

UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

Project Management Methodology for Public Health Inspector Interns at the St.
Ann Health Department

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DEDICATION

In Jamaica, there is a famous saying “A Nuh Weh Yuh Come From, But Weh You Wah Go”, which means your origin/ where you are from (location/societal class) does not limit what you can achieve. I am a true epitome of such saying as coming from a very humble beginning, I have risen above my many obstacles to have had remarkable achievements to date.

I dedicate this thesis to my late father Junior “Comfitan” Dowdie who died May 17, 2018, secondly to myself and finally to all my friends and families who believed in me and continuously provided words of encouragement throughout my study duration.

Lunce Dowdie-Campbell

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ABBREVIATIONS AND ACRONYMS

- CPHI Chief Public Health Inspector
- EH Environmental Health
- FGP Final Graduation Project
- MOH Ministry Of Health
- NERHA North East Regional Health Authority
- PHI Public Health Inspector
- PMBOK Project Management Body of Knowledge
- PMI Project Management Institute
- PMM Project Management Methodology
- PMP Project Management Professionals
- Prince 2 Projects in Controlled Environments
- RHA Regional Health Authority
- SAHD St. Ann Health Department
- UCI University for International Cooperation
- UTECH University of Technology
- WBS Work Breakdown Structure

EXECUTIVE SUMMARY (ABSTRACT)

Since 2010 the University of Technology (UTECH), Jamaica made it mandatory for final year students enrolled to the Bachelor's of Science Degree in Environmental Health with a Major in Public Health Inspection Programme, to successfully implement a community environmental health project as partial fulfillment of the programme. These students are referred to as Public Health Inspector (PHI) interns and are placed in the 14 parishes in Jamaica for a duration of 6 months to implement these projects . Each parish has the responsibility of selecting the community in which each student is placed for the implementation of said projects. Students are normally placed in communities that have significant environmental health problems.

The organization for which the project management methodology was developed, the St. Ann Health Department (SAHD) is in the parish of St. Ann and is a Government Office mandated by the North East Regional Health Authority (NERHA), Jamaica.

From the author's personal experience and several complaints from many of her colleagues, the implementation of community environmental health projects by PHI Interns poses a challenge to many. Though this is a yearly occurrence since 2010 at the SAHD, there exists no formal project management methodology to guide the successful initiation, planning, execution, monitoring and controlling and closing of said projects. The lack of said methodology coupled with the students having little to no knowledge of project management propel the students to develop their own strategies in an effort to aid in the successful completion of said projects. This often led to poor selection of project topics (improper prioritization), projects not being completed on time, unorganized project execution, budget overruns and in a few cases failure to execute the project. It is believed that having some form of structured formal guidelines can significantly assist these students in the management of their projects.

In light of this, the final graduation project (FGP) sought to develop a project management methodology within the standards of the Project Management Institute (PMI) to be utilized by these Interns in the parish. This methodology will provide guidelines for project execution by the PHI interns within the organization and it is hoped that this methodology will become the organization standard.

The general objective of the FGP was "to develop a Project Management Methodology (PMM) to be used by the Public Health Inspector Interns at the St. Ann Health Department in order to improve project execution through standardization". In order to achieve this general objective, five (5) specific objectives were realized: (i) To evaluate the organization's project management needs in order to design the main components of the project management methodology, (ii) To propose a project management methodology to fit the organization's project management needs, (iii) To develop project templates and techniques to utilize for future projects, (iv) To explain the operation of the proposed

methodology to management and intern supervisors to ensure thorough understanding of the methodology, and (v) to create an implementation plan guide for using the proposed methodology.

To achieve the objectives of the FGP both primary and secondary sources of information were utilized. The primary sources utilized were historical and legal documents, statistical data, survey research (questionnaires), reports on selected completed projects whilst the secondary sources were books (Project Management Body of Knowledge Guide, 5th edition), websites, literature studies on project management methodology, and relevant documentation obtained from St. Ann Health Department and via websites of North East Regional Health Authority and Ministry of Health, Jamaica. Research methods utilized were questionnaires, content analysis and documentary review. Firstly, questionnaires were utilized to garner information in order to make an assessment of the organization's project management needs at the time of study. The results of the questionnaires were then analyzed using content analysis. Lastly, documentary review was used to extract specific information from the Project Management Body of Knowledge (PMBOK) Guide and other literatures in order to design the proposed methodology based on the organizations' needs, to develop the necessary templates, explain the proposed methodology and to develop the implementation plan for the proposed methodology.

Results of the survey revealed several challenges being faced by previous PHI Interns at the St. Ann Health Department with planning and organization (44%) and project implementation (33%) being the top 2 challenges faced. Additionally, 65% of the respondents had little to no Project Management knowledge at the time of their internship. A PMM was developed within the PMI standards. The PMM was designed to fit the organization project management needs based on the survey results and taking into consideration existing bureaucracy and organizational process assets. To support the PMM and to obtain standardization for future projects, a total of 10 templates were developed that spanned the 10 project management knowledge areas. The operation of the methodology was explained to management and intern supervisors, an implementation plan guide was developed that encouraged gradual roll-out of the PMM. Lastly, a sample project was created demonstrating the application of the PMM to a typical project of the organization.

Several recommendations were put forward to management of the Environmental Health Unit at the St. Ann Health Department. Firstly, management was advised to ensure strict adherence to the gradual roll-out mechanism of the implementation plan guide to ensure smooth transition into the use of the PMM. Notably, a recommendation was also made for an assessment to be done of each PHI Intern to determine their project management knowledge and provide knowledge where lacking before allowing them to undertake any project utilizing the PMM. Additionally, it was highlighted that the PMM along with the templates are not static documents and thus should be updated regularly to ensure that they respond effectively to the organization's needs and changes in bureaucracy.

