in return will contribute towards healthier communities.

2.1.3 Organizational structure

As the St. George's market continues to grow and evolve yearly, the Government of Grenada has been tasked with considering how best the organization can be structured regarding its governance, revenue collection and liability protection. The organizational structure is important because it addresses matters such as the method in which business decisions are made, the cost each vendor should rent a stall or to govern its daily operations ensuring that revenue is collected from the vendors and in return contributes towards the economic development of Grenada.

The market functions as a statutory body but the Government of Grenada is solely responsible for, and has a strong influence in the decision-making processes. The board of directors comprises of government representatives, influential stallholders, the permanent secretary, minister with responsibility for agriculture as well as community stakeholders. This diverse community group allows the market to be run effectively and at the same time provide opportunities for the stallholders and community members to voice their opinion or have a say on critical matters related to the market. Markets, which are community-led generally, tend to be more successful as farmers give priority to the locals and offer a wider range of produce to the residents. Last, but not least, having this community-led market structure will ensure that in case there may be any dispute between vendors, it can be brought forward to a balanced jury of members which allows for better conflict management and resolution.

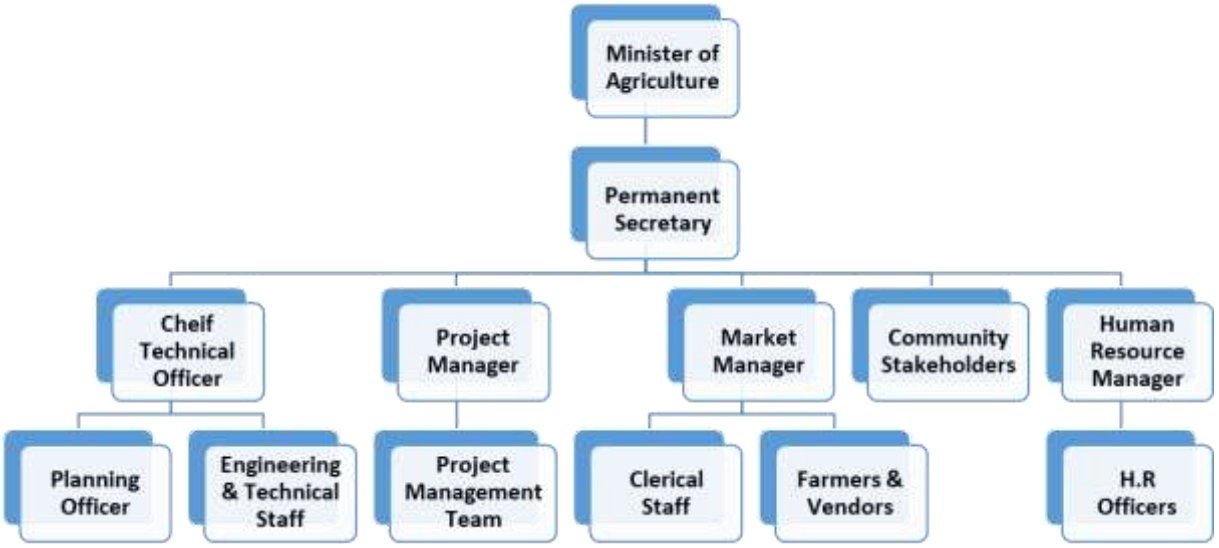


Figure 1 Organizational Structure of St. Georg's Market Committee

2.1.4 Products offered

Variety is always the spice in life and that is exactly what is to be offered at the St. George's market. Some of the products which is expected to be offered are:

- **Fruits**
- **Vegetables**
- **Crafts & Paintings**
- **Food & beverages**
- **Baked goods & treats**
- **Plants and so much more**

It will also feature a mini amphitheater where on specific days, musicians and other local talent can perform their renditions. While a farmer's market by definition includes produce, which come directly from the farm, the new structure will in essence, encourage a multipurpose facility, which can be used to facilitate a number of activities.

2.2 Project Management concepts

2.2.1 Project

The PMBOK® Guide defined a project as a temporary endeavor undertaken to create a unique product, service, or result (Project Management Institute, 2013, p.31).

2.2.2 Project management

The demand for better infrastructure and facilities around the world has dramatically increased over the years. The construction industry has a role in this development as it continues to evolve and contribute towards economic development of countries. The industry also provides better living conditions for the development and sustainability of life on earth. With an ever-growing population as well as an increase in economic activities, there is a constant demand for construction projects. These initiatives and projects need to be implemented to ensure that there is sustainable growth of the nation's economy, as well as create these linkages within the economy. To implement these projects successfully and to meet the functional aim of the projects within their service time, an efficient PM practice needs to be adopted from the planning stage to end (N A Haron et al 2017).

2.2.3 Project life cycle

A very important strategic decision a project management team should make in the early stages, is to determine which life cycle will be better suited for the project as it will need to be flexible enough to deal with a variety of factors, which might be included in the project. It is regarded as important because making the wrong choice can lead to disastrous results. Think of all the delayed deliveries, cost overruns, unhappy stakeholders and the list goes on.

According to the PMBOK, a project life cycle is the series of phases that a project passes through from its start to its completion. It provides the basic framework for managing the project and can be predictive (waterfall model) or adaptive (iterative model). In the early 80s, the most commonly used model was the waterfall model as it has been around for some time and proved to be successful. This however changed as companies started to shift towards more flexible life cycles due to the rapid pace in development, which they can bring to these organizations. These new models of project life cycle provided more support and flexibility to companies which contributed towards some companies delivering 'the first' in their respective industries though each have its advantages and disadvantages.

In the case of the St. George's Market, the project management team decided that it was best to adapt the iterative life cycle for the project as it allows for more flexibility when coming to accommodating new changes or requirements thereof. It also will provide enough room for improvements based on lessons learned from previous projects.

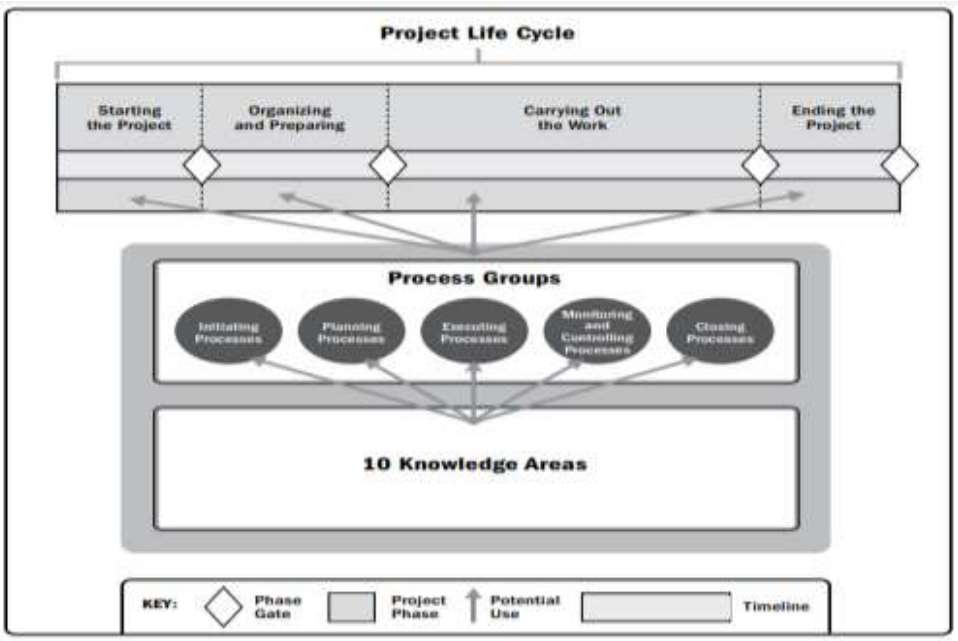


Figure 2 Project Life Cycle - PMBOK

2.2.4 Project management processes

Project management plays a critical role in every project and is known to connect all project processes and activities together. As there are many activities, which can be done in project management, the PMBOK Guide grouped those processes into five main groups. They are:

- **Initiating Process Group**
- **Planning Process Group**
- **Executing Process Group**
- **Monitoring & Controlling Process Group**
- **Closing Process Group**

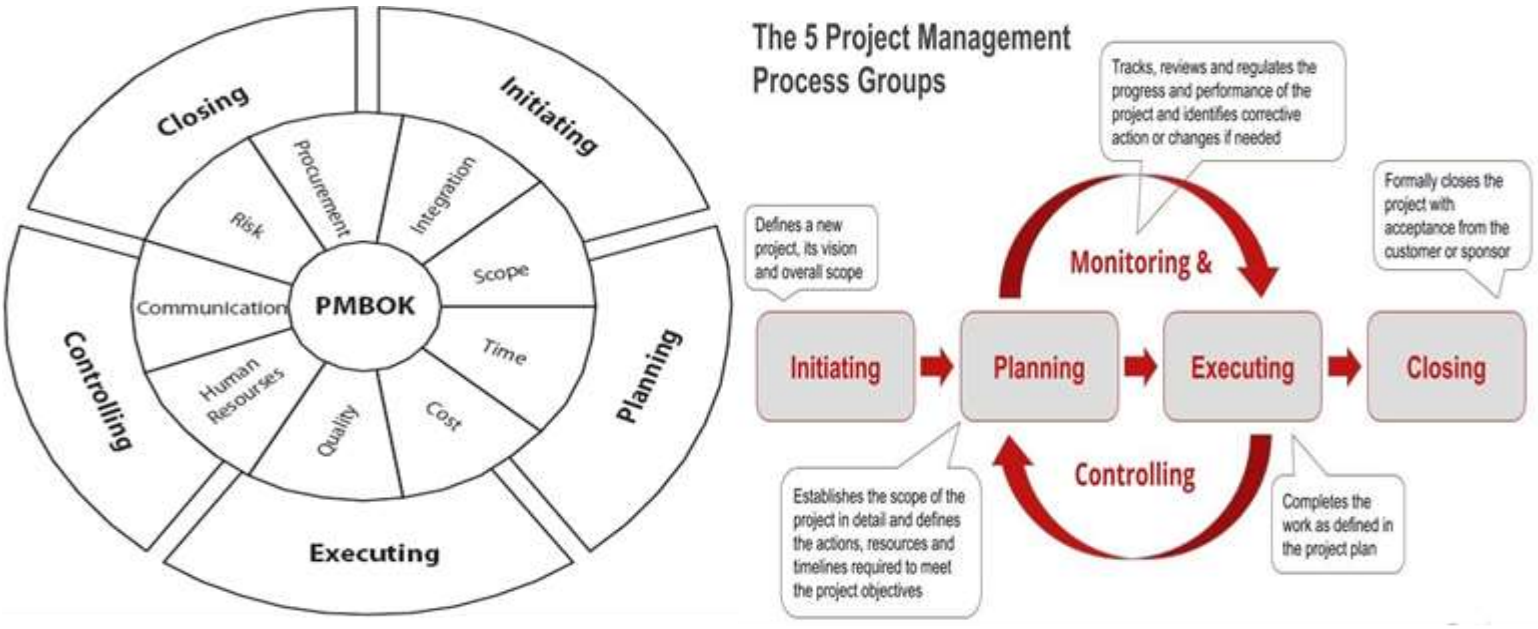


Figure 3 Process Groups with Knowledge Areas

2.2.5 Project management knowledge areas

The vast amount of project management tools, skills, knowledge and terms, which are within the discipline of project management, can surely be intimidating. The PMBOK Guide was created to help standardize and unify the many parts related to project management. The PMI divided this field into 10 digestible parts known today as the project management knowledge areas. These 10 knowledge areas coincide with the five process groups, which were previously mentioned which are initiating, planning, executing, monitoring & controlling as well as closing. It is also important to note that these knowledge areas can take place during any one of the process groups and that they are the core technical subject matter, which are necessary for effective project management.

According to the PMBOK, the 10 knowledge area are:

1. Initiation Management
2. Scope Management
3. Schedule Management
4. Cost Management
5. Quality Management
6. Human Resource Management
7. Communication Management
8. Risk Management
9. Procurement Management
10. Stakeholder Management

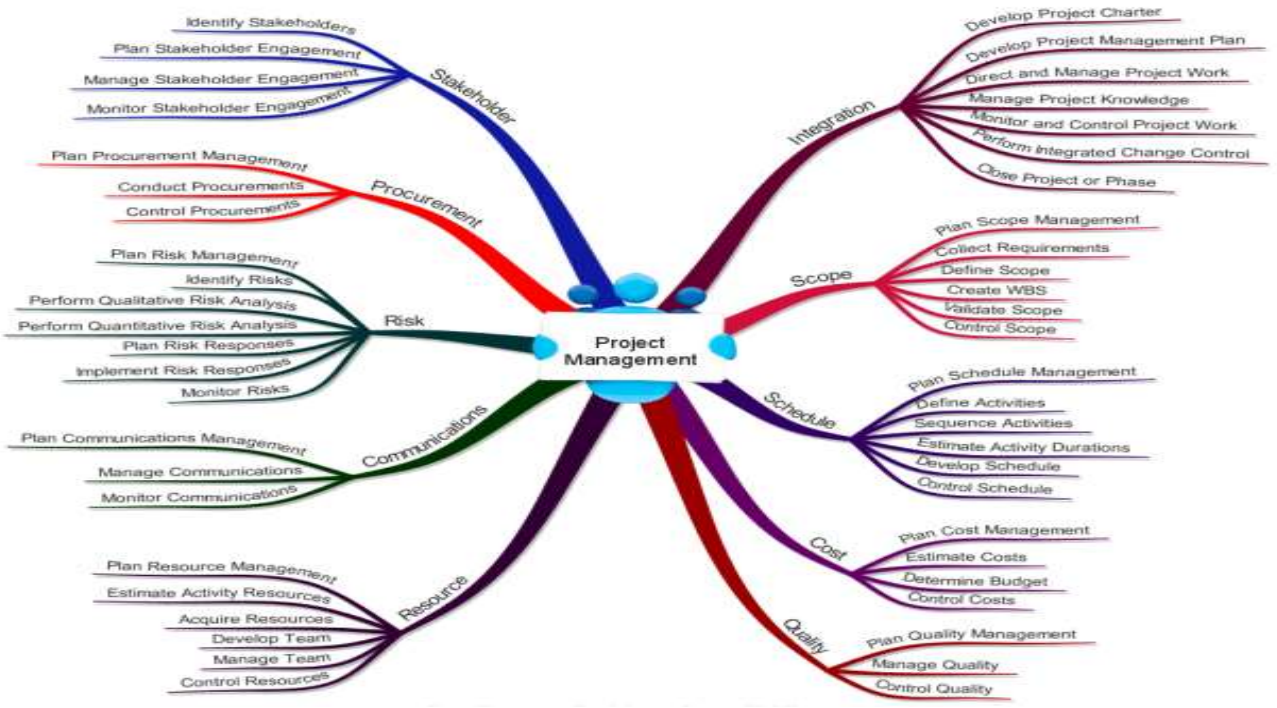


Figure 4 Project Management 10 Knowledge Areas

Based on the needs and technicalities of a project, it would be wise for the project management team to use more than one of the knowledge areas to assist in ensuring that the project receive a higher chance of success.

3 METHODOLOGICAL FRAMEWORK

3.1 Information sources

When undertaking research, it is important to gather evidence and information from a variety of sources. The two main sources of this research paper deal with primary and secondary sources. Gathering data can be accomplished through a primary source (researcher is the first person to obtain the data) or a secondary source (the researcher obtains the data that has already been collected by other sources, such as data disseminated in a scientific journal) (Mesly, 2015).

3.1.1 Primary sources

Primary sources are known to be the foundation of original research. It allows you to make new discoveries, provide credible information for arguments as well as ensure authoritative evidence is given about the topic being studied. If primary sources aren't utilized during a research, then it can be labelled as unreliable or unoriginal. They are usually long and time consuming. Statistical data, diaries, biographies, interviews, speeches, original documents etc. are all examples of primary sources.

3.1.2 Secondary sources

Secondary sources deal with materials that were taken from a primary source then analyzed, rephrased and interpreted. It is a source, which may try to persuade or argue a position (secondhand account). It is known to be a quicker and easier process than primary sources, as the required information is already readily available.

With secondary sources, you gain information of a topic, which can either contrast or support your argument with the ideas of another researcher. Secondary sources include websites, books, dissertations, newspapers, journal articles etc.

Primary sources are deemed more credible to use as evidence, but a good researcher uses both primary and secondary sources.