1 INTRODUCTION

1.1 Background

The organization for which the project management methodology is being developed, the St. Ann Health Department (SAHD) is a Government Office mandated by the North East Regional Health Authority (NERHA), Jamaica. Jamaica is the third largest Caribbean island and is the largest and most Westerly English speaking island in the Caribbean. The island is divided into 14 parishes that are further grouped into three counties.

In 1997, the Ministry of Health of Jamaica decentralized the administration of its health services in order to provide a cost effective health system, through effective primary health care. Under decentralization, the management of the delivery of health services shifted from central government (Ministry of Health) to 4 semi-autonomous bodies – the Regional Health Authorities (RHA): North East, South East, Southern, and Western Regional Health authority (<http://www.nerha.gov.jm/aboutus.html>).

NERHA consists of 3 parishes (Portland, St. Mary and St. Ann) where the St. Ann Health Department (SAHD) is found. The SAHD is divided into several units which together are responsible for the health and safety of communities within the parish. The environmental health unit is the unit to which this FGP is related. This unit comprises of the Public Health Inspectorate (including Public Health Inspector (PHI) Interns) and the vector control workers. The main areas of the environmental health unit are: Building and Subdivision plans (approving appropriate sewage systems), Environmental Sanitation, Food Safety, Institutional Health, Occupational safety and Health, Port Health and Quarantine, Vector control, Waste Management (include medical, hazardous and other solid waste - eg. domestic) and Water and Waste Water (regulating existing systems).

Since 2010 the University of Technology (UTECH), made it mandatory for final year students enrolled to the Bachelor's of Science Degree in Environmental Health with a Major in Public Health Inspection Programme, to successfully implement a community environmental health project as partial fulfillment of the programme. Students are placed in each of the 14 parishes in Jamaica as PHI Interns with a 6 months time frame to implement a community environmental health project. They are assigned a University tutor along with a field supervisor assigned by the parish. The parish then has the responsibility of selecting the community in which each student

is placed for the implementation of said projects. Students are normally placed in communities that have significant environmental health problems.

These projects most times fall in the areas of environmental health sanitation, vector control and waste management. The aim of these internship projects is to foster community development in both rural and local communities. Thus, for each project the environmental health status of the community assigned is determined via the collection of data that identifies the environmental health problems faced by the community. These problems should then be prioritized by the application of appropriate problem prioritization techniques and subsequently an attempt is made to solve the most feasible problem.

Currently, the health department is without a project management methodology for the initiating, planning, executing, monitoring, controlling and closing of said projects. In light of this, the FGP seeks to develop a project management methodology within the standards of the Project Management Institute (PMI) to be utilized by these Interns in the parish. This methodology will provide guidelines for project execution by the PHI interns within the organization and it is hoped that this methodology will become the organization standard.

1.2 Statement of the problem

The parish of St. Ann, Jamaica like all the other parishes is faced with the task each year to host at least one PHI Intern from the University of Technology Jamaica (UTECH) for a duration of 6 months. For this time frame the intern(s) are expected to successfully implement a community environmental health project. Though this is a yearly occurrence since 2010, there exists no formal project management methodology to guide the successful initiation, planning, execution, monitoring and controlling and closing of said projects. This has led to poor selection of project topics (ease of completion used to select priority problem to be solved), projects not being completed on time, poorly executed projects, budget overruns and in a few cases failure to execute the project. The opportunity therefore exists for a Project Management Methodology to be developed to be utilized by the Public Health Inspector Interns at the St. Ann Health Department. The use of this methodology will significantly improve the selection and organization of projects and the overall quality of the project execution and its deliverables within this realm in the parish.

1.3 Purpose

From the author's personal experience and several complaints from many of her colleagues, the implementation of community environmental health projects by Public Health Inspector (PHI) Interns poses a challenge to many. These interns are students of the UTECH, Jamaica BSc in Environmental Health program. They are placed yearly for 6 months in each of the 14 parishes of Jamaica.

In the parish of St. Ann Jamaica, there exists no formal project management methodology as to how these projects are initiated, planned, executed, monitored, controlled and closed. The lack of said methodology coupled with the students having little to no knowledge of project management propel the students to develop their own strategies in an effort to aid in the successful completion of said projects. This often leads to poor selection of project topics, projects not being completed on time, poorly executed projects, budget overruns and in a few cases failure to execute the project. Having some form of structured formal guidelines will significantly assist these students in the management of their projects.

The aim of this FGP is to develop a project management methodology within the standards of the Project Management Institute (PMI) to be utilized by these Interns in the parish. This methodology will provide guidelines for project execution by the PHI interns within the organization and it is hoped that this methodology will become the organization standard. The expected benefits to be derived from having such project management methodology are:

- Students will use the correct method to prioritize problems found.
- Projects will be properly initiated, planned, executed, monitored, controlled and closed.
- All stakeholders for the projects will be identified and engaged for project duration and beyond, where necessary.
- Adequate risk management will be done.
- Projects will be completed on schedule and within budget.

This FGP also produced the organization project management needs, project templates and techniques, an explanation of the proposed methodology, its implementation plan guide and a sample project showing application of the PMM to a typical project of the organization.

1.4 General objective

The general objective of the study was to develop a Project Management Methodology to be used by the Public Health Inspector Interns at the St. Ann Health Department in order to improve project execution through standardization.

1.5 Specific objectives

The specific objectives of the study were:

1. To evaluate the organization's project management needs in order to design the main components of the project management methodology.
2. To propose a project management methodology to fit the organization's project management needs.
3. To develop project templates and techniques to utilize for future projects.
4. To explain the operation of the proposed methodology to management and intern supervisors to ensure thorough understanding of the methodology.
5. To create an implementation plan guide for using the proposed methodology.

2 THEORETICAL FRAMEWORK

2.1 Company/Enterprise framework

The St. Ann Health Department is a subsidiary of the North East Regional Health Authority, which is one of the four (4) Regional Health Authorities under the Ministry of Health in Jamaica.

2.1.1 Company/Enterprise background

The Ministry of Health in Jamaica is in charge of ensuring that there is adequate, effective and efficient health service for the population of Jamaica. Effective primary health care is the most important element in providing a cost effective health system (<http://www.moh.gov.jm/>). With this in mind, in 1997 Jamaica decentralized the administration of its health services in order to improve organizational performance in business and co-production of government services and to foster community development in both rural and local communities. Four regional Health Authorities were established, namely North East, South East, Southern, and Western Regional Health authority (Ministry of Health, Background, 2009). North East Regional Health Authority comprises Portland, St. Mary and St. Ann. South East Regional Health Authority (SERHA) comprises of Kingston, St Andrew, St. Thomas and St. Catherine. Southern Regional Health Authority comprises Clarendon, Manchester and St. Elizabeth. Finally, Western Regional Health Authority is responsible for the parishes of St James, Westmoreland, Trelawney and Hanover (http://www.mission-jamaica.com/files/guidelines/HEALTH_DEPARTMENTSINFO.pdf).

The St. Ann Health Department is located in the Parish of St. Ann Jamaica. It comprises of several units including Environmental Health, Health Education, Mental Health, Curative Health, Health Records and Maternity and Child Health which together are responsible for the health and safety of communities within the parish. The FGP is related to the Environmental Unit, which comprises of the public health inspectorate (including the PHI interns), a secretary, data entry clerks and the vector control workers. This EH unit consists of the following main areas:

- Building and Subdivision plans (approving appropriate sewage systems)
- Environmental Sanitation
- Food safety
- Institutional Health
- Occupational Safety and Health
- Port Health and Quarantine
- Vector control

- Waste Management (includes medical, hazardous and other solid waste eg. Domestic)
- Water and Waste Water (regulating existing systems).

2.1.2 Mission and vision statements

The St. Ann Health Department operates under the mission and vision statements of NERHA which are:

Mission

“The Mission of the North-East Regional Health Authority is, in partnership with other stakeholders, to promote the physical, mental, social and spiritual well-being and enhanced quality of life for the residents of St. Ann, St. Mary and Portland. This, by empowering individuals and communities and ensuring access to adequate health care through the provision of cost effective, primitive, preventive, curative and rehabilitative services.”
(<http://www.nerha.gov.jm/aboutus.html>).

Vision

“Healthy lifestyles, healthy environment ...healthy people”
(<http://www.nerha.gov.jm/aboutus.html>)

The aim of this FGP was to develop a project management methodology within the standards of the Project Management Institute (PMI) to be utilized by PHI Interns who are mandated to conduct community environmental health projects. These projects are aimed at fostering community development via conducting a study to determine the community’s environmental health concerns and prioritizing the most suitable one (s) to be solved. Having developed communities can therefore lead to healthy lifestyles, healthy environment and eventually healthy people as is the vision of the health department. Having this methodology will see a more sustainable execution of projects within the parish. If these benefits are derived, the methodology could be adopted across the region to see a more widespread benefit.