Chart 1 Information sources (Source: Compiled by author J. Victor)

Objectives	Information Sources	
	Primary	**Secondary**
1. **Scope Management –** To produce a scope management plan which seeks to ensure that objectives and scope of works for the project are successfully carried out.	Interview, Meeting, Statistical data, Communication via telephone, conference calls or email	PMBOK® Guide and PMI database, Previous meetings and projects, Websites, scholarly articles, Expert judgements
2. **Schedule Management –** To create a time management plan which will support the management of a project schedule to ensure that the project is completed within the stipulated time frame.	Interview, Meeting, Statistical data, Communication via telephone, conference calls or email	PMBOK® Guide and PMI database, Previous meetings and projects, Websites, scholarly articles, Expert judgements
3. **Cost Management –** To create a cost management plan for developing and managing of the overall costs to ensure that the project is completed without being over budget.	Interview, Meeting, Statistical data	PMBOK® Guide and PMI database, Previous meetings and projects, Websites, scholarly articles, Expert judgements
4. **Quality Management –** To develop a quality management plan which seeks to ensure that the results meet expectations and that the quality is of good standard.	Interview, Meeting, Statistical data, Communication via telephone, conference calls or email	PMBOK® Guide and PMI database, Previous meetings and projects, Websites, scholarly articles, Expert judgements
5. **Communication Management –** To develop a proper communication management plan to ensure that the	Interview, Meeting, Statistical data, Communication via	PMBOK® Guide and PMI database, Previous meetings and projects,

status of the project and other key information are transmitted in a timely and effective manner to the relevant persons involved in the project.	telephone, conference calls or email	Websites, scholarly articles, Expert judgements
6. **Risk Management –** To create a risk management plan which identifies risks and develop strategies to avoid or minimize the chances of the project running into risks.	Interview, Meeting, Statistical data, Communication via telephone, conference calls or email	PMBOK® Guide and PMI database, Previous meetings and projects, Websites, scholarly articles, Expert judgements
7. **Procurement Management –** To develop a procurement management plan for identifying and contracting suppliers who are able to provide the required services and goods which the project management team cannot.	Interview, Meeting, Statistical data, Communication via telephone, conference calls or email	PMBOK® Guide and PMI database, Previous meetings and projects, Websites, scholarly articles, Expert judgements
8. **Stakeholders Management –** To develop a Stakeholders management plan which seeks to identify key stakeholders, their interest level and how their influence might impact the project.	Interview, Meeting, Statistical data, Communication via telephone, conference calls or email	PMBOK® Guide and PMI database, Previous meetings and projects, Websites, scholarly articles, Expert judgements
9. **Integration Management –** To develop an integration management plan which will act as a road map to ensure that all the processes involved work together and reach a successful end.	Interview, Meeting, Statistical data, Communication via telephone, conference calls or email	PMBOK® Guide and PMI database, Previous meetings and projects, Websites, scholarly articles, Expert judgements
10. **Human Resource Management –** To create a human resource management plan which seeks to identify the most	Interview, Meeting, Statistical data, Communication via	PMBOK® Guide and PMI database, Previous meetings and projects,

qualified and best suited persons to perform important roles throughout the lifecycle of the project, as well as resolve any internal issues or conflicts once they arise.	telephone, conference calls or email	Websites, scholarly articles, Expert judgements

3.2 Research methods

Research when loosely translated means a search for knowledge. It is a systematic and scientific approach to obtain information about a selected topic. There are different kinds of research. These include essential, applied, descriptive, and analytical research (Amrhein, Trafimow, & Greenland, 2019). Focus will only be placed on the analytical method in this study.

Analytical method

Analytical research method matters as it requires critical thinking skills and facts need to be assessed carefully. For instance, people might use analytical research to find the missing link in a study (Valcárcel, 2017). It seeks to offer new ideas regarding the obtained data and helps to prove or disprove different hypotheses. It helps identify a claim and find out whether it is true or false (Omair, 2015).

Research

This section deals with the research approach and research strategy. In Ref. (M.L. Saunders & Thornhill, 2009) it is highlighted that the “research method is the techniques and procedures used to acquire and analyze research data including questionnaires, observations, interviews as well as statistical and non-statistical techniques”.

Research strategy

The author adopted applied research in this thesis. Numerous samples of previous research regarding project management plans were reviewed, and a new outlook would be applied to the St. George's Market project. Hence, this work took the form of a novel research. In an effort to attain the research objectives, a qualitative

research method was adopted due to its suitability in dealing with a small sample size, which makes it different from quantitative research. In addition, it offers a complete description and analysis of a research topic, without limiting the research scope and the participants' responses.

Research approach

The subject of this study is the St. George's Farmers Market in Grenada and the overall objective is to create a project management plan for the afore-mentioned project. Literature reviews, structured interview questions, site visits will be used in this study as the data gathering tools. This study is based on an independent field research.

Data collection methods

Literature reviews, structured interview questions and site visits will be used in this study as the data gathering tools.

Interviews

One advantage of carrying out interviews is that they deal with having direct contact between the person carrying out the interview and interviewee. The interviewer ensured that they had the necessary skill and "know how" before attempting to perform the interview. Structured questions were used as a guide during the interview. In order to satisfactorily meet the research objectives, additional questions will be asked relating to other market projects during the interviews. These questions will be prepared in order to guide the interviewer towards obtaining the desired results.

Data Analysis

When dealing with research projects, one must use the appropriate and most effective methods for data collection. The research period for this project started in May of 2021 and is expected to run up to October of 2021.

Chart 2 Research methods (Source: Compiled by author J. Victor)

Objectives	Research Method (Analytical) Interviews, Meetings, Data Collection
1. **Scope Management –** To produce a scope management plan which seeks to ensure that objectives and scope of works for the project are successfully carried out.	The analytical method will be used by using information from the sources identified in chart 1, objective 1 which will aid in the creation of a scope management plan.
2. **Schedule Management –** To create a time management plan which will support the management of a project schedule to ensure that the project is completed within the stipulated time frame.	The analytical method will be used by using information from the sources identified in chart 1, objective 2 which will aid in the creation of the schedule management plan.
3. **Cost Management –** To create a cost management plan for developing and managing of the overall costs to ensure that the project is completed without being over budget.	The analytical method will be used by using information from the sources identified in chart 1, objective 3 which will aid in the creation of the cost management plan.
4. **Quality Management –** To develop a quality management plan which seeks to ensure that the results meet expectations and that the quality is of good standard.	The analytical method will be used by using information from the sources identified in chart 1, objective 4 which will aid in the creation of the quality management plan.
5. **Communication Management –** To develop a proper communication management plan to ensure that the status of the project and other key information are transmitted in a timely and effective manner to the relevant persons involved in the project.	The analytical method will be used by using information from the sources identified in chart 1, objective 5 which will aid in the communication management plan.

6. **Risk Management –** To create a risk management plan which identifies risks and develop strategies to avoid or minimize the chances of the project running into risks.	The analytical method will be used by using information from the sources identified in chart 1, objective 6 which will aid the risk management plan.
7. **Procurement Management –** To develop a procurement management plan for identifying and contracting suppliers who are able to provide the required services and goods which the project management team cannot.	The analytical method will be used by using information from the sources identified in chart 1, objective 7 which will aid in the creation of a procurement management plan.
8. **Stakeholders Management –** To develop a stakeholders management plan which seeks to identify key stakeholders, their interest level and how their influence might impact the project.	The analytical method will be used by using information from the sources identified in chart 1, objective 8 which will aid in the creation of the stakeholders' management plan.
9. **Integration Management –** To develop an integration management plan which will act as a road map to ensure that all the processes involved work together and reaches a successful end.	The analytical method will be used by using information from the sources identified in chart 1, objective 9 which will aid in the development of the project charter.
10. **Human Resource Management –** To create a human resource management plan which seeks to identify the most qualified and best suited persons to perform important roles throughout the lifecycle of the project as well as resolve any internal issues or conflicts once they arise.	The analytical method will be used by using information from the sources identified in chart 1, objective 10 which will aid in the creation of the human resource management plan.

3.3 Tools

Tools are the items/ munition which project managers use to manage their projects or get their work organized, so that they may achieve a higher chance of success on completion of the project. The PMBOK® Guide (2013) defines tools as something

tangible, such as a template or software program, used in performing an activity to produce a product or result.

Chart 3 Tools (Source: Compiled by author J. Victor)

Objectives	Tools
1. **Scope Management –** To produce a scope management plan which seeks to ensure that objectives and scope of works for the project are successfully carried out.	WBS Collect Requirements Define Scope
2. **Schedule Management –** To create a time management plan which will support the management of a project schedule to ensure that the project is completed within the stipulated time frame.	Plan Schedule Management Define Activities Develop Schedule
3. **Cost Management –** To create a cost management plan for developing and managing of the overall costs to ensure that the project is completed without being over budget.	Plan Cost Management Estimate Cost Determine Budget Control Cost
4. **Quality Management –** To develop a quality management plan which seeks to ensure that the results meet expectations and that the quality is of good standard.	Plan Quality Management Manage Quality Control Quality
5. **Communication Management –** To develop a proper communication management plan to ensure that the status of the project and other key information are transmitted in a timely and effective manner to the relevant persons involved in the project.	Plan Communication Management Manage Communications Monitor Communications
6. **Risk Management –** To create a risk management plan which identifies risks and develop strategies to	Plan Risk Management Identify Risks

avoid or minimize the chances of the project running into risks.	Perform Risk Response
7. **Procurement Management –** To develop a procurement management plan for identifying and contracting suppliers who will provide the required services and goods which the project management team needs.	Plan Procurement Management Conduct Procurement Control Procurement
8. **Stakeholders Management –** To develop a Stakeholders management plan which seeks to identify key stakeholders, their interest level and how their influence might impact the project.	Plan Stakeholder Management Manage Stakeholder Engagement Monitor Stakeholder Engagement
9. **Integration Management –** To develop an integration management plan which will act as a road map to ensure that all the processes involved work together and reaches a successful end.	Develop Project Management Plan Develop Project Charter Manage Project Knowledge
10. **Human Resource Management –** To create a human resource management plan which seeks to identify the most qualified and best suited persons to perform important roles throughout the lifecycle of the project as well as resolve any internal issues or conflicts once they arise.	Plan Resource Management Estimate Activity Resource Develop Team Control Resources

3.4 Assumptions and constraints

A lot of projects these days start with limited accuracy and only a few with an adequate amount of certainty. The PMBOK® Guide states that every project and its project management plan are conceived and developed based on a set of assumptions and within a series of constraints. Some of the facts and issues are known at the beginning, but the rest must be estimated and that usually takes place during the planning phase of the project. In order for the project to achieve a higher

rate of success, analysts and project managers need to be mindful of constraints and assumptions while managing the project.

Assumptions

An assumption is something that is believed to be true based on our knowledge, experience and information provided by team members. In other words, they are anticipated issues or events which are expected to take place during the lifecycle of the project. It is part of the risk management process and if not analyzed or made properly, can affect the entirety of the project. If assumptions are verified wrong, then the project management plan will have to be changed to suit.

Constraints

Constraints on the other hand deals with anything which can limit or restrict the actions of the team during the project. Based on the PMBOK® Guide, the six constraints which are recognized as determining factors are Scope, Schedule (Time), Cost (Budget), resources, quality and risk. Out of the previously listed constraints, the first three are considered the triple constraints of project management.

Chart 4 Assumptions and constraints (Source: Compiled by author J. Victor)

Objectives	Assumptions	Constraints
1. **Scope Management – To produce a scope management plan which seeks to ensure that objectives and scope of works for the project are successfully carried out.**	Expert judgement will be readily available to assist with planning, executing and monitoring of the project.	• Time • Scope • Cost
2. **Schedule Management – To create a time management plan which will support the management of a project schedule to ensure that the project is completed within the stipulated time frame.**	• Expert judgement available throughout the life of the project • Project schedule will not be adjusted • Information and resources are readily available	• Time • Resources

3. Cost Management – To create a cost management plan for developing and managing of the overall costs to ensure that the project is completed without being over budget.	• Expert judgement available throughout the life of the project • Project budget will not be adjusted • Information and resources are readily available	• Time • Scope • Cost
4. Quality Management – To develop a quality management plan which seeks to ensure that the results meet expectations and that the quality is of good standard.	• Expert judgement available throughout the life of the project • Project quality will not be affected • Information and resources are readily available	• Time • Scope • Cost
5. Communication Management – To develop a proper communication management plan to ensure that the status of the project and other key information are transmitted in a timely and effective manner to the relevant persons involved in the project.	• Expert judgement available throughout the life of the project • Project communications plan will not be affected • Information and resources are readily available	• Time • Resources • Scope • Cost
6. Risk Management – To create a risk management plan which identifies risks and develops strategies to avoid or minimize the chances of the project running into risks.	• Expert judgement available throughout the life of the project • Project will not be affected by risks • Information and resources are readily available	• Time • Scope • Resources • Cost
7. Procurement Management – To develop a procurement management plan for identifying and contracting suppliers who are	• Expert judgement available throughout the life of the project • Project procurement plan will not be affected	• Time • Scope • Cost

able to provide the required services and goods which the project management team cannot.	• Information and resources are readily available	
8. Stakeholders Management – To develop a stakeholders management plan which seeks to identify key stakeholders, their interest level and how their influence might impact the project.	• Expert judgement available throughout the life of the project • Project stakeholders plan will not be affected • Information and resources are readily available	• Time • Scope • Resources • Cost
9. Integration Management – To develop an integration management plan which will act as a road map to ensure that all the processes involved work together and reaches a successful end.	• Expert judgement available throughout the life of the project • Project integration plan will not be affected • Information and resources are readily available	• Time • Scope • Cost
10. Human Resource Management – To create a human resource management plan which seeks to identify the most qualified and best suited persons to perform important roles throughout the lifecycle of the project, as well as resolve any internal issues or conflicts once they arise.	• Expert judgement available throughout the life of the project • Project quality will not be affected • Information and resources are readily available	• Time • Scope • Resources • Cost

3.5 Deliverables

The concept behind project deliverables is an essential concept in the field of project management. Defining, managing and tracking deliverables are important responsibilities of a project manager. A deliverable can be any result, service or product which must be finished in order for the project to be completed. The

PMBOK® Guide mentions that deliverables are an important output of Direct and Manage Project Execution in the Project Integration Management knowledge area.

Chart 5 Deliverables (Source: Compiled by author J. Victor)

Objectives	Deliverables
1. **Scope Management – To produce a scope management plan which seeks to ensure that objectives and scope of works for the project are successfully carried out.**	Scope Management Plan to give details as to how the project's scope will be defined in keeping with the project's objectives.
2. **Schedule Management – To create a time management plan which will support the management of a project schedule to ensure that the project is completed within the stipulated time frame.**	Schedule Management Plan to ensure that the project is completed within the stipulated timeframe.
3. **Cost Management – To create a cost management plan for developing and managing of the overall costs to ensure that the project is completed without being over budget.**	Cost Management Plan, Budget Allocation and Funding Requirements to ensure that the project is completed within budget and that there are no cost overruns.
4. **Quality Management – To develop a quality management plan which seeks to ensure that the results meet expectations and that the quality is of good standard.**	Quality Management Plan to ensure that a proper standard and quality control measures are put in place so that the expected quality is achieved.
5. **Communication Management – To develop a proper communication management plan to ensure that the status of the project and other key information are transmitted in a timely and effective manner to the relevant persons involved in the project.**	Communication Management Plan to ensure that proper communication channel are utilized throughout the project's life cycle.

6. **Risk Management – To create a risk management plan which identifies risks and develop strategies to avoid or minimize the chances of the project running into risks.**	Risk Register, Risk Management Plan to ensure that once a risk is encountered, the right measures will be taken to address it.
7. **Procurement Management – To develop a procurement management plan for identifying and contracting suppliers who are able to provide the required services and goods which the project management team cannot.**	Procurement Management Plan to ensure that the right services and equipment are sourced and procured so that the project won't have any setbacks.
8. **Stakeholders Management – To develop a stakeholders management plan which seeks to identify key stakeholders, their interest level and how their influence might impact the project.**	Stakeholder Register, Stakeholder Management Plan to ensure that the stakeholders are engaged and to determine their level of interest regarding the project.
9. **Integration Management – To develop an integration management plan which will act as a road map to ensure that all the processes involved work together and reaches a successful end.**	Project Charter
10. **Human Resource Management – To create a human resource management plan which seeks to identify the most qualified and best suited persons to perform important roles throughout the lifecycle of the project as well as resolve any internal issues or conflicts once they arise.**	Human Resource Management Plan

4 RESULTS

For the objectives of this study, a comprehensive questionnaire was developed by applying the lean project management methodology guidelines. This implies that we provide what is required, when it is required, with adequate amount of labour, materials and equipment. This was done by keeping in mind the 10 major objectives of this research. There were ten (10) questions altogether of which, each question was rated on a scale of one (1) – ten (10) with 1 being the least favorable and ten (10) being the maximum level to attain the best option.

A random selection of ten (10) area residents, mostly vendors and ten (10) consumers of the market supplies including senior officers were the target respondents to the questionnaire. Nevertheless, there were two (2) focus group discussions (FGDs) and meetings with both the farmers and the buyers to obtain firsthand feedback based on the objectives of this study. There was an average of twenty-five (25) buyers, ten (10) vendors, and 5 Farmers in each of the FGD and meetings. Based on the feedback received from both FGDs and the distributed questionnaires and other existing secondary data, a comprehensive review was conducted and a detailed analysis of the responses carried out. The following results were obtained:

4.1. Integration Management

As per the Project Management Institute, ‘‘The Project Integration Management Knowledge Area entails the activities as well as processes required to identify, combine, define, unify, & coordinate different activities & processes of project management within the Project Process Groups’’. (Project Management Institute, 2013) Processes that are critical to this knowledge field are: Monitor and Control Project Work, Develop Project Management Plan, Develop Project Charter, Direct and Manage Project Work, Conduct Integrated Change Control, and Close Project or Phase. Of these processes this research will focus on the development of the Project Charter.

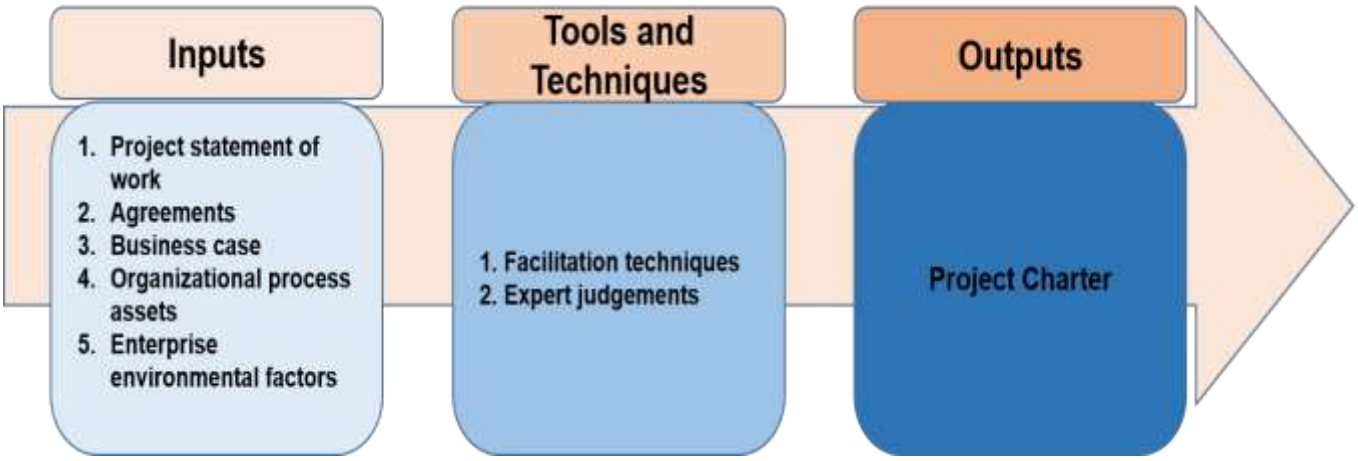


Figure 5 Inputs, Tools and Techniques to the Project Charter (Source: PMI 2013)

4.1.1 Develop Project Charter

As described in Project Management Institute, "Develop Project Charter is the process of developing a document that "formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities." (Project Management Institute, 2013, (p.66). Figure 10 illustrates the Project Charter which is the output of using different tools & approaches to incorporate inputs.

Chart 6 Project Charter for Market Project (Source: J. Victor)

PROJECT CHARTER	
Date:	**Project Name:**
4th January, 2021	Project Management Plan for the Construction of St. George's Market
Application Area (Sector / Activity):	
Construction	
Project Start Date:	**Project Finish date:**
5th January, 2021	26th October, 2021
Project Objectives:	

General Objective:

The general objective is to formulate a project management plan based on the standards of the Project Management Institute for managing and constructing Building #3 at the St. George's Market.

Specific Objectives:

1. To create a Project Management Plan for the construction of the St. George's Market and apply the right project management practices and principles based on the PMI.
2. To ensure that objectives and scope of works for the project are successfully carried out and that the project is completed on schedule and on budget.
3. To ensure that the results meet expectations and that the quality is of good standard whenever the project is completed.
4. To develop a proper communication method to ensure that the status of the project and other key information are transmitted in a timely and effective manner to the relevant persons involved in the project.
5. To create a risk management plan which identifies risks and develop strategies to avoid or minimize the chances of the project running into risks.
6. To identify key stakeholders, their interest level and how their influence might impact the project. To ensure that the right set of people are chosen to undertake the project.
7. To develop an integration plan which will act as a road map to ensure that all the processes involved work together and reaches a successful end.

Project purpose or justification (merit and expected results):

The St. George's Market is Grenada's largest market which has the highest transaction volume for agricultural products in the country. Although having an iconic status, the market is known for selling unique herbs and spices, organic and freshly produced fruits and vegetable. Renovating the entire structure has always been on the agenda of the Government of Grenada but could not be materialized, as the market was always occupied by vendors.

As the world is experiencing the COVID-19 pandemic, the government decided to seize the opportunity and conduct an all-out restoration of the existing two worn-out structures and commence the construction of a third structure which will house the vegetable and fruit market. In the future, this will be labelled Building #3. In addition to undertaking this project, it seeks to improve three functions: food hygiene management and logistics. Ultimately, the project seeks to create a better environment for both locals and tourists to conduct business with vendors/farmers.

The benefits of the project entail:

1. Improved structural integrity as well as the aesthetics of the market.
2. Enhanced customer experience for both locals and tourists.
3. Improved efficiency and operations by upgrading the existing structure
4. Promotion of the use of green energy by installing a solar system and LED lights; and other energy saving equipment throughout the facility; before the project completion.
5. Improve overall sanitation and hygiene by upgrading of the facility and its surroundings.

Description of Product or Service to be generated by the Project – Project final deliverables:

When the project is completed, it is expected to have several benefits to the Grenadian people such as employment, enhanced vending environment and enhanced esthetics of the town.

Assumptions:

Assumptions of the project are:
1. Sufficient resources allocated for the Project
2. Adequate Budget
3. All the required stakeholders are onboard
4. Contractor will have adequate skills to get the job done properly
5. Expert judgement is readily available

Constraints:

Constraints of the project comprises of:
1. Timeline for construction is not enough
2. Limited staff
3. Inadequate resources
4. Poorly designed plan

Preliminary Risks:

Risks the project might encounter are:
1. Poorly defined scores
2. Natural disasters
3. Unexpected increases for material costs
4. Safety hazards

Budget:

The overall cost for completing the project is USD $1,809,810.00

Activity	Cost
Preliminaries	**$197,500.00**
Renovation of Building #1	**$230,950.00**
Renovation of Building #2	**$109,725.00**
Construction of Building #3	**$970,000.00**
Contingency 20%	**$301,635.00**

Milestones and dates:

Milestone	Duration	Start date	End date
Planning & Design	13 Days	9th November, 2020	25th November, 2020
Bidding & Awarding of Contract	20 Days	27th November, 2020	24th December, 2020
Start of Construction	1 Day	5th January, 2021	5th January, 2021
Excavation & Foundation	32 Days	6th January, 2021	18th February, 2021
Concrete Works	117 Days	1st March, 2021	10th August, 2021
Plumbing & Electrical	42 Days	15th June, 2021	11th August, 2021

Roofing	29 Days	30th August, 2021	7th October, 2021
Final Inspections	11 Days	4th October, 2021	18th October, 2021
Project Closure	3 Days	22nd October, 2021	26th October, 2021

Relevant historical information:
Looking back, we can see that farmers markets were not only important for economic success, but also social interaction as it was often the only means for rural and urban community members to meet. This was the case in Grenada decades ago and still continues to this day. The St. George's market has always been a pillar contributing toward the economic growth and development of Grenada. Activities such as the selling of slaves back then to the now selling of fruits, vegetables, spices, herbs and other items are all proof showing that the market has come a long way. It has been a while since the structure has been renovated and as the COVID-19 virus is rampant all over the world, the government of Grenada decided to conduct renovation works on the buildings as well as construct a building dedicated solely to selling fruits and vegetables.
Stakeholders:
Direct stakeholders: Government of Grenada Ministry of Infrastructure Development Project Management Team Market Vendors Association **Indirect stakeholders:** Vendors Customers
Approval:

Project Manager: **Josh Victor**	**Signature:** X Josh Victor Josh Victor

4.1.1 Develop Project Management Plan

This part will bring all aspects related to the planning phase together into one single document known to be the master plan of the project. It will help to determine the deliverables of the project, estimated timelines, milestones, and other measurable solutions for evaluating the success. The project manager will divide activities into smaller packages or WBS so that it will be more manageable and easier to track its progress. It will become an essential reference for risk assessments and decision making, when it comes to organizing and controlling the project. In the planning phase it will also draw attention to developing a comprehensive resource plan so that all resource needs will be obtained in advance. Allocation will also be made to hire the right skill set to get the job done which will eliminate any cost overruns.

Project goals, budget, scope, risks, change management plans etc. will also be conducted during this process.

4.1.2 Direct and Manage the Project

In the integration process it seeks to ensure that there is a balance in the areas of the project involving cost, risk, procurement, scope, human resource management etc. as these processes are all interconnected. It also involves the management of resources, creating any changes wherever necessary and executing the work based on the specifications provided. To prevent the chances of scope creep during the project, proper communication management channels will be enforced by all departments involved in the project as well as the need for them to be transparent in their operations. The scope of works will be used as a guidepost to ensure that the intent of the project is achieved. Performance reviews will also be carried out by the team during the lifespan of the project, to make any necessary changes and just to monitor whether or not the project is on track. The project will be managed and supervised diligently to ensure that with the project management plan, there is compliance. The project manager will constantly conduct earned value analysis to ensure that the project is not over budget and not behind schedule. By keeping those aligned and monitored with the project charter will only ensure that the project is progressing smoothly.

4.1.3 Perform Integrated Change Control

At some point in the project, there might have the need to make adjustments and changes to the original scope of work. This can be a stressful and difficult process for managers. The primary goals of the project won't be jeopardized as only the corrective measures will be taken to prevent the project from encountering a risk or any unforeseen circumstances. The change management plan will be done by the change request committee as previously mentioned. Any of the change requests will be submitted and documented through an official process to avoid any ad-hoc changes or scope creeping. Once the committee has evaluated the request, a decision will then be determined to outline the next possible steps or if to implement the change.

4.1.4 Closure Phase

This is where the project is closed as it will be completed or nearing completion. It will involve reviewing various aspects of the project, successes, issues and also documenting the findings so that it can be used as lessons learned for future projects. A rating system to rate the execution and management of the project will also be carried out by the members in a postmortem project review meeting.

4.2. Scope Management Plan

4.2.1 Project Requirements

Requirements for the construction of St. George's market are determined, documented and used as a basis for ensuring that all the stakeholder requirements are fully met. At the time this research was conducted, the full requirements were partially known. This was because of a delay in the architectural drawings or blue print, since the Grenada government regulations required an adjustment in the project design. Nevertheless, preliminary information from the stakeholders FGDs proved to provide a better insight into the initial extent and the scope of the project.

4.2.2 Scope Definition

The scope definition is a detailed description of the project. Below is a description of the initial scope definition provided by the stakeholders. The dates and the scope need revision because the planning authority recommended a new design to be produced. This prevented additional planning.

The initial scope is as follows:

- Proposed location for the construction of St. George's Market
- The Government of Grenada presently owns land at the St. George's Market Development site
- Budget for project is **USD $1,809,810.00**
- Description of the project (building size, facilities)

- Size – 20,000 ft^2
- Facilities – fresh and organic vegetable and fruits stalls, eggs, handicraft stalls, grains and spices section stalls, restaurants, clothing and household goods, storage sheds, administration offices/ section, public and staff toilets.

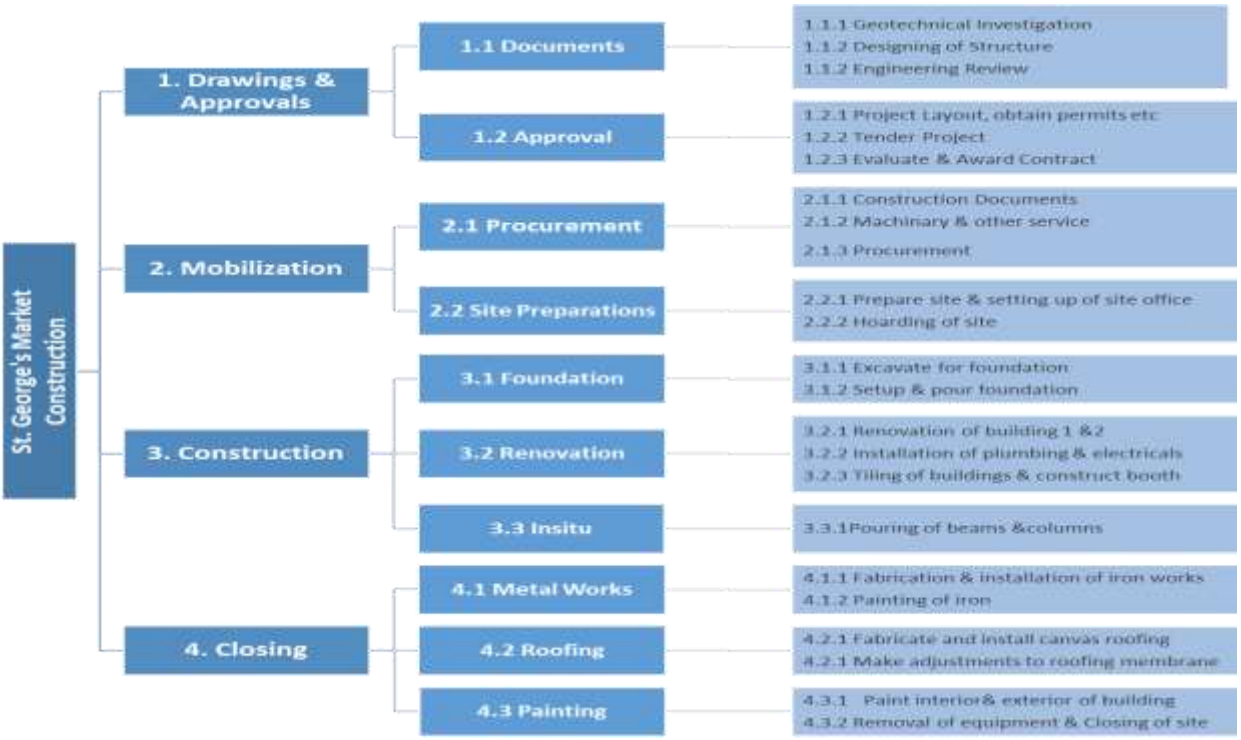
- Start Date – January 5th 2021
- Duration of Construction – January 5th 2021 – 26th October 2021

The construction / building plan will be designed by the Ministry of Infrastructure Development and plan will be approved by the local building board Physical Planning Development of Grenada). The project will be supervised jointly by the Ministry of Health, Ministry of Tourism and Ministry of Infrastructure Development.

The facility will be constructed by a qualified main contractor and sub-contractors will be contracted where applicable.

- Main Contractor – Mr. Ryan Murrell
- Qualifications – Experienced contractor with good construction and project management skills. Under his supervision will appoint individuals with the following competencies including plumbing, iron fabricating, welding works, carpentry, masonry and electrical works.
- Sub-Contractors:
  - Bobby Iron Works (Fabricator)
  - George Wilkinson (Welder)
  - Sunshine Solutions (Roofing)
  - Neville Matthew (Masonry)

Figure 6 shows the WBS of the market project (Source: Compiled by author J. Victor)



4.3. Schedule Management

As the project management profession improves every year, there are some tools, techniques and technological platforms which are designed to assist with efficiencies in the scheduling process of the project. The team decided to put those practices into perspective for the market project. The following are the benefits the team believes would be gained from the employment of specific techniques and software in the scheduling process, of the St. George's Market project:

1. It decreases on the number of mistakes which reduces project problems or risks.

2. Also, the repetition of tasks and duties will be reduced. The team will also be able to track milestones and other key metrics more easily.

3. There will be increased efficiency.

4. Also, improved transparency and accountability will be realized.

5. The team will be better equipped to handle any change request or adjustment to the scope of the project.

The St. George's construction project schedule was developed using MS Project with the deliverables identified in the construction project's work breakdown structure. The project milestones list which was developed in the project charter, clearly identifies the specific task packages which must be conducted to successfully complete each of the identified deliverables and the allotted completion duration for each of the identified tasks. The task sequencing applied in this research, highlights the order of work packages and identified relationships between project tasks.