2.1.3 Organizational structure

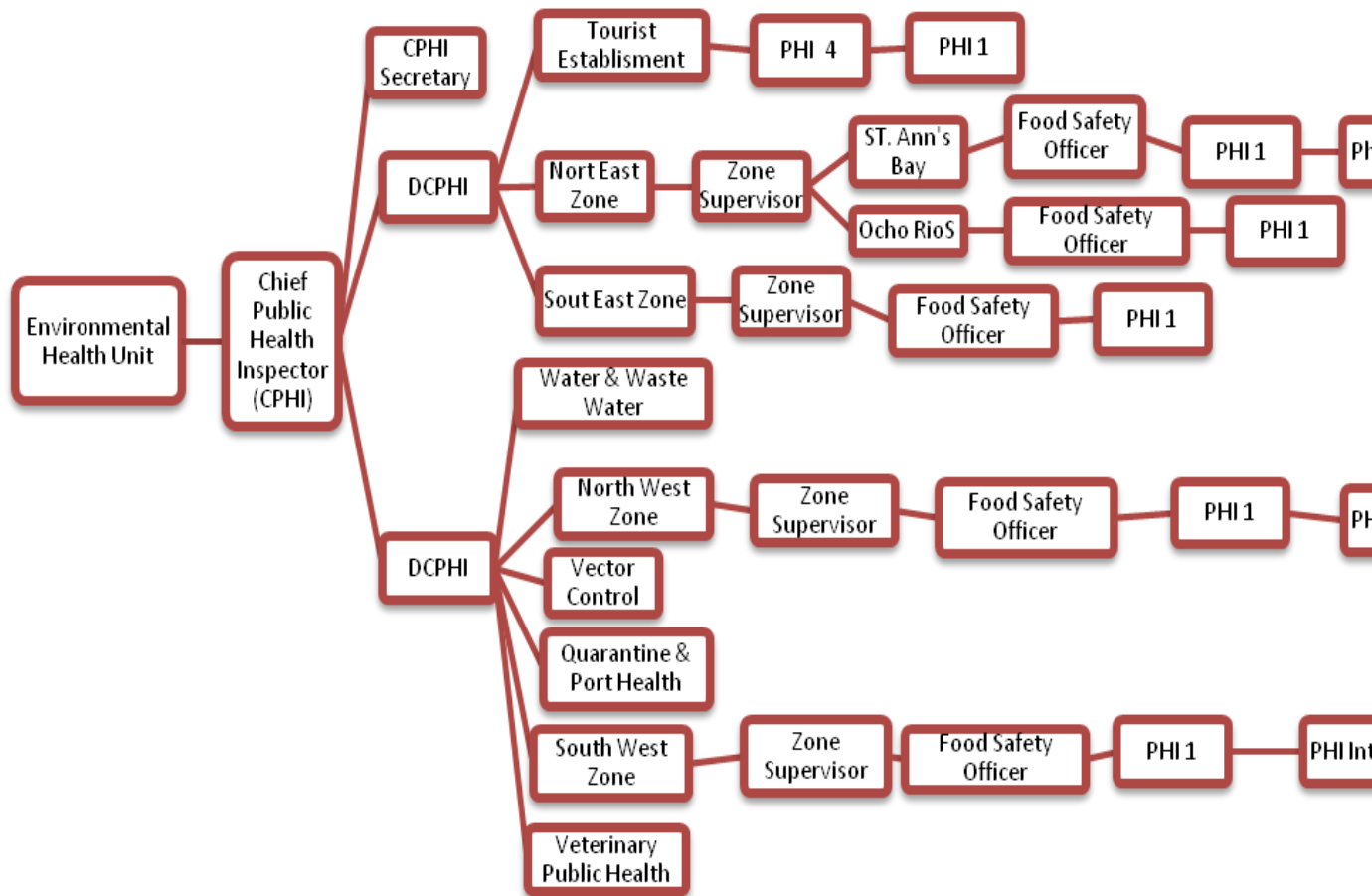


Figure 14. Organizational structure. Compiled by author, 2017)

Figure 1 shows the current organizational structure of the Environmental Health (EH) Unit of the SAHD. This structure was created by the author after consultation with both deputy chief public health inspectors. The EH Unit was headed by a Chief Public Health Inspector followed by two deputies. The chief was provided with a secretary who performs administrative duties. The unit was divided into four zones namely North East, South East, North West and South West. Within each zone there exists a zone supervisor (PHI3), 1 or 2 food safety officers (PHI2) and 1 or 2 Grade 1 Public Health Inspectors (PHI) as depicted in Figure 1 above. The unit also comprises of specialist PHIs in the areas of Quarantine & Port Health, Tourist Establishment, Vector Control, Veterinary Public Health and Water & Waste Water. The two deputy chiefs oversaw the zones and specialist areas, one for the easterly zones and tourist establishments and the other for the westerly zones and all other specialist areas. Two data entry clerks also served two zones each and were being supervised by each of the deputy chiefs.

At the time of the study there were three (3) Public Health Inspector Interns in the parish, one each in the North East, North West and South West Zones. PHI Interns are under the direct supervision of the zone supervisors. After successfully completing their projects, registration with the council of professionals and a satisfactory performance evaluation from their supervisors, they are usually employed as level 1 Public Health Inspectors once there are vacancies and the parish budget can accommodate it.

2.1.4 Products offered

The Environmental Health Unit of the SAHD offers numerous services and products to the communities in order to aid the parish in fulfilling its responsibility of maintaining the health and safety of its communities. The following are the main duties conducted by the unit:

- i. Disease investigations.
- ii. Inspection of meat and poultry to ensure that they are fit for human consumption.
- iii. Burial site inspections.
- iv. Training and certification of food handlers', barbers, hairdressers, cosmetologists, and beauty therapists.
- v. Organization and conducting of health education sessions at various forums.
- vi. Inspection and certification of all categories of food handling establishments.
- vii. Inspection of all public institutions, spirit license establishments, beauty salons, barber-shops and other service establishments and residential and non- residential premises to ensure compliance with public health standards.
- viii. Investigate complaints of insanitary conditions in reference to points VI and VII and initiate action for control, eradication or disposal.
- ix. Discuss local public health problems with relevant authorities and supply information and advice on such problems.

During internship the PHI interns are only allowed to conduct residential premises inspections by themselves, all other inspections/investigations must be supervised and done jointly with a PHI. For health education sessions the PHI interns conduct said inspections using material vetted by the SAHD and UTECH. The aim of this FGP is to have a project management methodology that will aid in the effective organization and execution of the internship projects resulting in quality deliverables. These deliverables can get the communities which the parish serves to a certain standard to allow for ease of health and safety maintenance. Also, having

quality sustainable deliveries from such projects can foster a better working relationship between the St. Ann Health Department and the communities it serves.

2.2 Project Management concepts

Project management like any other discipline has their unique terms, concepts/ theories. This looked at the various project management terms and concepts (project, project management, project life cycle, project processes and process groups and knowledge areas). It also looked specifically at the concept of project management methodology as is the topic of choice for this final graduation project.

2.2.1 Project

A project is defined by the Association for Project Management (APM) as “a unique transient endeavour undertaken to achieve planned objectives defined in terms of outputs, outcomes or benefits” (APM, 2017). The Project Management Body of Knowledge Guide, 5th edition, 2013 has a slightly different definition which is “a project is a temporary endeavour undertaken to create a unique product, service or result” (p.3). A project is usually deemed to be successful if it achieves the objectives according to their acceptance criteria, within budget and at the agreed timeframe. A project is considered temporary because it has a defined beginning and end and is seen as unique in that it is not a routine operation but rather a specific set of operations designed to accomplish a singular goal (PMI 2017). The PMBOK Guide 5th edition 2013 highlighted that a project may come to an end when its objectives have been met, when its objectives will not or cannot be met, the need for the project no longer exist or it is the wish of the client (customer, sponsor or champion) to terminate the project (p.3). Projects can be simple as well as complex, an example of a simple project is to create a database using Microsoft Access to easily store, organize and retrieve company employee information whilst an example of a complex project is the design and building of a toll road.

2.2.2 Project management

A project can be used to seize an opportunity or to solve a problem. When this need arises, its order is to have success from the project's conception to completion; therefore, the project must be carefully planned and guided. This is achieved through project management. The PMBOK Guide 5th edition, 2013 defines project management as "the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements (PMBOK Guide 5th

edition, 2013, p.9). On the other hand, Management Study Guide (MSG), 2017 defines project management as "the art of managing all the aspects of a project from the inception to closure using scientific and structured methodology".

(<http://www.managementstudyguide.com/project-management-rational-approach.htm>).

In order to meet the project requirements or to achieve specific goals it is imperative that a project management plan be developed. The project management plan is iterative and must be progressively elaborated throughout the life of the project. Progressive elaboration speaks to continuously and constantly modifying, detailing and improving the plan as newer and more improved (as well as highly detailed) sets of information becomes available to the project management team and the project management team leader as the project unfolds and begins taking place, (<https://project-management-knowledge.com/definitions/p/progressive-elaboration/>).

2.2.3 Project life cycle

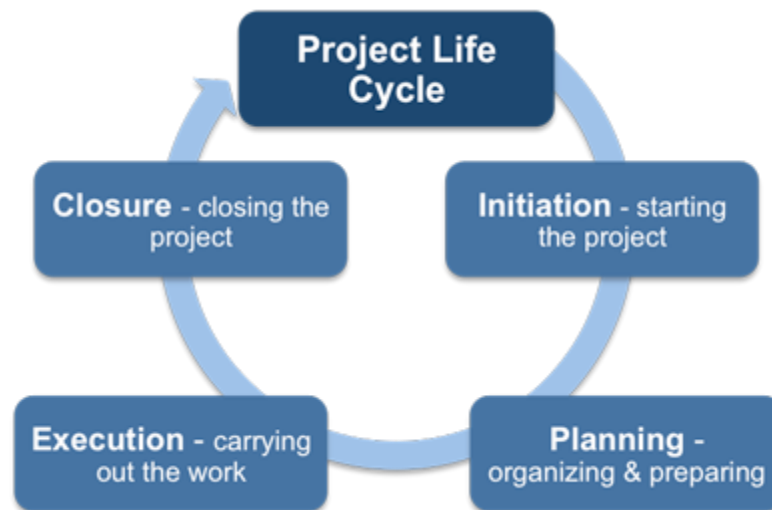


Figure 2: Project life cycle. Free Management E-books retrieved from <http://www.free-management-ebooks.com/faqpm/principles-08.htm>

A project may be divided into a number of phases depending on things such as size, complexity, time frame and potential impact(s) of the project. A normal project usually has four major phases: initiation, planning, execution/ implementation and closing. Collectively these phases are referred to as the project life cycle as depicted in figure 2 above. The PMBOK Guide

defines a project life cycle as “series of phases that a project passes through from its initiation to closure”,(PMBOK Guide, 5th edition , 2013, p.38) whilst Watt (2014) gives an even simpler definition “the path a project takes from the beginning to its end”. According to the PMPBOK Guide, 5th edition, 2013, all projects can be mapped according to the generic life cycle of: (i) starting the project, (ii) organizing and preparing, (iii) carrying out the project work and (iv) closing the project, (p.39).

The life cycle of the projects for which this FGP seeks to develop the project management methodology are similar to the generic life. Projects conducted by the PHI Interns are normally initiated, planned, executed, monitored and controlled and then closed. In the initiation stage , the community project is introduced to community members via data collection that identifies the environmental health problems faced by the community, after data is collected appropriate problem prioritization techniques are then used to determine the most feasible problem(s) to be solved. From here the activities and tasks required to solve these problems are developed in the planning phase along with the resources needed, estimated cost and the project schedule. Implementation is then done according to schedule. After completion the deliverables are handed over to the communities via a closing ceremony and the necessary documentations such as lessons learnt are done. From as early as the project initiation, active monitoring and controlling takes place due to the nature of these projects.

2.2.4 Project management processes

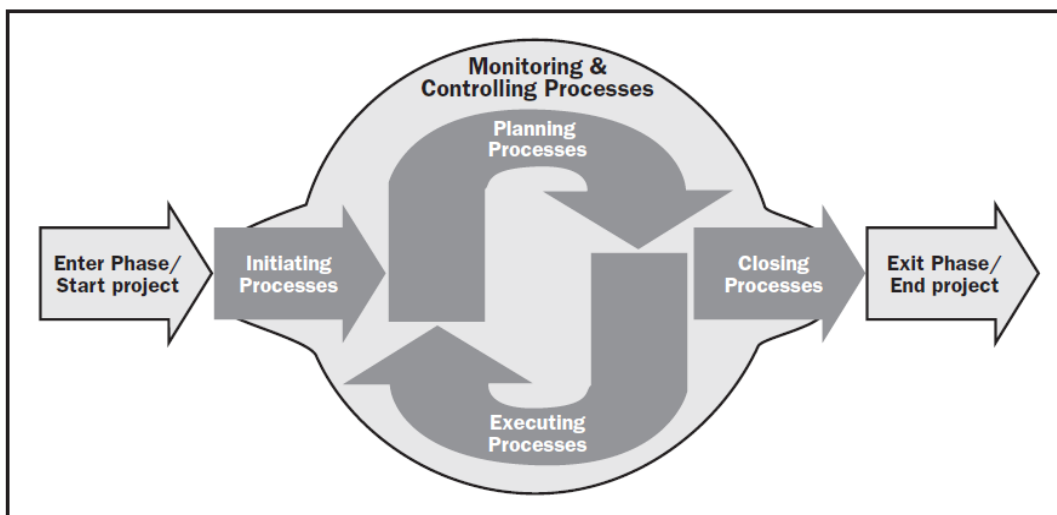


Figure 3. Project management process groups. Adopted from PMBOK Guide , 5th edition, 2013