Activity List

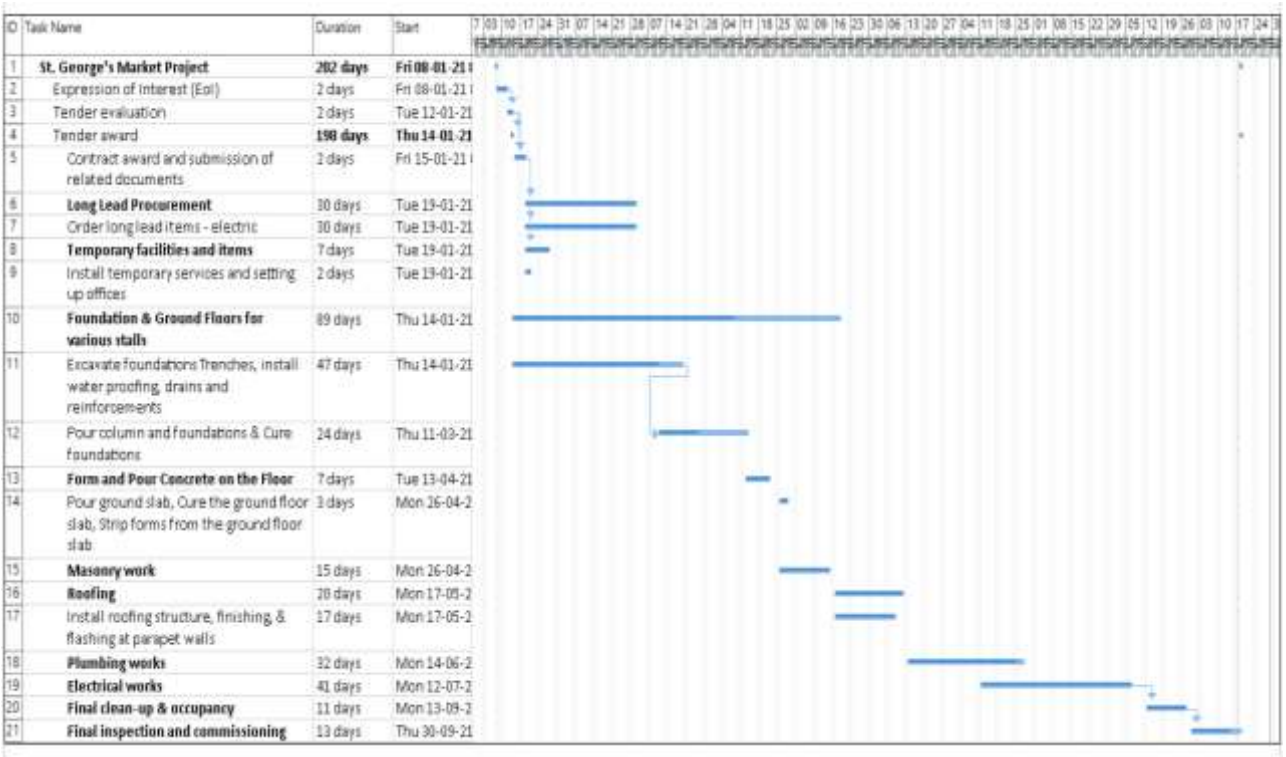
Table 0.1 Activity List (Source: Compiled by J. Victor)

CONSTRUCTION OF ST. GEORGE'S MARKET		
ID	Activity-L 2	Activity-L3
1	**Preliminary stages**	1.1 Tender advertisement in newspapers and government websites 1.2 Expression of Interest (EoI) 1.3 Tender evaluation of interested parties 1.4 Tender award 1.5 Contractor awarded the contract receive notice to proceed and sign contract 1.7 Submit insurance, bond and other related documents 1.8 Prepare and submit project schedule 1.9 Prepare and submit schedule of cost 1.10 Obtain building and other legal permits 1.11 Submit monthly requests for payment
2	**Long Lead Procurement**	2.1 Order long lead items - Roofing 2.2 Order long lead items – Seating & tables

		2.3 Order long lead items - plumbing 2.4 Order long lead items - electric
3	**Temporary facilities and items**	3.1 Install temporary services 3.2 Set up site office 3.3 Prepare site - prepare site & temporary fencing 3.4 Clear and grub site 3.5 Provide access and temporary parking area 3.6. Install drainage 3.7 Erect building batter boards and layout building
4	**Foundation & Ground Floors for various stalls**	4.1 Excavate for foundation 4.2 Install waterproofing, Drains 4.3 Pour column and foundations 4.4 Strip column and foundation forms
5	**Floor walls and Openings for the stalls**	5.1 Erect rebar's for block work 5.2 Fabricate rebars for columns and beam 5.3 Form and pour Columns & beams 5.4 Strip forms from Column & Beams
6	**Form and Pour Concrete on the Floor**	6.1 Formwork for flooring 6.2 Install electrical underground 6.3 Install plumbing underground 6.4 Install rebar and in-floor utilities 6.5 Pour flooring slab 6.6 Strip formwork from floor slab
7	**Masonry work**	7.1 Construct Manholes, connect to city sewer line and waste chambers 7.2 Lay and clean tiles in Bathrooms and Kitchen
8	**Roofing**	8.1 Install roofing structure, finishing, & flashing at parapet walls 8.2 Install roof drains & guttering
9	**Doors and Windows installation**	9.1 Plastering of walls

		9.2 Paint walls and metal framing 9.3 Install windows 9.4 Install Cabinets in Kitchen and bathroom area 9.5 Epoxy counter tops and flooring
10	**Plumbing works**	10.1 Rough-in plumbing in block walls 10.2 Sitting of external Waste pipes 10.3 Set plumbing fixtures and trim 10.4 Flush, test, & clean piping and fixtures
11	**Electrical works**	11.1 Rough-in electrical in a prepared masonry walls 11.2 Pull wire in conduit and set area transformers 11.3 Install and terminate electrical devices 11.4 Install light fixtures - test and clean
12	**Final Clean-up & Occupancy**	12.1 Install non-slip Ceramic tiles in designated areas 12.2 Remove debris from building 12.3 Do final clean-up
13	**Final Inspection and Commissioning**	13.1 Complete checklist of items from all inspections 13.2 Issue final completion documents 13.3 Hand-over to stakeholder 13.4 Project Closure & opening of market facility

Precedence diagramming techniques were used to construct these sequencing links. The PMBOK Guide documents four sequencing relationships applied were: finish-start, finish-finish, start-start & start-finish. The linkages utilized for this construction project is finish-start which implied that a successor relationship cannot start a task unless a predecessor task has finished. A successor activity is a dependent activity that comes after another in the Schedule while a predecessor activity is a logical activity that comes before a dependent activity in a project (PMBOK Guide Fifth Edition, 2013). The Project Manager and project team are tasked to complete the defined responsibilities in the schedule for the constructing of the St. George's market.



ID	Task Name	Duration	Start
1	**St. George's Market Project**	**202 days**	**Fri 08-01-21**
2	Expression of Interest (EoI)	2 days	Fri 08-01-21
3	Tender evaluation	2 days	Tue 12-01-21
4	Tender award	**198 days**	**Thu 14-01-21**
5	Contract award and submission of related documents	2 days	Fri 15-01-21
6	**Long Lead Procurement**	30 days	Tue 19-01-21
7	Order long lead items - electric	30 days	Tue 19-01-21
8	**Temporary facilities and items**	7 days	Tue 19-01-21
9	Install temporary services and setting up offices	2 days	Tue 19-01-21
10	**Foundation & Ground Floors for various stalls**	89 days	Thu 14-01-21
11	Excavate foundations Trenches, install water proofing, drains and reinforcements	47 days	Thu 14-01-21
12	Pour column and foundations & Cure foundations	24 days	Thu 11-03-21
13	**Form and Pour Concrete on the Floor**	7 days	Tue 13-04-21
14	Pour ground slab, Cure the ground floor slab, Strip forms from the ground floor slab	3 days	Mon 26-04-2
15	**Masonry work**	15 days	Mon 26-04-2
16	**Roofing**	20 days	Mon 17-05-2
17	Install roofing structure, finishing, & flashing at parapet walls	17 days	Mon 17-05-2
18	**Plumbing works**	32 days	Mon 14-06-2
19	**Electrical works**	41 days	Mon 12-07-2
20	**Final clean-up & occupancy**	11 days	Mon 13-09-2
21	**Final inspection and commissioning**	13 days	Thu 30-09-21

Figure 7 shows the complete schedule of the market (Source: Compiled by J. Victor)

4.3.1 Choosing the Right Scheduling tool for the St. George's Market Project

As much as we might try to stay organized, one of the biggest challenges of a project is keeping on track as it relates to the scheduling process. For the market project, there are hundreds of details which must be tracked to ensure that the deliverables are completed on time. Ensuring that the correct scheduling method is chosen, can make a huge difference between making sure the project is completed within budget and meeting the specified deadline, and its failure to do so.

As mentioned by the PMBOK Guide, "each project is unique" and all that's required is finding the right fit and combination of tools to get the job done. The team is of the opinion that by having the right amount of knowledge about those tools and techniques, will surely make a difference in the productivity, efficiency and ability of the team members to move from being just good enough, to being great.

The main tool the team has selected to assist with ensuring that the project remains on schedule is a Gantt Chart. This type of bar chart will encourage the stakeholders to properly structure the project with some levels of details, milestones as well as consider the dependencies between tasks. This will ensure that a better estimate in terms of the duration of the project is done, as well as identifying the critical path which the team should take during the construction phase of the project. Another reason for using this tool in the scheduling process is its excellence when creating a hierarchy amongst activities showing which are the ones that requires immediate attention, or which should be completed before others can follow. The project manager and team will be responsible for any change requests or changes to the schedule once, approval is given from the change request committee. Below is the schedule for the St. George's Market.

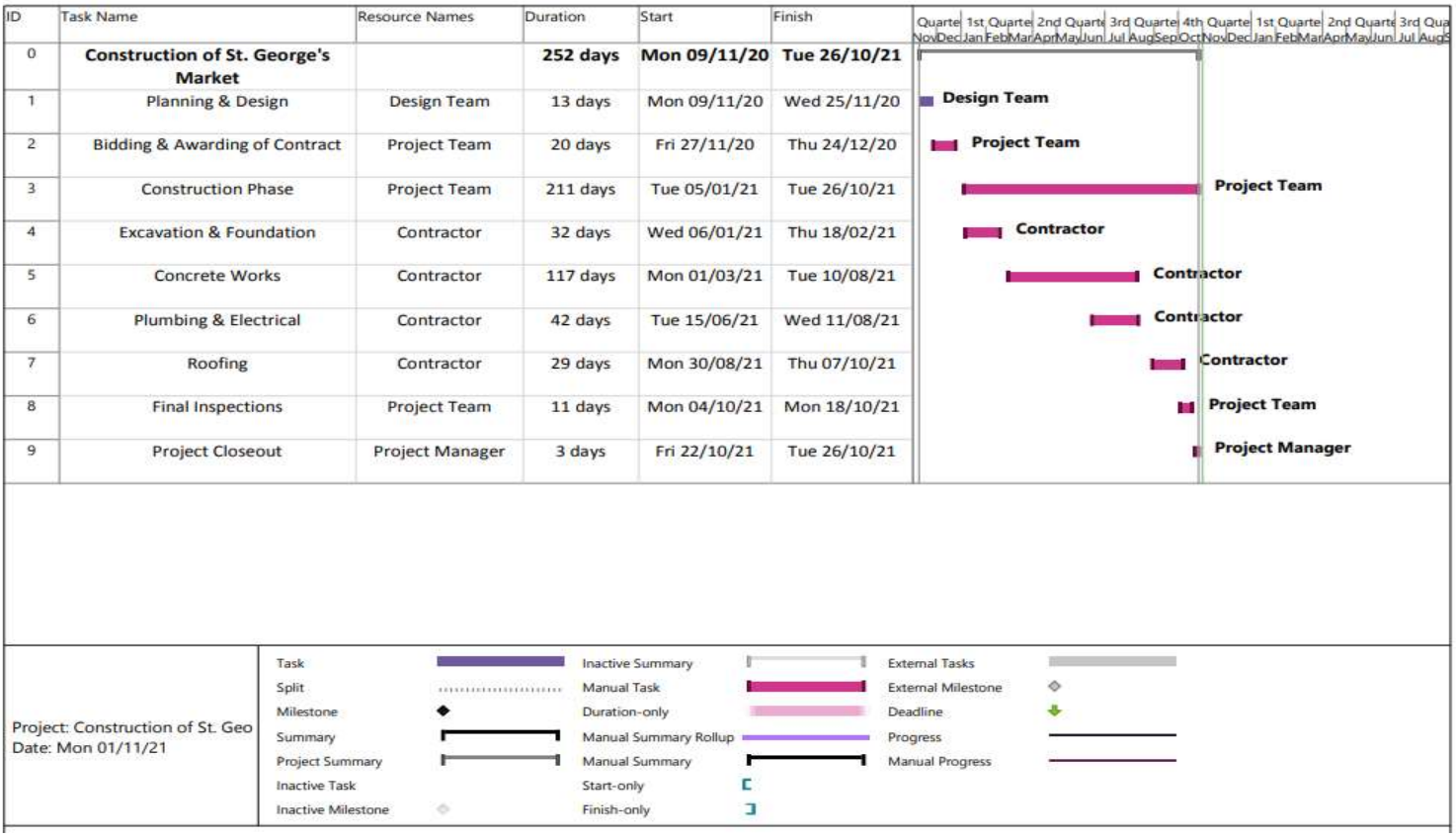


Figure 8 shows the timeline for different activities during construction period (Source: Compiled by J. Victor)

4.3.2 Pros of using Gantt Charts for the project:

1. Creates accurate picture of the project's complexity

2. Helpful in organizing thoughts

3. Indicates what should be done within realistic time frames

4. Easy to develop

4.3.3 Cons of using Gantt Charts for the project:

1. A requirement is the constant updates which can be time consuming process.

2. It tends to be inaccurate in displaying relevant information and a reflection of actual resource requirements.

3. It tends to get complicated when there are many activities.

4.3.4 Project Scheduling Methods for the St. George's Market Project

The schedule of the project is a very important aspect of the market project as it demonstrates professionalism when it comes to managing and planning. Below are four common construction scheduling measures which the team put in place to improve the project's success and efficiency rate, as it relates to the scheduling process:

1. Accurate project estimates: it is important to be as accurate as possible when coming to the project deadline during the construction phase. This process will be done based on expert judgment which comprises of quantity surveyors, engineers, architects, contractors etc. If any of the parties or activities seem unrealistic about the budget or timing then it will be red flagged, as this will indicate that the project might be headed to an overrun. Realistic planning and estimation will help in avoiding any scheduling problems down the road.

2. Preparing for the Worst: Once a project is started, there are many factors on the job site, which you simply cannot control. This is why this role is secured for members

who are overly cautious as they're always prepared for whenever anything happens. The team will have a plan in place for the worst case scenarios, including allocation of additional funds, buffer time to handle any unknown issues which are most likely to have an impact on the project. These include natural and man-made disasters.

3. Properly Defined Dependencies: In a complex project such as the St. George's Market project, it is easy to overlook mistakes. To avoid any such delays in the project, the multiple team members involved in the project to ensure that all dependencies are in their proper, logical manner will check schedules constantly. If not defined properly, dependencies, which are missing, can lead to more than just the project overshooting deadlines. You could have difficulties arguing when there might be a litigation, lawsuit or arbitration.

4. Proper Resource Allocation: When the schedule is created, a realistic sense of what is available will be given so that there would not be any issues or shortages experienced during the project. An adequate number of resources will be available during the lifespan of the project whether it be budget, time, manpower or materials. Delays and problems occur often when there is the assumption that adequate resources are at their disposal when truly that is not the case.

4.4. Cost Management

Construction projects at times are notorious for going over the approved budget whether it be poor planning, estimating or unforeseen challenges. No project is perfect. Projects from time to time encounter some bumps down the road and the allocated financial resources might need to be adjust. This is where cost management comes in. The main goal of cost management is to remove any unnecessary costs associated with the project, without compromising the deliverables. This control process should commence from the start of the project and

not left until the end. It involves planning, estimating, and financing, budgeting, funding, controlling and managing the costs, so that the project will be completed within budget. Below is a summary of the project displaying a breakdown of the budget. A more detailed summary of the project will be displayed at the end of the cost management knowledge process group. The project manager and the finance manager will carry out the cost management for the project. Any changes to the project will first be brought to the PM, who then will present to the change request committee. Whenever a decision has been made, it will be implemented by the PM once feasible.

Item	Description	Unit Cost
	Summary of Project	
1	**Preliminaries**	**$197,500.00**
2	**Renovation of Building #1**	**$230,950.00**
3	**Renovation of Building #2**	**$109,725.00**
4	**Construction of Building #3**	**$970,000.00**
5	**Contingency 20%**	**$301,635.00**
	Grand Total	**$1,809,810.00**

Figure 9 shows the budget of the project (Source: Compiled by J. Victor)

Cost Management should be a continuous process which requires constant monitoring to ensure that the budget of the project is maintained. It also aids in identifying discrepancies so that timely action can be taken which will prevent cost overruns. Managing the budget of the project will only improve its operational efficiency and reduce cost significantly.

4.4.1. Plan Cost Management - This process will establish the procedures, framework or policies for planning, controlling, expending and managing costs related to the project. The key benefit is that it seeks to provide direction and guidance on how costs will be managed, from the initiation of the project through to the closure.

One feature which will be incorporated into the plan is to do a proper value analysis. This involves finding a less costly way to get the same activity done. It also involves identifying the required project functions, getting values assigned to those functions,

as well as providing these functions at a lower cost without compromising the quality and performance of the overall project.

4.4.2. Estimate Costs - The process involves estimating the financial resources needed for completing the project objectives and activities and assigning a monetary value to each project activity. The benefit of this process is that it will provide crucial information such as the estimated amount of money which is required to complete the project, variable costs (materials, labour), fixed costs (equipment, rent, etc.) as well as direct costs (wages of workers, cost of materials etc.) and indirect costs (taxes, fringe benefits etc.).

The estimate will be done based on the schedule of the project in order to see which jobs / activities will require little financial resources and which will require more. The type of estimation which the team saw fit and practical to use for the market project is both Analogous Estimating as well as Parametric Estimating. Analogous was selected because it uses similar historical project data costs to determine current activity costs. It relies heavily on expert judgment. Parametric estimating was also employed because it uses mathematical calculations to determine activity costs which generally can be more accurate. For example, it will cost $100 to have 20m of electrical wires installed at a unit price of $5, therefore it would cost $1,000 to have 200m installed.

4.4.3. Determine Budget - Some projects go over budget due to poor planning, unexpected challenges and improper use of construction technology. For that reason, the project management team believes that it is essential to understand budgeting principles so that the project will be operated within its established budget. Construction best practices dictates that the project's budget should be determined as early as possible. Better cost estimates and budget management will be the main priority of the team responsible for the market construction project when coming up with a budget. The project manager and team will be responsible for monitoring and controlling the project, as well as ensuring that it is executed within budget. If the budget is not properly done, it can result in poor quality building output which will only lead to escalations with the client.

The s-curved graph is used to evaluate the performance and the progress in which the project is going. This is attained through Earned Value Management. A few factors which were evaluated in the process of finding out the current status of the project and the future forecasts about the project were the initial estimate and contingency reserve of 20%. All these factors were compiled using an s-curve graph to generate results.