The PMBOK Guide, 5th edition defines a process as “a set of interrelated actions and activities performed to create a pre-specified product, service or results”, (PMBOK Guide 5th edition, 2013). In project management, there are 47 processes which are grouped in 5 categories (initiating, planning, executing, monitoring and controlling and closing) known as the project management process groups (or process groups) as depicted in Figure 3 above. There are 2 key factors that will highly influence options for project management processes in order to meet project needs, the organizational process assets and the environmental factors. It should be noted that, there is more than one way to manage a project and thus the required process groups and their processes are guides for applying appropriate project management knowledge and skills during the project.

The initiating process sets the vision for the project, that is what is needed to be accomplished. This may arise from an opportunity that can be grasped or a problem that needs to be solved. In this group, the feasibility of undertaking the project is established, alternatives are identified, stakeholders are identified and a proposal for the project is made via a project charter. Arising from this process group are the formal authorization by the sponsor (signed project charter) and the selection of a project manager if none existed previously. Upon obtaining the go ahead comes the crucial step of planning. The project management plan (PMP) is developed through an iterative process called progressive elaboration and all the necessary baselines (schedule, scope, budget) are created. Simply put, in the planning process group, the project scope is developed and the course of actions required to meet the objectives of the project or phase are defined. Of significance in this process group is also the consideration of possible risks and the development of appropriate risk responses.

After successful planning comes the execution process group whereby the work is completed according to the PMP to satisfy the project specifications. The next process group monitoring and controlling unlike all the other process groups that occurs sequentially is done throughout the entire life of the project. According to the PMBOK Guide (2013), the monitoring and controlling processes are “those processes required to track, review and regulate the progress and performance of the project; identify any areas in which changes to the plan are required; and initiate corresponding changes”, (PMBOK Guide, 5th edition, 2013, p.49). For the final

stage, closing, not only is the project or phase formally closed (finalizing all activities) but sign off and acceptance from customer(s) must be obtained.

The project management process groups of initiating, planning, execution, monitoring and controlling as well as closing are familiar to the PHI interns and the Environmental Health Unit of SAHD in lay man terms. However, as it relates to the project management processes being iterative, they are lacking in that knowledge.

2.2.5 Project management knowledge areas

Chart 1 Project Management Process Groups and Knowledge Area Mapping

Knowledge Areas	Process Groups				
	Initiating	Planning	Executing	Monitoring & Controlling	Closing
Project Integration Management	Develop Project Charter	Develop Project Management Plan	Direct and Manage Project Work	Monitor and Control Project Work Perform Integrated Change Control	Close Project or Phase
Project Scope Management		Plan Scope Management Collect Requirements Define Scope Create WBS		Validate Scope Control Scope	
Project Time Management		Plan Schedule Management Define Activities Sequence Activities Estimate Activity Resources Estimate Activity Durations Develop Schedule		Control Schedule	
Project Cost Management		Plan Cost Management Estimate Costs Determine Budget		Control Costs	
Project Quality Management		Plan Quality Management	Perform Quality Assurance	Control Quality	
Project Human Resources Management		Plan Human Resources Management	Acquire Project Team Develop Project Team Manage Project Team		
Project Communications Management		Plan Communications Management	Manage Communications	Control Communications	
Project Risk Management		Plan Risk Management Identify Risks Perform Qualitative Risk Analysis Perform Quantitative Risk Analysis Plan Risk Responses		Control Risks	
Project Procurement Management		Plan Procurement Management	Conduct Procurements	Control Procurements	Close Procurements
Project Stakeholder Management	Identify Stakeholders	Plan Stakeholder Management	Manage Stakeholder Engagement	Control Stakeholder Engagement	

Note: From “PMBOK Guide, 5th edition, 2013”, p. 61.

Chart 1 highlights the 10 knowledge areas and their interactions with the 5 process groups (grouping of the 47 project management processes). A knowledge area according to the PMBOK Guide 5th edition represents a complete set of concepts, items and activities that make up a professional field, project management field or area of specialization, (PMBOK Guide, 2013, p.61).

The first step in carrying out a project once the project idea is generated is to obtain approval for said project via signing of the submitted project charter by the project sponsor. After obtaining approval the next step is to plan the project by developing a project management plan (PMP). The PMP will give the overall management approach for the project and will also include management plans for all the other knowledge areas: scope, time, cost, quality, procurement, risk, human resource, communications and stakeholders. All this will be done in the project integration management knowledge area; this is where all the knows of the project are brought together so that the project can be managed holistically and not by individual processes, (Harrin 2017).

It is very important to know what the project includes and what is not included, this is achieved through a project scope statement detailed in the project scope management knowledge area. Here the work breakdown structure is created detailing all the work required for completion of the project. After knowing what to do, it is essential that a timeframe be attached; this timeframe is set in the time management knowledge area where schedules are created to manage the timely completion of the project. Having all this, the cost for the project execution can then be estimated, (project cost management). For timely completion of the project to be done, this will be dependent on:

- how well risks are managed, (project risk management)- are there measures in place to increase the likelihood and impact of positive events and decrease the likelihood and impact of negative events?,
- the human resources available (human resource management),
- purchasing and timely delivery of required goods and services (procurement management),
- quality of goods and services procured as well as that of work performed by project team- will rework be required?, (project quality management)
- stakeholder engagement- were all stakeholders identified and their role, power and interest understood?(project stakeholder management)

To have overall success from the integration of these knowledge areas communication is key, the right channel and medium of communication must be chosen for all stakeholders involved including project team members, sellers and buyers (project communication management).

For the FGP through the development of the project management methodology all knowledge areas were addressed.

2.3 Project Management Methodology

2.3.1 Project management methodology overview

The term project management methodology (PMM) was first defined in the early 1960's when various business organizations began to look for effective ways that could simplify the realization of business benefits and organize the work into a structural and unique entity (called "project" later on), (McConnell, 2010). Since then the term has undergone several modifications and changes creating new definitions and addition of terms and elements. McConnell (2010) also highlighted that a PMM is a scientifically proven, systematic and disciplined approach to project design, execution and completion and is defined today as "a strictly defined combination of logically related practices, methods and processes that determines how best to plan, develop, control and deliver a project throughout the continuous implementation process until successful completion and termination", (McConnell, 2010).

In light of the above, a PMM is therefore a very critical component for the active and effective management of projects. Not only to have, but each user must understand its importance and understand and be able to carry out their role as required by the plan. Failure to use a PMM may jeopardize an organization's efforts and overall effectiveness in respect to knowledge management, repeatability, comparability, quality and future impact, (Ozmen 2010).

According to literature, a PMM serves the purpose of providing a framework that describes/outlines what is to be done, by whom and by when so that project deliverables can be achieved according to planned specifications. Choosing the appropriate PMM paves the way to gaining the following achievements as put forward by McConnell (2010):

- Stakeholders needs are defined
- A common "language" is established and understood by the team; their expectations are known.
- Cost estimates are complete, accurate and credible
- Every task is done using a common methodological approach
- Most conflicts are spotted and resolved early
- Expected deliverables are produced and handed over

- Lessons are learnt and solutions are implemented quickly.

On the other hand, Ozmen (2013) postulated that a PMM is indispensable to ensure project success in terms of knowledge management, repeatability, comparability, ongoing improvements and quality. Overall, being that a PPM acts as a guide or framework for the design, execution and completion of a project it therefore provides the opportunity for the consideration of what might go wrong at each phase or process and allows for the development of specific corrective actions and implementation plan and guide. It can also act as the means of providing baselines for which overall project team performance can be matched against.

2.3.2 Project management methodology types

Chart 2 Summary of Popular Project Management Methodology

Project Management Methodology	About	When to Use it
Agile	<ul style="list-style-type: none"> • The core values of Agile can be summed up as follows: individuals over processes, working software over detailed documentation, customer collaboration over contract negotiation and responding to change over rigid planning. 	<ul style="list-style-type: none"> • Originated in software development. • Has been applied to non-software products that seek to drive forward with innovation and have a level of uncertainty, such as computers. • Also being used in other types of projects that need a more responsive and fast-paced production schedule, such as marketing.
Critical Chain Project Method (CCPM)	<ul style="list-style-type: none"> • Focuses on resources that will be used to complete the project, such as teams, equipment and material. 	<ul style="list-style-type: none"> • Can be applied to both large and small companies, and for projects that include industries such as construction, software development and tech research and development.
Critical Path Method (CPM)	<ul style="list-style-type: none"> • Starts with a list of all activities, or a work breakdown structure, the duration of each task, what dependencies there are and then mapping milestones and deliverables. 	<ul style="list-style-type: none"> • CPM works better with smaller or mid-sized projects. The larger the project, the more difficult it can be to take all the data you need to diagram and make sense of it without software
Kanban	<ul style="list-style-type: none"> • Visual approach to project management. The name is literally <i>billboard</i> in Japanese. It helps manage workflow by placing tasks on a Kanban board where workflow and progress is clear to all participants. Kanban helps improve inefficiencies, and has been used to schedule lean manufacturing in Agile projects. 	<ul style="list-style-type: none"> • Developed initially for manufacturing and for software teams, • Has since expanded and has been used in human resources, marketing, organizational strategy, executive process and accounts receivable and payable.
Lean	<ul style="list-style-type: none"> • Focuses on key processes to continuously have a positive impact on value by optimizing separate technologies, assets and verticals. 	<ul style="list-style-type: none"> • Manufacturing. • Has been adopted by construction and education industries, among others in the manufacturing space and countless startups and software development
Prince 2	<ul style="list-style-type: none"> • PRINCE2 stands for Projects IN Controlled Environments, and is a structured certified methodology. • Initially created by the UK government for IT projects. • It is not a one-size-fits-all solution, but follows seven principles, themes and procedures. 	<ul style="list-style-type: none"> • Adopted by many other country's governments
Scrum	<ul style="list-style-type: none"> • Scrum is a short "sprint" approach to managing project. It's ideal for teams of no more than 10 people, and often is wedded to two-week cycles with short daily meetings. It's led by what is called a Scrum master. 	<ul style="list-style-type: none"> • Used predominantly in software development, but proponents note it is applicable across any industry or business that requires some flexibility.
Six Sigma	<ul style="list-style-type: none"> • Works to improve quality by identifying what is not working in the project. It applies quality management, including empirical statistics, and employs personnel who are experts in these disciplines. 	<ul style="list-style-type: none"> • Works best in larger organizations
Waterfall	<ul style="list-style-type: none"> • The model is in six parts, beginning with capturing requirements in a document, creating models to analyze them, designing, coding, testing and installing and maintenance of that system. 	<ul style="list-style-type: none"> • Great for manufacturing and construction projects, which are highly structured and when it's too expensive to pivot or change anything after the fact.