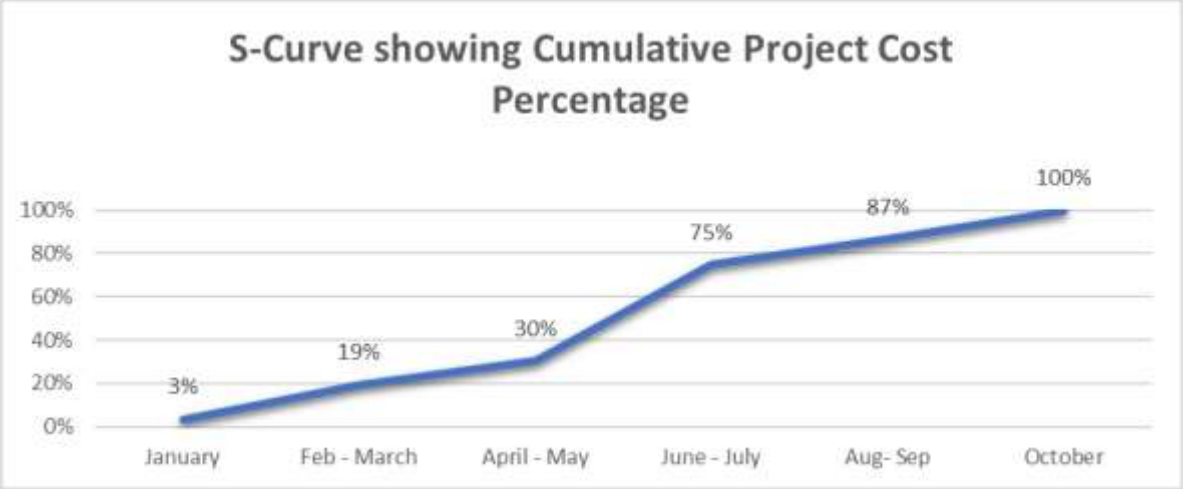


Figure 10 illustrates a cumulative project cost percentage for the St. George's Market Project Budget (Source: Compiled by J. Victor)

4.4.4. Contingency Reserve Plan

Based on the magnitude and technicalities of the project, the consultants and team members decided that 20% of the overall cost to construct the St. George's Market will be allocated from the budget, for any unforeseen circumstances. This will take care of any cost- related hiccups.

A team of engineers, architects and quantity surveyors will carry out the estimation for the project. Analogous estimating is used as it is a useful in producing estimates even when limited information is available. Another reason for choosing this method of estimation is because it does not require many resources and the budget of the project can be developed in a short space of time. In case of any emergency, a contingency reserve plan of USD $50,000.00 will be allocated towards the project upon the request of the project manager.

Item	Description	Unit Cost
1	**Preliminaries**	
a	Site Management	$70,000.00
b	Site Accommodation	$15,000.00
c	Concrete Testing	$10,500.00
d	Demolition	$32,000.00
e	Rubbish Removal	$40,000.00
f	Hoarding of Site	$30,000.00
g	Survey & Design	MOIID
Total to Collection		**$197,500.00**
Item	**Description**	**Unit Cost**
2	**Renovation of Building #1**	
a	Tiling	$75,000.00
b	Interior & Exterior Painting	$85,950.00
c	Construction of new booths & Stalls	$45,000.00
d	Plumbing & Electricals	$15,000.00
e	Other Furnishings	$10,000.00
Total to Collection		**$230,950.00**
Item	**Description**	**Unit Cost**
3	**Renovation of Building #2**	
a	Tiling	$35,000.00
b	Interior & Exterior Painting	$42,725.00
c	Construction of new booths & Stalls	$20,000.00
d	Plumbing & Electricals	$7,000.00
e	Other Furnishings	$5,000.00
Total to Collection		**$109,725.00**
Item	**Description**	**Unit Cost**
4	**Construction of Building #3**	
a	Excavation, Site Preparation & Foundation	$25,000.00
b	Foundation	$75,000.00
c	Steel Works & Framing	$450,000.00
d	Concrete Framing	$60,000.00
e	In Situ Concrete & Large Pre-Cast	$145,000.00
f	Electricals & Plumbing	$65,000.00

g	Canvas Roofing	$150,000.00
Total to Collection		**$970,000.00**
Item	**Description**	**Unit Cost**
Summary of Project		
1	**Preliminaries**	**$197,500.00**
2	**Renovation of Building #1**	**$230,950.00**
3	**Renovation of Building #2**	**$109,725.00**
4	**Construction of Building #3**	**$970,000.00**
5	**Contingency 20%**	**$301,635.00**
Grand Total		**$1,809,810.00**

Figure 11 shows a comprehensive breakdown of the St. George's Market Project Budget (Source: Compiled by J. Victor)

For the project to be successfully completed, all stakeholders and key members must adhere and work within the cost management plan and on a whole, the overall project management plan which it supports for the market construction project.

4.5. Quality Management

In the construction industry, quality management plays an essential role in ensuring that projects are successfully completed. Once this objective is implemented, the project will have a competitive advantage and have an impact on the organization's profit and success. As long as quality is monitored and controlled, it can cause the project to be completed within its predetermined cost, scope and timeline. The PMBOK Guide illustrates that, "project quality management plan entails the activities and processes of t developing an organization plan that is anchored on quality policies (PMBOK guide Fifth Edition, 2013). The processes involve:

- **Control quality** – includes the controlling and monitoring of quality activities to determine and enhance performance, and provide necessary changes. (PMBOK guide Fifth Edition, 2013).

- **Plan quality** - Quality management planning is the process of linking quality standards or requirements for the project at hand to its deliverables, and documenting how the said construction project will comply with the quality targets or standards outlined. (PMBOK guide Fifth Edition, 2013).

The Quality Management Plan is a crucial component of this construction project as it illustrates how quality will be managed throughout the lifecycle of the project. Quality management is an important aspect of the feasibility study. The processes involved ensures that the targets and objectives of the research are attained in a way that satisfies the need to determine the viability of the project.

Chart 7 Quality Checklist (Source: Compiled by J. Victor)

CONSTRUCTION OF ST. GEORGE'S MARKET					
Quality Management Checklist					
Project Component		**Date**			
Quality Item	**Yes**	**No**	**N/A**	**Date**	**Recommendations**
Does the construction project have an approved quality management plan?					
Do all stakeholders have access and are fully aware of the quality management plan for the construction project?					
Is the quality management plan in sync with the specific objectives of the construction project?					
Have all quality matrices been developed, reviewed and approved?					
Is the project management team well conversant with the project's quality plan review process?					
Are the buyers aware of their responsibilities in regard to quality plan acceptance?					
Is the said project sponsor aware of his/her duties relating to quality plan acceptance?					
Are the vendors aware of their responsibilities in regard to quality acceptance?					
Are the suppliers aware of their responsibilities in regard to quality acceptance?					
Are the farmers aware of their responsibilities in regard to quality acceptance?					
Are there appropriate quality plan and control measures put in place?					
Are there adequate resources (materials/ mahour/manpower) assigned for quality assurance plan and control?					

The quality checklist developed herein as shown in Table 4.4.1 will assist the project management team in documenting quality standards and compliance needs.

4.5.2 Quality Assurance and control

The aim of the research was to determine the viability of the proposed construction of St. George's Market project. Hence, to ensure standard quality, an iterative quality management process of document reviews will be conducted throughout the market construction life cycle of the project.

The Project Manager will be responsible for planning and scheduling regular quality assurance and control plan review meetings. At these meetings, the project management team will review the construction project stages, processes and discuss ways of enhancing process improvement initiatives. All quality control process improvement efforts will be well-documented, reviewed, implemented, and communicated to all stakeholders regularly. To maximize the project's success, the ISO 9001 method will be used to ensure that there is consistency throughout the life of the project, and that only quality services will be done. This in return will bring many benefits including continuous improvements, significant cost savings, as well as satisfied customers, employees and management.

4.6. Communication Management

In simple terms, communication deals with the exchanging of information so that when transmitted, it is received by its intended recipients and understood. We, as project managers communicate from the inception of the project go right through to the end. Communication Management plays a crucial role in the project's completion success. Good communication improves teamwork which in return leads to better collaboration on the project. Poor communication can lead to misunderstandings, unnecessary issues and delays in the future. O'Neill, Hodgson, and Mazrouei (2015) mentioned that good communication motivates and engages employees by allowing them to understand current organizational changes and how they should respond.

During the project, a communication matrix will be used as a guide by the project management team to determine who will be responsible for communicating, to whom

will they communicate, and when will they communicate to the respective parties. The project manager and team will record the preferred communication method, frequency and communication channels of the stakeholders and project sponsor, to ensure that important updates and information related to the project is communicated accurately and in a timely manner. Change requests or any other matter related to the project will be communicated and submitted to the project manager, who in return will document the request. The project manager will then assess the request submitted for its practicality and come up with an action. The PM will then submit the request and findings to the Change Control Board and determine whether the change will be approved, implemented or not. Below is the communication management matrix which the team would have implemented during the lifespan of the project.

Figure 12 shows the Communication Management Matrix (Source: Compiled by J. Victor)

Communication Method	Purpose	Medium	Frequency	Audience
Kickoff Meeting	• Introduction of project • Review objectives and goals • Ensure each employee knows what is expected	Face to face / In person	Once	• Project Team • Sponsor • Stakeholders
Staff Meeting	• Review project status • Address issues • Motivate staff	Face to face / In person	Monthly	• Project Team
Status Report	• Detailed report on the status of the project including cost, progression, issues, etc.	Email Hard copy docs	Monthly	• Project Management Team • Stakeholders • Sponsors
Project Team & Technical Staff Meeting	• Discuss & review technical design issues • Resolve design issues	Face to face Conference call	Weekly	• Technical Team • Project Management Team
Change Control Meeting	• Review any change request • Determine solution	Face to face Conference call	Upon request	• Project Management Team • Technical Team • Stakeholders • Project Sponsors

4.6.1. Method of Communication

We communicate daily both verbally and nonverbally. We talk on the phone and in person, send emails, texts or even send a fax. On construction sites we communicate using hand signals, signs, meetings and drawings. We take photos, compile reports daily, review change orders as well as create requests for information (RFIs).

Mehra, (2009) mentioned that for ease of classification, the methods of communication in the construction industry are as follows:

1. Formal Written: In the form of specifications, project charter, plans and reports which includes emails, memos, letters, faxes, legal documents, reports.

2. Formal Verbal: It includes speeches and presentations.

3. Informal Verbal: Comprises of meetings, conversations with shareholders, etc.

It is important to note that these methods of communication all have their advantages and disadvantages but by choosing the right method it can simplify and expedite the process of information exchange. At times a quick email or call is all that is necessary, while some other instances may require a quick face to face meeting with key personnel involved in the project.

The use of software programs can allow one to quickly share and disseminate information to all persons involved in the project. If there are any changes to the project, it can be easily documented, edited and updated so that the right persons will have access to the required information. These software programs tend to be good tools for communicating to management, as long as the stakeholders have access and are committed towards using it. The most appropriate method of communication for information sharing and specific tasks should be established early in the project by all stakeholders and agreed upon. If there is a deviation from the prescribed method of communication, then it can result in the project experiencing delays.

The previously mentioned methods will be adopted and used throughout the construction of the St. George's Market project to ensure a higher rate of success.

4.6.2. Establishing a Communication Management Chain of Command.

A proper chain of command will be established once the project has commenced. Proper instructions will be included in the contract documents about who they are to report to or if need be, inform of any change in the scope. The General contractor will be responsible for communicating with the architects, civil engineers, consultants, suppliers and subcontractors. The general contractor will then communicate any issues to the project manager and his team.

It is crucial that any communication which is not outlined in the documents, receive proper authorization. If there are any changes to be made to the scope or schedule of the project, these will be reported and documented through the right channels. Then, after a decision is made, an action will be taken. As long as a clear line of communication is established, it will ensure that information gets to the right set of team members in a timely manner.

4.7. Risk Management

The context of this project management plan is to develop a risk management plan that follows the standard practice guidelines established in the PMBOK guide. The development of this risk management plan will be initiated in the plan risk management process. Developing the Risk Management Plan would allow the project manager to establish the process for managing risks. Accordingly, the project manager would identify, and analyze the project-related risks, through the identification process, and utilize various tools and techniques to determine the likely impact of each risk factor on the project. For each risk, the project manager and his team will develop and implement a risk response mechanism, for which the risk register, probability impact scales and matrix are important inputs for this process. Additionally, an integrated process for monitoring and identifying new risks would be

established by the project team. This is to ensure that the project risks do not prevent the project from attaining its objectives and deliverables.

4.7.1 Risk Management Plan

Identifying and having a handle on project risks can be a tricky process but it's not impossible when there's proper planning and execution of that plan. When a risk becomes a reality, it can derail or disrupt a project. Therefore, risk management is very important. In order to avoid these disasters, the team will be able to properly assess, monitor and control these risks once they've been identified; and come up with a proper strategy to prevent them from ever happening. The most inherent risks in this construction project could be related to deals with contractual, financial, environmental and operational in nature. They may be as a result of internal or external factors. Some other common risks which the project can encounter include:

- Unknown Weather Patterns - The island of Grenada is prone to natural disasters which includes hurricanes, earthquakes and heavy rainfall.
- Managing of Change Requests and orders
- Poorly defined scope of works and incomplete drawings
- Problems with suppliers (unexpected increase in material price) and subcontractors (feeling like they're not being compensated enough or labour shortages as Grenada's population is quite small
- Safety hazards which will lead to workers obtaining injuries due to the occurrence of accidents

Whenever a risk comes to fruition, it tends to have an impact on schedules, performance and costs. This in return leads to disputes and delays. Luckily, these risks can be mitigated and managed through proper planning and good project management practices. A Risk Breakdown Structure (RBS) which is similar to the WBS, produces a number of benefits as it is a decomposition of risks into layers of details. A RBS can be termed as a powerful aid when identifying risks, carrying out assessments and reporting the appropriate levels and insights into the overall exposure a risk might have on a specified area of the project. The RBS have the potential to be a valuable tool used by the project manager to better understand and

manage risks on the market construction project. Based on the project, the risks related to it have been categorized as external, industrial and project risks. Due to the result of the wide categorization of the associated risk, the project team has determined that it would identify the specific risks for each category. This is indicated below in the Risk Breakdown Structure (RBS) for the market project.

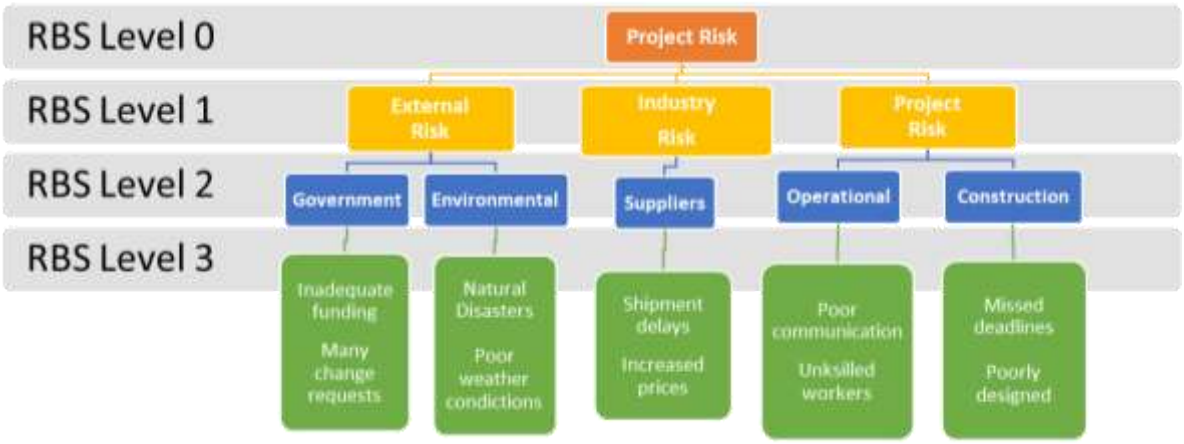


Figure 13 illustrates the RBS Risk Breakdown Structure for the St. George's Market Construction Project (Source: Compiled by J. Victor)

4.7.1 Identifying Project Risks Associated with the Project

The risk management process will be handled by the project manager and team. If the risk is complex, they then will use the transfer risk method and that will be dealt with a risk management specialist / consultant. They will be responsible for finding the most appropriate solution to combat the risk and prevent it from ever happening and disrupting the project. Whenever a risk is found, it should be identified as soon as possible so that solutions can be put in place to counter it. Brainstorming sessions will be held with the project management team, as well as the stakeholders to identify the risks. During this phase, the main goal is to identify the possible scenarios which can impact the project negatively. The team will rely on its knowledge base, experience and expertise. Previous projects of similar nature (scope, location and size) will be reviewed in order to have better understanding of what the project might be facing, and to come up with a way to prevent it.

Another measure put in place by the project management team to prevent those risks from sneaking up as the project progresses, is to have regular meetings with the team, stakeholders and any other persons who have interest and influence in the project.

4.7.2 Risk Management Process

Once the potential risks have been identified, the project manager and team will assess those risks based on the probability of any of them becoming a reality, and the impact they might have in the project if they were to occur. There will be a system to rank the probability and impact of each of those risk. The High Impact, High Probability risks will be handled at first, while risks with a lower probability and impact will be tackled last. To effectively manage them, factors such as money, time and the work each will take will be considered. After ranking each risk, the team will then carefully review each of them and determine whether or not the team can:

- Avoid the project risk
- Eliminate the project risk
- Reduce the project risk
- Transfer the project risk
- Accept the project risk

4.7.3 Qualitative Analysis (Probability & Impact Assessment)

By having a qualitative risks analysis for the project, will seek to identify and prioritize risks based on a pre-established scale. The identified risks that can relate to contractors, employees or any other aspects of the project will be scored based on the impact and the likelihood of occurrence. This analysis will help the project manager to home in on risks that might have a significant impact on the project and prioritize the efforts and resources in containing the risks in relation to the impact. This process not only helps in terms of avoiding crises situations, but also aids in remembering and learning from past mistakes. This in return will improve the chances of successful project completion and reduce the consequences of those risks. In terms of analyzing risks they are assessed for probability and impact using a scale such as high, medium and low. As the current project is of higher complexity,

the five-point scale is used with guidelines and numerical values for each point on the scale. The risk criteria table provides numerical ranges for the probability scale from Very Low to Very High. Looking at the information displayed below, it is evident that some risks are low and manageable for the team but the environmental risks are high and should be carefully monitored by the project manager and his team if the project is to come out successful.

The probability and impact matrix helps to determine which risks the project team should focus on and requires a risk response plan by combining probability and impact totals then rank or prioritize it. The probability and impact matrix for this project was developed by the project manager and project team. Below, the risks are plotted according to the value (probability and impact) assigned by the project team, using the qualitative risk analysis process. First for each risk, the project team established a value for both probability and impact. Secondly, the data is arranged in a tabular format by multiplying (P x I) to give the weight of each risk. Using the weight of the risk, the project team identifies where the risk lies within the matrix. In the development of the below table, the project team determines that it will focus on the most critical project risks taken from the RBS and risk register.

Risk	Level of Risk	Occurrence	Probability Score	Impact	R=PXI	Detail	Response
Team • **Operational Risks** • **Lack of Communication**	Very Low	Highly unlikely to occur	2	1	2	Most teams suffer from poor communication and as a result leads to a decrease in production. This must be remedied, as it will increase the chances of the project obtaining a higher level of success.	Regular meetings to keep everyone updated and ensuring that members are clear of their roles in the project.
Government • **Delay in funding** • **Too many bosses** • **Constant change requests**	Low	Likely to occur	1	3	3	As the world continues to experience the COVID-19, Government officials are now more reserved where spending is concerned as their economies were extremely affected. This can cause a delay in grants and funding for the project..	Adequate funds must be secured for the project to be a success before the take-off stage. Proper chain of command & level of influence to be initiated.

Suppliers/Resources • **Commercial Risk** • **Materials unable to reach Grenada**	Medium	Likely to occur	3	4	6	Companies production level from all over have been affected causing there to be a limit amount of products for the consumers. This creates an unavailability of resources required for the project to take off.	Procurement unit must source materials early
Environment • **External Risks** • **Natural Disasters**	Very High	Highly likely to occur	4	4	12	Grenada is located in the path where numerous storms and hurricanes pass. This brings added disaster to the island.	Project should commence in the dry season (January) and be almost completed before the start of hurricane season

Figure 14 shows the Probability & Impact Risk Matrix (Source: Compiled by J. Victor)

Risk Identification	**Risk Treatment**		
Description	**Action**	**Plan**	**Risk Owner**
Environmental Risk (Natural disasters, etc.)	Accept / Avoid	Changes to be facilitated and measures put in place for those environmental changes	Contractor
Suppliers / Resources (Delay in shipment)	Transfer	Ensure that goods are ordered in advance so that it will arrive on time.	Project Manager/ Procurement officer
Operational Risks (Few staff and human errors)	Transfer	Hire more qualified staff	HR Manager / Project Manager
Financial Risks (Loss of revenue and high debt)	Mitigate	Payments to be made on a timely basis and audits to be carried out regularly to track the spending of the project.	Finance team

Figure 15 shows the Risk Identification & Treatment for Market Project (Source: Compiled by author J. Victor)

Risk Action Plan	
Proposed Action	• Appropriate plan to minimize risk impact • Inform the accountable person • Analyze risk
Resource Requirements	• Access to proper tools, materials, equipment, capital
Responsibilities	• Analyze level of potential risk and inform responsible team • Manage risk & develop effective solution plan
Timing	• Monitor and identify risks
Monitoring	• Complete risk management plan • Have checklist of activities and remind owner of activities

Figure 16 shows the Risk Action Plan for Market Project (Source: Compiled by author J. Victor)

Risk Register

Project name: Construction of the St. George's Market

Risk Description	Likelihood of Risk Occurring	Impact if Risk Occurs	Severity *Rating based on likelihood & impact*	Owner *Person responsible for managing the risk.*	Mitigation Action *Actions to be taken to mitigate risk (reduce the likelihood)*	Contingent action *Action to be taken if the risk happens.*	Progress on Actions
Project is not well-defined	**Medium**	**High**	**High**	Project Sponsor	Business case must be completed, and the purpose of the project should be well defined on Project Charter and Project Management Plan	Project Board to be notified about risk so that an assessment of the risk can be done, and a solution be determined on how to handle it.	Business case will be re-written with clear deliverables and submitted to the board for approval.
Design is Incomplete, Schedule is not clearly defined or understood	**Low**	**Medium**	**Medium**	Project Team	Design and Scope should be properly defined and put together by experts in the field which will ensure that their design is practical. Scheduling workshops with the project team will be held frequently to ensure they understand the plan and try to ensure that the likelihood of missed tasks be reduced.	Assumptions made will be documented as well as associated risks. Items which seem not practical will be removed from scope. Share plan and constantly go through upcoming tasks at weekly project progress meetings.	Constant follow ups with architects and other designers
No control over staff priorities	**Medium**	**Medium**	**Medium**	Project Manager	Stakeholders and PM will brief team on the importance of the project. Identify back-ups for each human resource on the project to	Escalate to the Project Sponsor and bring in back up resource.	Regular meetings to be held to discuss matters and prioritize duties.

					ensure deadlines are met.		
Delays	**Medium**	**High**	**High**	Project Manager	Penalties will be included in contract for missed deadlines. Schedule will be communicated frequently to ensure that the team understands what is expected of them and the tasks they need to complete.	Escalate to Project Sponsor and Contracts Manager. Implement late clauses.	Penalties imposed for missed deadlines
Errors in estimating and scheduling	**Medium**	**High**	**High**	Project Manager	The risk will be broken down into two categories which are cost estimating and scheduling errors. It will seek to carefully track the cost estimation of the project as well as its forecasted cost at completion after making necessary adjustments. Schedules will be tracked and reviewed constantly and discussed in meetings. Any errors or delays will be flagged and brought to the project board.	Project sponsor and project board will be notified and change request will be made for changes to the budget and schedule.	Contingency agreed by Project Board.

Unplanned work that must be undertaken	**Low**	**High**	**Medium**	Project Manager	All unforeseen work which need to be done will be taken care of with the contingency. Meetings should also be attended by key members so that they can have an update on how the project is progressing. All plans and surveys also need to be double checked.	Key stakeholders and project team should be informed with a plan of action including the impact it will have on the schedule, cost and quality of the project.	Key players to attend scheduling and approval meetings.
Lack of Communication which might cause lack of clarity and confusion	**Medium**	**Medium**	**Medium**	Project Manager	Communication plan will be developed which will include the frequency, goal and audience. Stakeholders will be identified early and considered when coming up with this method so that the most appropriate channel of communication can be used.	Misunderstandings must be immediately corrected. Areas that are not clear will be clarified swiftly with the assistance of the Project Sponsor and stakeholders if required	Communication management plan in progress.
Scope Creep	**Medium**	**High**	**High**	Project Manager	The project scope will be documented in a Project Initiation Document or Project Charter and will be authorized by the Project Board. It will be used throughout the project and all changes will be assessed to ensure it aligns with the project.	Each scope creep will be documented no matter how small in a change order and the team will get authorization from the project board before tackling the required work. This also includes zero cost changes.	Scope to be clearly defined

Inadequate Quality Control	**High**	**High**	**High**	Project Manager	Ensure that adequate amount of quality control checks, concrete testing, quality assurance is done for optimal production and efficiency.	Staff to be trained to be mindful of the different quality control measures to make sure that only the best end result is always obtained.	Prepare quality checks
Theft of Materials, Property or Equipment.	**Low**	**High**	**High**	Project Manager	Security procedures will be followed to ensure that the site always remains secure to prevent theft from occurring.	Appropriate authorities to be notified (security firms, police) incase an incident has been reported.	Ensure proper security of compound
Acts of God (Unpredicted Weather)	**Low**	**High**	**High**	Project Manager	Ensure insurance is in place as Grenada experiences extreme weather conditions at times. Team should be knowledgeable about emergency procedures and that solutions are in place to combat those issues.	Notify appropriate authorities. Follow health and safety procedures. Notify stakeholders and Project Board.	Ensure insurance policy is valid
Stakeholder Required Action / Decision Making Delays	**Low**	**High**	**High**	Project Manager	Identify stakeholders, analyze power and influence and create a stakeholder engagement plan. Project Board to authorize the plan. Revisit the plan at regular intervals to check all stakeholders are managed.	Notify appropriate authorities and follow internal procedures.	Stakeholder Analysis

Figure 17 shows the Risk Management Register for Market Project (Source: Compiled by author J. Victor)

4.8. Procurement Management

The main purpose of the procurement management process is to determine what will need to be procured (purchased) so that the project can run smoothly. The procurement management process simply means securing the required goods and services needed to ensure that the project is completed in a timely manner and that the deliverables are all met. As there are contracts involved in this process, contractors are asked to submit their bids for the project. The contractor is not to be selected solely based on price but also experience, reputation, good track record, access to finances etc. An evaluation committee comprising of the project manager, senior engineer, procurement officer, HR Manager, QS, as well as a representative(s) from the stakeholder / sponsor group will be put in place to handle all procurements. They will ensure that the provider upholds their end of the bargain with respect to materials, budget and the schedule of the project. Once the project commences, a procurement management plan will be implemented detailing how the process is to be managed and contracts for each service procured will be done to ensure that everyone is on the same page. Some of the factors to be considered in this process are:

- Timeliness of the delivery of goods or service.
- Quality
- Reasonably priced goods and services
- Easibility of use and client's satisfaction

4.8.1 Effective Procurement Management Planning for the St. George's Market Project

Requests for proposals (RFP) will be sent to no less than 3 suppliers in order to procure their much-needed goods or service which the team might not be able to provide. Once proposals are submitted, an evaluation committee will be established to determine the best bidder based on the previously mentioned factors. A contract will then be awarded to the successful bidder to provide that specialized good or service. The three processes to be used in the project based on the PMBOK includes:

1. Planning - goals are clearly defined and other aspects such as resources, potential sellers, timeline and costs are reviewed with consideration to the project. To also secure the project, accountability plans, bidding documents including Request for Quotation (RFQ), Request for Information (RFI) and Request for Proposal (RFP) will be created and documented. The procurement board comprising of the HR manager, QS, chief engineer, project manager and procurement officer will meet periodically to oversee this process.

2. Conducting – The procurement board will meet to discuss and decide on the goods / services which need to be procured as well as assign resources so that the goods / services can be purchased. In the case of the St. George's Market project, a number of items will need to be procured from the outside including steel columns, canvas covering for the roofing, tiles, windows etc. After all the Request for Quotation have been received from the prospective sellers, the board will then evaluate the bidding documents.

3. Controlling - This execution process entails having an assessment carried out into the supplier's market as well as to compile the information of the suppliers. The suppliers will be chosen based on the availability of the materials, cost, quality, warranty, durability, location of the procured goods / product as well as the time it will take for the procured items to arrive in Grenada. After the seller(s) is decided, the procurement board will then move on to administering a contract and purchasing the goods from the seller. This step will still be managed by the procurement board and if need be, change request and other adjustments will take place during this process. The final step will be closing out the contract after the procured goods / services have been received and accepted by the team. A review will also be done to note lessons learned and how those improvements can be applied in the next project.

As it relates to the procuring of goods for the market project, a total of $680,000 will be spent and will be handled by both the procurement board and the finance manager for the project.

Chart 8 Procurement Management Plan for Market Project (Source: J. Victor)

Project Name: Construction of St. George's Market							
Scope of Project: Construction of a new market to facilitate the people of St. George's							
Ref #	**Description of Goods / Services**	**Requested By**	**Procurement Method**	**Cost**	**Date of Request**	**Delivery Date**	**Status**
1	Steel columns & galvanize pipes	Project Manager	Single sourced	$450,000.00	02-04-21	27-06-21	Received
2	Canvas roof	Project Manager	Single sourced	$120,000.00	02-04-21	15-05-21	Received
3	Tiles	Project Manager	Selective tendering	$65,000.00	16-04-21	03-06-21	Received
4	Acquisition of furniture	Project Manager	Selective tendering	$45,000.00	21-06-21	15-10-21	In transit
Procurement Total				**$680,000.00**			

Before everything is completed, the procurement board will ensure that the procurement agreement works and contains the right agreement. The procurement officer will also check the specifications of the procured items to ensure that it is of good quality. There will also be constant communication between both the buyer and the seller to ensure that the requirements, issues and specifications are exactly what is needed. This will be important just in case something is left out, it can be inserted once agreed to by both parties.

4.9. Stakeholders Management

As per the PMBOK Guide, Project Stakeholders Management includes “the processes needed to identify the people, groups or organizations that could impact or be impacted by the project, to analyze their expectations, impact on the project and to create the appropriate management strategies for effectively engaging them in decisions and execution of project tasks” (PMBOK guide Fifth Edition, 2013). The stakeholder management processes include:
(i) stakeholders’ identification, (ii) stakeholder management plan, (iii) stakeholders’ engagement, and (iv) stakeholders’ control.

To identify and manage the project stakeholders, the project management team will brainstorm to determine the following:

- Will the people be indirectly or directly affected by this construction project?
- Will the people or their organization negatively or positively affect the construction project?
- Do the people or their organization have special key competences or skills the project will require?
- Will the people potentially benefit from the construction project or they are in a position to be adamant to change?
- How involved can these people be in the construction project?

The Project Management team headed by the project manager will be responsible for the documentation and ensuring the level of participation desired is achieved, type and frequency of communication, and any conflicting interests, or concerns are amicably addressed. Compiled information concerning all the stakeholders will be stored in a stakeholder register which is to be utilized by the PM team.

Chart 9 Stakeholder Register

STAKEHOLDER REGISTER						
Project: Construction of St. George's Market					**Date: 28th January, 2021**	
Name of Stakeholder	**Department**	**Role In Project**	**Level of Interest**	**Influence on Project**	**Communication Method / Type**	**Level of Expectation**
Gregory Bowen	Government of Grenada	Sponsor	High	Medium	• Emails • Face to face	High
Merina Jessamy	Ministry of Infrastructure Development	Decision Maker	High	High	• Emails • Conference Calls	Medium
Josh Victor	Project Management	Project management	High	High	• Face to face • Conference Calls	High
Claudette John	Vendors Association	Advisor	High	Low	• Face to face	Medium

In the construction project communication, it is critical to decide the amount of communication channels needed. The formula X(X-1)/2 is applied to determine the amount of communication channels required on a project where X is the number of stakeholders on the project at hand. A huge construction project team as this market construction is also determined by the number of vendors using the market and staff managing St. Georges Market. Putting that into consideration and with 12 construction project team members, the possible 66 communication channels. This is calculated as follows 12(12-1)/2 = 12(11)/2 = 132/2 = 66. So for the PM must realize that the twelve people on their team are communicating efficiently and there are no missing gaps in team's understanding that they require to manage 36 communication channels amongst the team.

4.10. Human Resource Management Plan

Human Resource Management processes are those which includes the managing, organizing and leading of the project management team. It will comprise of members with specialized skills who have been assigned different roles and responsibilities. There may be full or part-time positions which must be completed during the life of the project. Although the team members are assigned specific roles and responsibilities, their involvement in this process is beneficial as they are classified as the most important asset of the company.

The team is of the view that Human Resource Management is of strategic importance and will contribute towards the overall success of the market project. This process is important because it deals with the way in which HRM policies and practices takes shape and also how it affects the team member's work experience and relationships. Some of the key principles of PM ties into Human Resource Management because the HRM team will need to work closely with the project manager and their team ensuring that the rules, standards, policies and guidelines are properly implemented and developed, especially with regard to the ever-changing nature of the work environment.

The following processes are comprised of this knowledge area:

1. Plan Human Resource Management - This planning process will seek to identify and document project roles, reporting relationships, selection of required skilled laborers and other workers. This also includes creating a management plan for staff to resolve any issues which might arise over the lifespan of the project.

Plan Human Resource Management Input:

- Enterprise Environmental Factors which tend to deal with the geographical location of members, culture market conditions etc.
- Organizational process assets which entail things like lessons learned, standard operating procedures, responsibilities and roles descriptions
- Creating and implementing a staffing management plan
- Creation of a Change management Plan as well as a configuration management plan
- Managing the different roles and responsibilities of team members

Tools and Techniques:

- Organizational Charts as well as properly detailed positions and job descriptions
- Expert Judgment which will help identify the required roles, responsibilities and skills needed to get the job done.

Plan Human Resource Management Output:

- Staffing Management Plan which seeks to address staff acquisition, personal development and training needs, safety, compliance as well as recognizing when an employee goes above and beyond and have a rewarding system for the same workers.
- Human Resource plan which deals with the role, responsibility, competency as well as the authority of team members

Attached below is the organizational chart for the St. George's Market project.

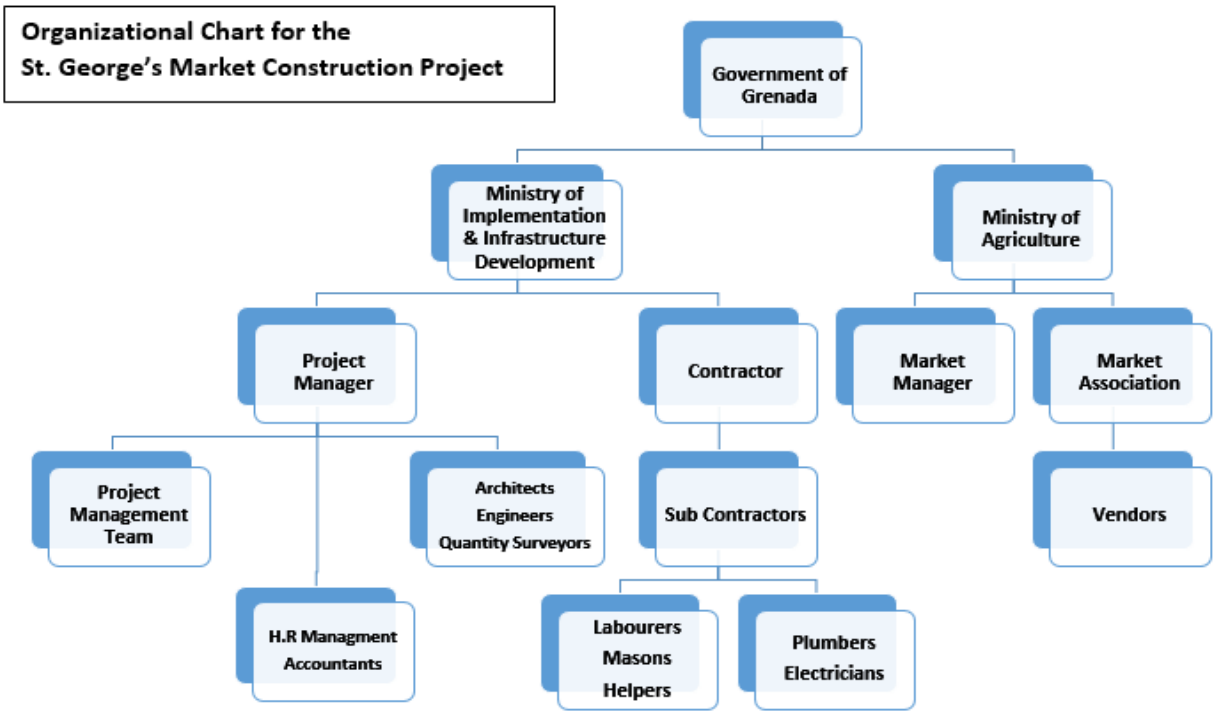


Chart 10 St. George's Market project.

2. Acquire Project Team - For any project, a highly motivated and skilled team can make any project obtain a higher level of success. For the market project, it comprises of skilled masonry workers, qualified and experienced welders and fabrication experts, carpenters, electricians, plumbers etc. A screening process was done to make sure that the necessary team members were selected to carry out the job.

Inputs, Outputs, Tools & Techniques:

- Staff Management Plan
- Acquisition of skilled workers
- Roles and Responsibilities roster to ensure that everyone knows their role in the project and what task or deliverable they may need to work towards completing.
- Negotiation of requirements, salaries, roles etc. of staff selected to get the job done.

3. Develop Project Team - During this process, it seeks to improve the competency of the workers, interactions between team members as well as enhancing and developing the members into a functioning, effective and coordinated team. This will lead to the project having an enhanced performance. It falls under the execution process group.

Develop Project Team Input & Output:

- Enterprise Environmental Factors etc. will be updated to take note of employee training records.
- Team Performance Assessment - this assessment will seek to increase team bonding, improve competency and moral of workers as well as improve their skill allowing for a higher level of performance.

Tools and Techniques:

- Team Building Activities

(Forming 》 Storming 》 Norming 》 Performing 》 Adjourning)

- Training in both technical and soft skills
- Recognition & Reward for whenever the team members go above and beyond whenever carrying out their duties

4. Manage Project Team - In this process, the performance of team members is tracked, issues and other problems are resolved as well as managing any changes which might be required for optimizing the project's performance.

Manage Project Team Inputs:

- Assessment of team's performance to identify and resolve any issues as well as choose proper communication channels.
- Issue Log to resolve any issues identified and have it recorded
- Work performance reports (SPI & CPI)

Tools & Techniques:

- Interpersonal Skills (leadership, influencing & effective decision making)
- Conflict Management (Compromising, Withdrawal, Smoothing, Forcing & Confronting)
- Project Performance Appraisals

Outputs:

- Enterprise Environmental Factors
- Change Requests (staff, budget, scope changes etc.)
- Project Management Plan and Document Updates

5 CONCLUSIONS

Project management today has developed significantly into a discipline alongside other managerial functions involving operations, technology, finance just to name a few. Organizations use this discipline to improve and increase their efficiency and productivity which in return leads to success. Projects are temporary in nature (they have a beginning and an end) which create a unique result, product or service of value to its stakeholders. Projects comprise of a budget, a schedule as well as a team full of members with a set of expectations which needs to be met at the end of the project's life cycle. Leading those projects are professionals who are either by circumstance or intentionally, asked to ensure that the team accomplishes its goals, tasks and duties on time and on budget. To meet the needs of the project, project managers use different approaches, tools and techniques. Due to the ever-changing nature of the discipline as a result of globalization, technological advances etc. means that the work will be better organized around projects with qualified team members being brought together based on the skills needed to complete specific tasks, as in the case of the St. George's Market project.

For centuries, the St. George's Market has been the place where farmers from all over the island congregated to offer their goods and services to the general public. The area is of historical and architectural importance, as it was constructed since the late 1800's. The overall intent of the project is to conduct an overall renovation of the existing buildings and to construct a new building which will be used to house the vegetable market vendors. The project was a much needed and requested one by the government and citizens of Grenada, who saw it fit to undertake this project during this pandemic to make it safer and more accessible to everyone. For the project to be successful, the 10 project management knowledge areas would be used as a reference throughout the lifespan of the project. Qualitative staff are the ones chosen to provide the required skills and services to get the job done.

1. Its purpose is to ensure that in the initiation phase of the project through to the planning, managing and completing of the project that the right steps are

taken ensuring that the project is completed on time, objectives are met and based on the financial resources allocated for the project.

2. Due to the St. George's market project having a limited timeframe, the scope was well defined and the adequate number of resources needed to complete the project were assigned to the project manager and team. The reason for this resource allocation was because the team knows the importance of completing the project on time. The longer it takes to get the project completed, the number of risk increases and that can lead to a higher chance of the project being a failure.
3. The schedule of the project is very important and crucial towards it obtaining a higher rate of success. Strict monitoring and managing of activities were enforced by the project manager which will ensure the project is completed on time.
4. Proper resource allocation, monitoring and use will help the project complete on time and on budget. The project manager, finance manager and team is responsible for overlooking this process.
5. Proper Communication management methods implemented and used to ensure that messages will be conveyed in a timely manner, and to the right persons so that they can be involved in the project and kept up to date.
6. Procuring of goods and services will be handled by the relevant committee and accepted / rejected based on the quality they arrived in. In the case of the market construction project, several goods would be procured.
7. Risk management process is to be managed and monitored by consultant and solutions to be implanted based on the suggestions.
8. Quality Management will be managed by quality assurance officers who will be accepting or rejecting any goods or services that is deem unactable to the project. Routine inspections will be carried out to ensure that only the best materials and goods are used for the project.
9. Stakeholder engagement is important and that was why the at the beginning of the project a level of influence was established as well as to have a register which ensured that everyone was briefed on important project updates.

10. Human management was created to ensure that issues were dealt with immediately and resolved. The right set of people with the right set of skills were chosen to undertake any specialized works which was to be done on site. The human resource function also ensured that everyone was clear on their role in the project.

Without the project management team and the level of professionalism they bring, the project could be exposed to unclear objectives, chaotic management, unrealistic planning, higher risks, the project going over budget, late delivery; as well as the quality of the construction being compromised. Luckily, a team of skilled project professionals have been assigned to the project, which in return will increase the chances of the project achieving its goals. Good project management practices matters because it will lead to project success and that is the case with the construction of the St. George's Market Project.

6 RECOMMENDATIONS

As the population increases yearly, so too has the number of vendors looking to sell their produce. At the market, space was limited and the surroundings was not in keeping with the health code. The solution, create an avenue for the vendors and farmers to sell their produce, goods and services directly to the consumers. The government of Grenada developed a plan to improve the structure of the market making it more suitable for the farmers, vendors and their clients. This project was much needed as it will seek to address the demand and supply of fresh fruits, vegetables, spices etc. which is in dire need by the people. After completion, it will stimulate the economy, promote local sustainability, better access to organic and fresh food, comfort and safety to the persons utilizing the facility as well as an essential post pandemic cleanup which was necessary.

1. Integration Management

- **Finding:** Much empasis was not placed in this stage of the project.
- **Recommendation:** The integration management plan should be developed and will act as a road map to ensure that all the processes involved in the project work together and reach a successful end.

2. Scope Management

- **Finding**: The scope might be excessive and specified work won't be completed on time.
- **Recommendation**: Once a task is created, there should be an adequate number of team members with the right set of technical skills and core competencies selected to get the job completed on time, with the right quality and on budget. The scope should also be created and managed by experts who have a wealth of knowledge and skills.

3. Cost Management

- **Finding**: On numerous projects, cost overruns tend to be excessive and that causes projects to be over budget. This is as a result of poorly defined scope of work, poor planning, budget cuts, unforeseen costs etc.

- **Recommendation**: Ensure that the project is adequately funded, have regular meetings with project managers, accounting professionals and other relevant team members to ensure that the project has enough financial resources and it is being managed properly.

4. Schedule Management

- **Findings:** The schedule of the project was done based on expert judgment and estimation. Much time wasn't allotted to the project as it was an emergency project.
- **Recommendation:** A time management plan must be created which will support the management of a project schedule to ensure that the project is completed within the stipulated time frame.

5. Quality Management

- **Finding:** Much emphasis was not placed on quality.
- **Recommendation:** A proper quality management plan should be developed which will seek to ensure that the results meet expectations and that the quality is of good standard.

6. Communication Management

- **Finding:** Proper communication management network was established late.
- **Recommendation:** Communication management must be developed to ensure that the status of the project and other key information are transmitted in a timely and effective manner to the relevant persons involved in the project.

7. Risk Management

- **Finding**: During the life of the project, several things can lead to the project encountering risks. From cost overruns, poor planning, inappropriate decision-making strategies, to scope or deliverables not being completed in a timely manner.
- **Recommendation**: Whenever a risk is identified, it is important to keep everyone working together and on the same page to manage and try to resolve that risk before it becomes a problem for the team. Once managed effectively, that same risk can lead to a much greater reward.

8. Procurement Management

- **Finding:** Due to the pandemic, procurement process started late.
- **Recommendation:** A procurement management plan must be developed for identifying and contracting suppliers who are able to provide the required services and goods which the project management team cannot in earlier stage of the project.

9. Stakeholders Management

- **Finding:** Much empasis wasn't placed on stageholder engagement.
- **Recommedation:** A stakeholders management plan should be developed which will seek to identify key stakeholders, their interest level and how their influence might impact the project.

10. Human Resource Management

- **Finding**: There is a problem of projects having numerous subunits comprised of many workers. Some skilled and some unskilled. This can lead to poor quality work. Another issue might be workers feeling demotivated as they have no one to turn to report any issues.
- **Recommendation**: For the market project there should be a screening / vetting process to ensure that only the most qualified candidates are selected to undertake the job. Once a highly skilled and motivated workforce is created, that will only lead to the project obtaining a higher chance of success. The HR team should also try to resolve any issues which team members might be having during the project, because by leaving those issues unattended will only lead to escalations / problems down the road.

Other recommendations for the project are as follows:

• Incorporation of Green Technology - As the world is now paying more attention to its carbon footprints and emissions, renewable energy (solar) should be used to power the structure as well as harvesting and storing rainwater for use in the washroom facilities or cleaning of the produce.

• Multipurpose Use - the main focus should be to have a structure which is not only a farmers’ market but should incorporate features for other uses. This will promote the market and draw in people as well as prolong the site's sustainability.

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8 APPENDICES

Appendix 1: FGP Charter

PROJECT CHARTER	
Date:	**Project Name:**
10th May, 2021	Project Management Plan for the Construction of St. George's Market
Knowledge Areas / PM Processes:	**Application Area (Sector / Activity):**
Knowledge Areas: • **Scope Management** • **Time Management** • **Cost Management** • **Quality Management** • **Communication Management** • **Risk Management** • **Procurement Management** • **Stakeholders Management** • **Integration Management** • **Human Resource Management** **Process groups:** • **Initiation** • **Planning** • **Executing** • **Monitoring & Controlling** • **Closing**	**Construction**
Project Start Date:	**Project Finish date:**
(Is the same as the issue date)	22nd October, 2021
Project Objectives (General and Specific):	
General Objective: In project management, project objectives are key elements that give you a standard of assessing a given project's success rate. It is important to ensure that the objectives are clear and achievable so that the project management experience can be smooth. This will facilitate a greater chance of project success. In the case of this project management plan for the St. George's Market Construction, SMART framework was used when coming up with the objectives. The acronym translates to Specific, Measurable, Achievable, Realistic and Time Bound (S.M.A.R.T). The effects will be workable and realistic objectives which will act as the perfect guide for the project. The general objective is to formulate a project management plan based on the standards of the Project Management Institute for managing and constructing Building #3 at the St. George's Market.	

Specific Objectives:

8. **Scope Management** – To produce a scope management plan which seeks to ensure that objectives and scope of works for the project are successfully carried out.
9. **Schedule Management** – To create a time management plan which will support the management of a project schedule to ensure that the project is completed within the stipulated time frame.
10. **Cost Management** – To create a cost management plan for developing and managing of the overall costs to ensure that the project is completed without being over budget.
11. **Quality Management** – To develop a quality management plan which seeks to ensure that the results meet expectations and that the quality is of good standard.
12. **Communication Management** – To develop a proper communication management plan to ensure that the status of the project and other key information are transmitted in a timely and effective manner to the relevant persons involved in the project.
13. **Risk Management** – To create a risk management plan which identifies risks and develop strategies to avoid or minimize the chances of the project running into risks.
14. **Procurement Management** – To develop a procurement management plan for identifying and contracting suppliers who can provide the required services and goods which the project management team cannot.
15. **Stakeholders Management** – To develop a Stakeholders management plan which seeks to identify key stakeholders, their interest level and how their influence might impact the project.
16. **Integration Management** – To develop an integration management plan which will act as a road map to ensure that all the processes involved work together and reaches a successful end.
17. **Human Resource Management** – To create a human resource management plan which seeks to identify the most qualified and best suited persons to perform important roles throughout the lifecycle of the project as well as resolve any internal issues or conflicts once they arise.

Project purpose or justification (merit and expected results):

The St. George's Market is Grenada's largest market which has the highest transaction volume for agricultural products in the country. Although having an iconic status, the market is known for selling unique herbs and spices, organic and freshly produced fruits and vegetables, renovating the entire structure has always been on the agenda of the Government of Grenada but could not as the market was always occupied by vendors.

As the world is experiencing the COVID-19 pandemic, the government decided to cease the opportunity and conduct an all out restoration of the existing two worn-out structures and commence the construction of a third structure which will house the vegetable and fruit market which in the future will be labelled Building #3. In addition to undertaking this project, it seeks to improve three functions which is food hygiene management, logistics and create a better environment for both the locals and tourists as Grenada depends heavily on tourism.

The benefits of the project entails:

1. Improve the structural integrity as well as the aesthetics of the market.
2. Enhance the customer shopping experience for both locals and tourists.
3. Improve efficiency and operations by upgrading the existing structure

4. Promote the use of green energy by installing a solar system before project completion as well as using LED & other energy saving equipments throughout the facility.
5. Improve overall sanitation and hygiene by upgrading of the facility and its surroundings.

Description of Product or Service to be generated by the Project – Project final deliverables:

Markets are important because they have always helped us reconnect to the land and equally important, helped us reconnect with each other. When the project is completed, it is expected to have a number of benefits to the Grenadian people such as employment, enhance the quality of life for vendors and customers as well as enhancing the appearance of the town.

Assumptions:

Assumptions are anticipated circumstances or events which might take place during the life cycle of the project. It also deals with what we believe to be true, and they are made based on the information available on hand or expense.

Some assumptions of the project are:
1. Sufficient resources allocated for the Project
2. Adequate Budget
3. All the required stakeholders are onboard
4. Contractor will have adequate skills to get the job done properly
5. Expert judgement is readily available

Constraints:

Time, scope and cost are the three constraints a project manager should be familiar with also known as the triple constraints. Each is connected to the other two.

Constraints of the project comprises of:
1. Timeline for construction is not enough
2. Limited staff
3. Inadequate resources
4. Poorly designed plan

Preliminary Risks:

Every project will encounter risk as they are usually outside of our control. It is therefore important to identify them at an early stage and develop a plan / strategy on how to deal with them accordingly.

Some risks the project might encounter are:
1. Poorly defined scores
2. Natural disasters
3. Unexpected increases for material costs
4. Safety hazards

Budget:

(General cost estimate of main items/deliverables for project budget.)

Milestones and dates:

Milestone	**Start date**	**End date**
1. Final Graduation Seminar	10th May, 2021	16th May, 2021
1.1 FGP Deliverables	10th May, 2021	16th May, 2021

1.1.1 Charter	10th May, 2021	16th May, 2021
1.1.2 WBS	10th May, 2021	16th May, 2021
1.1.3 Introduction	17th May, 2021	23rd May, 2021
1.1.4 Theoretical Work	24th May, 2021	30th May, 2021
1.1.5 Methodological Framework	31st May, 2021	6th June, 2021
1.1.6 Anexes	31st May, 2021	6th June, 2021
1.1.6.1 Bibliography	31st May, 2021	6th June, 2021
1.1.6.2 Schedule	31st May, 2021	6th June, 2021
1.2 Graduation Seminar Approval	7th June, 2021	13th June, 2021
2. Tutoring Process	14TH June, 2021	21st October,2021

Relevant historical information:

Looking back, we can see that farmers' markets were not only important for economic success, but also social interaction as it was often the only means for rural and urban community members to meet. This was the case in Grenada decades ago and continues to this day. The St. George's market has always been a pillar contributing toward the economic growth and development of Grenada. Activities such as the selling of slaves back then to the now selling of fruits, vegetables, spices, herbs, and other items are all proof showing that the market has come a long way. It has been a while since the structure has been renovated and as the COVID-19 virus is rampant all over the world, the government of Grenada decided to conduct renovation works on the buildings as well as construct a building dedicated toward selling fruits and vegetables.

Stakeholders:

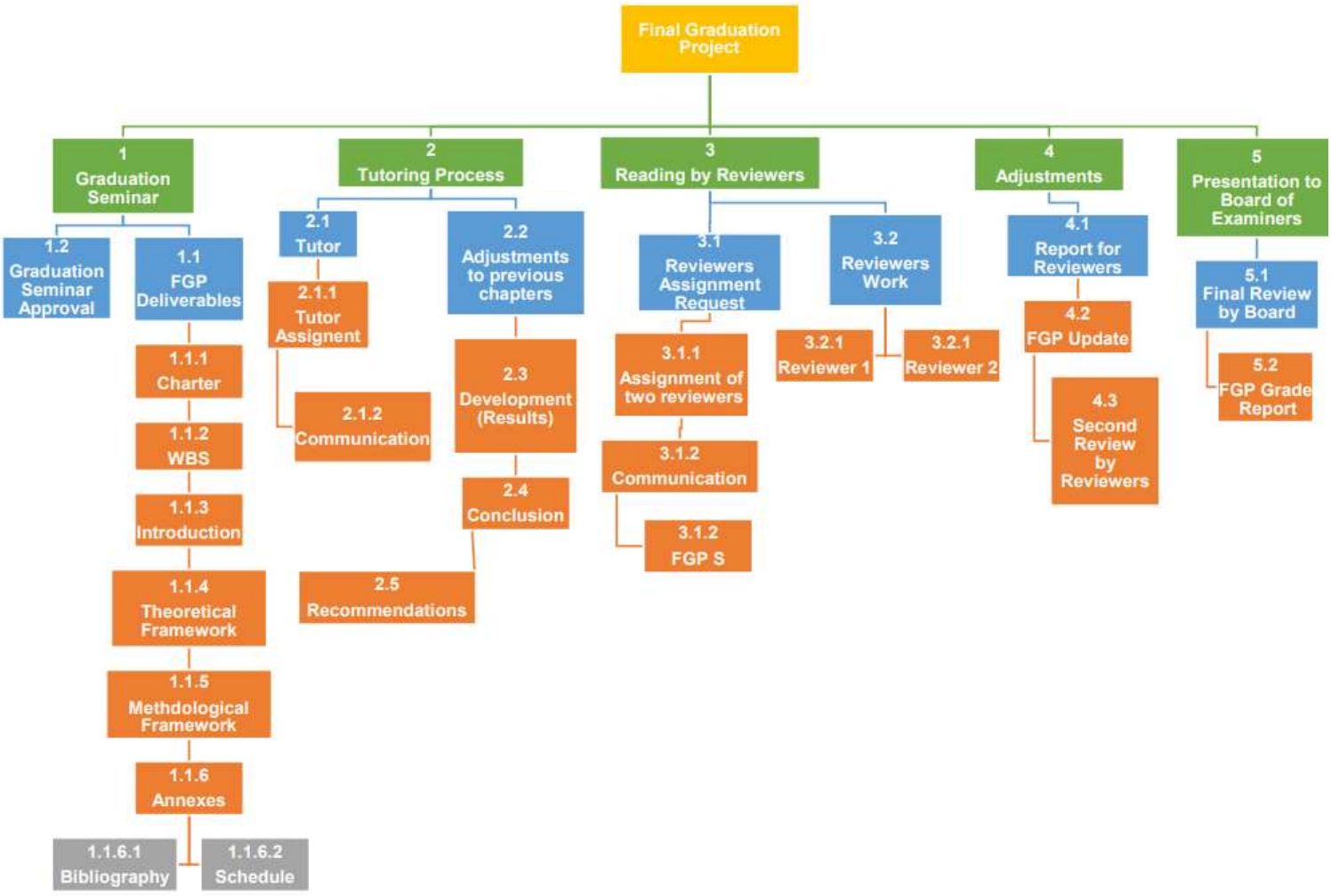
Direct stakeholders:
Government of Grenada
Ministry of Infrastructure Development
Project Management Team
Market Vendors Association

Indirect stakeholders:
Vendors
Customers

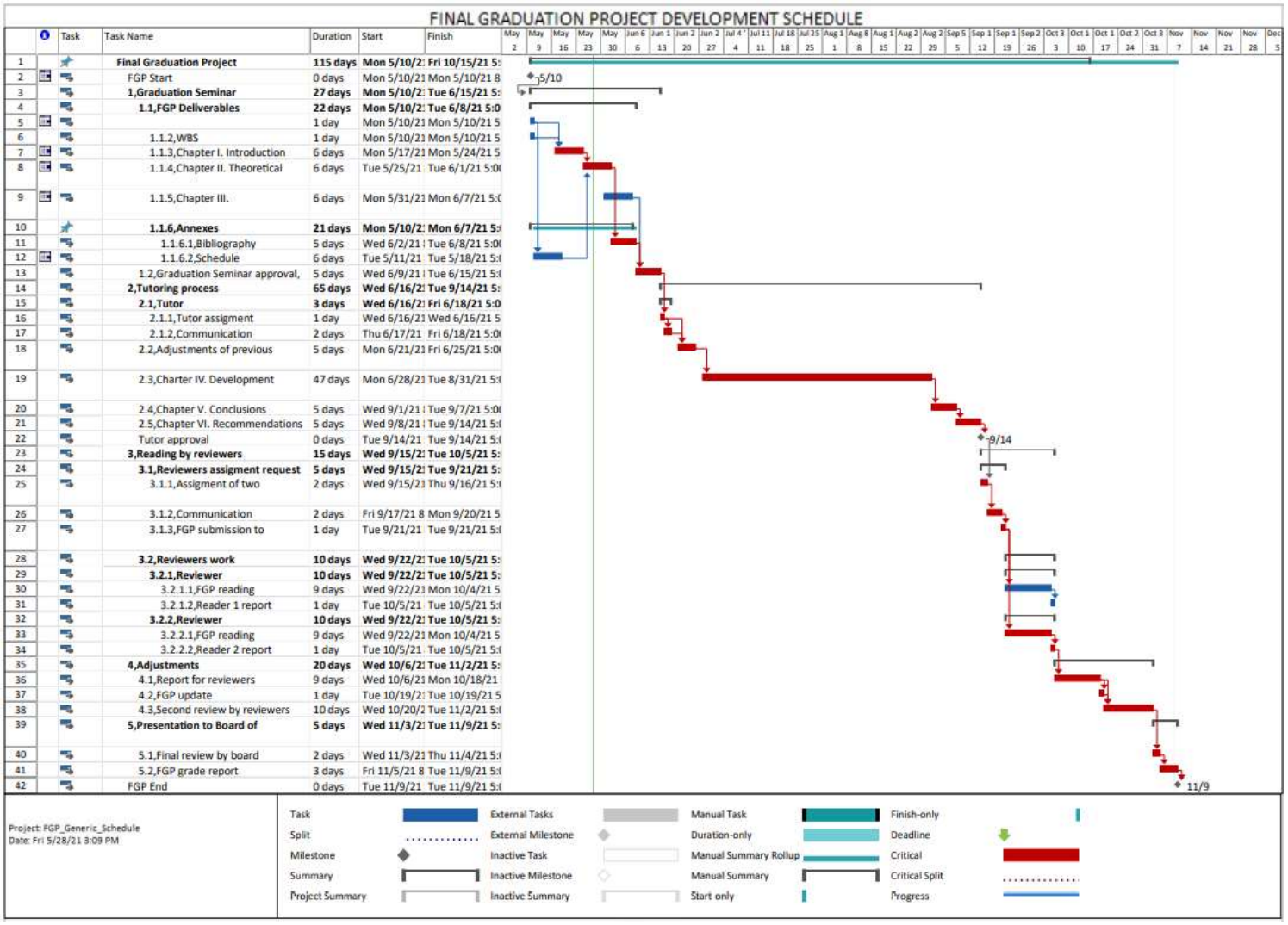
Approval:

Project Manager: **Josh Victor**	**Signature:** X Josh Victor Josh Victor
Authorized by:	**Signature:**

Appendix 2: FGP WBS

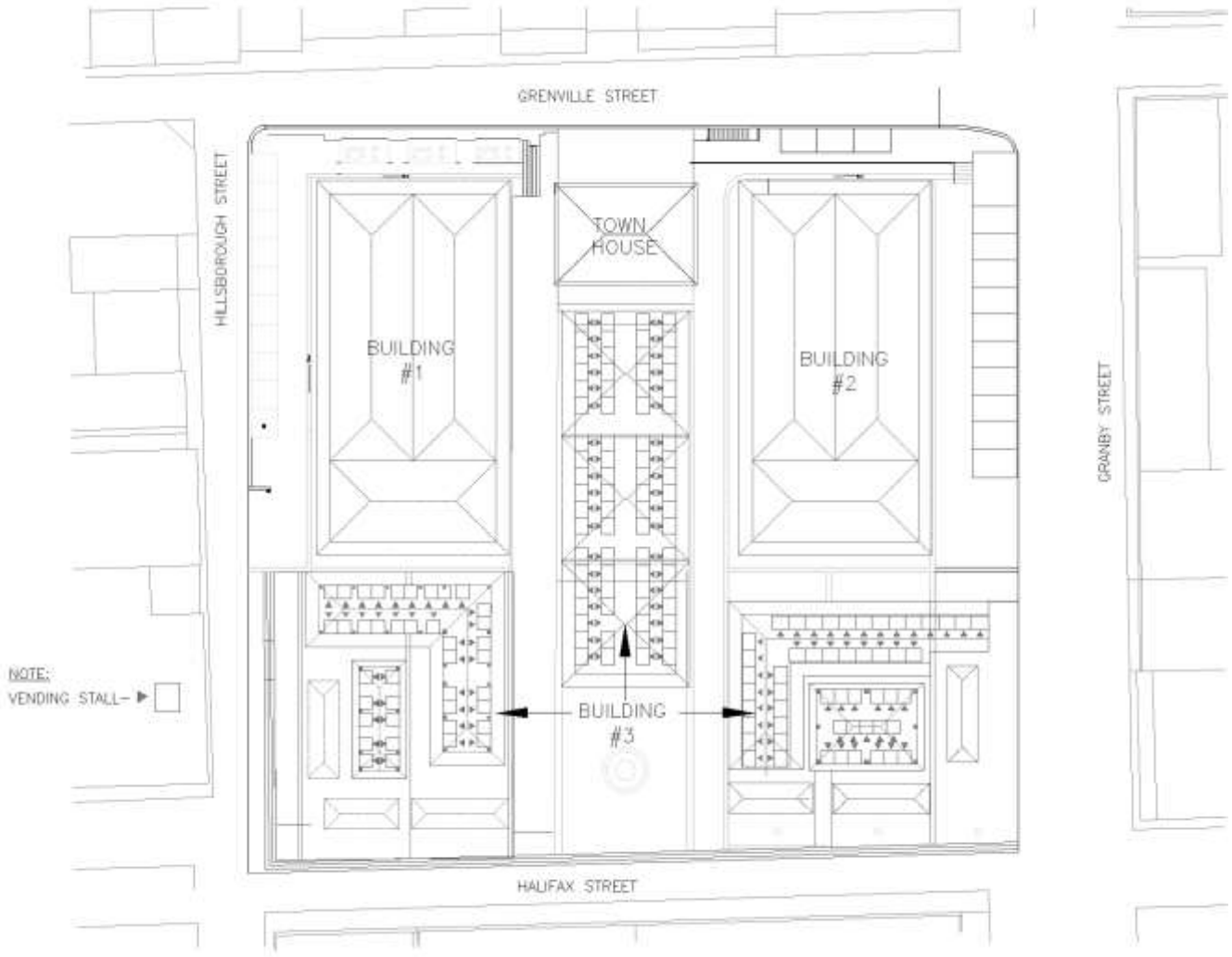


Appendix 3: FGP Schedule



Appendix 4: St. George's Market Design Plan (View 1)

Appendix 5: St. George's Market Design Plan (View 2)



Appendix 6: Linguist Credentials and Proof of Philological Corrections

Letter of Verification

H.A. Blaize Street

St. George's

Grenada

Tel: 473 – 404 - 7553

12th November 2021

To Whom It May Concern

Dear Sir/Madam

This is to notify you that I have reviewed Josh Jason Mark Victor's final Graduation Project making structural, typographical and grammatical corrections where necessary.

I am an instructor within the School of Arts and Sciences at St. George's University. I have lectured in College English I and II over the past 10 years in that department and hold a Masters of Communications degree from the London School of Economics. A copy of same is attached.

Sincerely,

Queen Annie Gill

Copy of Master Degree

LSE THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Queen Annie Gill

Having completed the approved course of study and passed the examinations has this day been admitted to the London School of Economics and Political Science

Degree of

MASTER OF SCIENCE

With Merit

In the following field of study

Media, Communication and Development

Director, The London School of Economics and Political Science

Chairman of Court and Council

Date of Award

Copy of Bachelor Degree

St. George's University
School of Arts and Sciences

Be it known that the faculty of the
School of Arts and Sciences of St. George's University
in recognition of the successful completion of the required course of study
and by virtue of the authority vested in it by the Trustees
has conferred upon

Queen Annie C. Gill

the degree of

Bachelor of Arts

with all the honors, rights and privileges
thereunto appertaining and has granted this Diploma as evidence thereof.
signed by the authorized officials of the University and duly sealed.

May 11, 2001

Grenada, WI

TUTOR´S FGP APPROVAL REPORT
TO COMMENCE READERSHIP STAGE

Student: JOSH VICTOR

Topic for Final Graduation Project: PROJECT MANAGEMENT PLAN FOR THE CONSTRUCTION OF ST. GEORGE'S MARKET

Tutor: Carlos Brenes Vega **Signature:** **Date:** 15 Nov 2021

Telephone: +506 88125458 **E-mail:** c.brenesv@outlook.com

MERIT CRITERIA: APPROVED TO COMMENCE READERSHIP STAGE

SUMMARY TABLE FOR FULFILLMENT OF MINIMUM FGP REQUIREMENTS

FGP Requirements	Fulfills requirements YES or NO
Introductory section	
Page numbering lowercase Roman numerals on bottom border, 2 space from the last line	Yes
Spacing 1 ½	Yes
Coversheet	Yes
Approval sheet	Yes
Dedication	Yes
Awards	Yes
Table of Contents	Yes
Table of Illustrations	Yes
Index of Tables	Yes
Index of Abbreviations	Yes
Executive Summary	
Summarized Background	Yes
Summarized Objectives	Yes
Summarized Methodology	Yes
Summarized Results and Recommendations	Yes
No more than 2pages long	Yes
Prioritization of Results and Conclusions	Yes
Summary Parts in separate paragraphs	Yes
Single spacing	Yes
1) FGP Introduction	
Written in prose format	Yes
From 3 to 6 pages maximum	Yes
Background	Yes
Problem	Yes
Justification for the Project	Yes
General Objective	Yes
Specific Objectives	Yes

Begin objectives with an infinitive verb	Yes
The What and Why of the Objectives	Yes
Complete sentences for the Objectives	Yes
2) Theoretical Framework	
Elements and variables to consider during the study	Yes
Relation between variables and theorizing	Yes
Referential or Institutional Framework	Yes
Theory of Project Management	Yes
3) FGP Methodological Framework	
Relation with the FGP´s EDT	Yes
Identification and description of the methods, techniques, procedures and tools	Yes
Identification of Research Methods	Yes
Identification of Application Techniques	Yes
Identification of Information Processing and Analysis	Yes
4) Content Development	
The entire document, right margin 2.5 cm and left margin 3.5 cm, superior margin 3.5 cm and inferior margin 3 cm	Yes
Page numbering in Arabic numbering in the superior right area 5 spaces	Yes
1 ½ spacing for the entire document except for the Executive Summary	Yes
Font type Arial 12 or similar	Yes
Title in uppercase and bold	Yes
Subtitle in bold	Yes
Title and numbering above the table throughout the document	Yes
Title and numbering below the figures (Graphs, Diagrams, Photographs, Flow charts, etc.) throughout the document	Yes
Contribution to knowledge, innovation.	Yes
5) Conclusions	Yes
6) Recommendations	Yes
7) FGP Bibliography	
Bibliographical references according to standard format	Yes
Alphabetical order according to author	Yes
Quantity and quality of citations	Yes
8) Annexes	
FGP Charter	Yes
Description of FGP (EDT)	Yes
Timeline	Yes
Secondary information	Yes