Note: Adapted from <https://www.projectmanager.com/blog/project-management-methodology>. Copyright 2017 and <http://www.mymanagementguide.com/basics/project-methodology-definition/>. Copyright 2010-2017 by MyManagementGuide.com MyMg.

Chart 2 illustrates some of the most popular project management methodologies, what they are and where they are normally used. Choosing a unified singular PMM is an effective approach by which to consolidate prior efforts in an organization, (Ozmen, 2013). Based on the types highlighted in chart 2 and the nature of the projects conducted by the PHI Interns, a PPM using the Critical Path Method was most suitable to be developed in this FGP. The PHI Interns have a strict timeframe of 6 months and there are set milestones at which certain deliverables must be produced from the projects.

2.3.3 Project Management Methodology Development

There are two ways in which a PPM can be developed, by creating your own or by tailoring whereby most suitable portions from industry standards are adopted. This FGP tailored a PMM that met PMI standard in order to develop a PMM that met the needs of the project types normally undertaken by PHI Interns. In tailoring the PMM, the researcher utilized the following 3 steps as proposed by Plewiski in a study undertaken in 2014 to design and implement a PMM in an organization of 2000+ staff: (i) Maturity assessment, (ii) methodology development and (iii) methodology implementation.

In maturity assessment an analysis was done of existing project management practices of the PHI interns and the strengths and weaknesses of the practices were assessed. This step was important as it provided the requirements and the needs for the methodology which were needed to design the main components of the PMM. The PMM was then developed according to the results of the assessment adopting PMI standards. Due to time constraints the methodology was not implemented, however, as stated in the specific objectives an implementation plan guide was created for the proposed methodology.

3 METHODOLOGICAL FRAMEWORK

3.1 Information sources

According to Business Dictionary.com information is “ data that is (1) accurate and timely, (2) specific and organized, (3) presented within a context that gives it meaning and relevance and (4) can lead to an increase in understanding and decrease in uncertainty, (<http://www.businessdictionary.com/definition/information.html>). The source of information is the means by which a person is informed about something or knowledge is availed to someone, a group of people or an organization, (http://karibouconnections.net/medlibafrica/training_module/pdf/module1.pdf). According to Yale University Library there are three major sources of information: (i) primary sources, (ii) secondary sources and (iii) tertiary sources, (<https://guides.library.yale.edu/c.php?g=295913&p=1975839>).

3.1.1 Primary sources

According to Yale University Library,` primary sources of information are “original materials on which other research is based; they are from the time period involved and have not been filtered through interpretation or evaluation”, (<https://guides.library.yale.edu/c.php?g=295913&p=1975839>). Ethaca College Library on the other hand explained that a primary source of information provides direct or firsthand evidence about an event, object, person or work of art, (<https://library.ithaca.edu/sp/subjects/primary>). Examples of primary sources of information according to both sources are:

- Records of organization/ government agencies
- Historical and legal documents
- Statistical data
- Internet communication such as emails and blogs
- Results of experiments
- Articles from newspaper, magazine, journals (published at the time)
- Survey research

The primary sources of information utilized in the FGP were: historical and legal documents, statistical data, survey research (questionnaires), reports on selected completed projects.

3.1.2 Secondary sources

Secondary sources of information describe, discuss, interpret, comment upon, analyze, evaluate, summarize and process primary sources, (<https://library.ithaca.edu/sp/subjects/primary>). Yale University Library postulated that secondary sources of information are accounts written after the fact with the benefits of hindsight and that they are not evidence, but rather commentary on and discussion of evidence, (<https://guides.library.yale.edu/c.php?g=295913&p=1975839>). Examples of secondary sources are:

- Websites
- Books
- Literature studies
- Articles from newspaper, magazine, journals (after the event)
- Criticisms of work

For the FGP the secondary sources used were: books (Project Management Body of Knowledge Guide, 5th edition), websites, literature studies on project management methodology, and relevant documentation obtained from St. Ann Health Department and via websites of North East Regional Health Authority and Ministry of Health, Jamaica.

Chart 3 Information sources (Source: Created by Author)

Objectives	Information sources	
	Primary	Secondary
To evaluate the organization's project management needs in order to design the main components of the project management methodology.	-Historical and legal documents -Statistical data -Survey research (questionnaires) -Reports on selected completed projects	-Project Management Body of Knowledge Guide, 5 th edition, 2013 websites -Literature studies on project management methodology -Relevant documentation obtained from St. Ann Health Department, and via websites of North East Regional Health Authority and Ministry of Health, Jamaica.

<p>To propose a project management methodology to fit the organization's project management needs</p>	<ul style="list-style-type: none"> -Historical and legal documents -Statistical data -Survey research (Analysis of questionnaires results) -Reports on selected completed projects 	<ul style="list-style-type: none"> -Project Management Body of Knowledge Guide, 5th edition, 2013 -Literature studies on project management methodology -Relevant documentation obtained from St. Ann Health Department and via websites of North East Regional Health Authority and Ministry of Health, Jamaica.
<p>To develop project templates and techniques to utilize for future projects.</p>	<ul style="list-style-type: none"> -Historical and legal documents -Statistical data -Survey research (Analysis of questionnaires results) -Reports on selected completed projects 	<ul style="list-style-type: none"> -Project Management Body of Knowledge Guide, 5th edition, 2013 -Literature studies on project management methodology
<p>To explain the operation of the proposed methodology to management and intern supervisors to ensure thorough understanding of the methodology.</p>	<ul style="list-style-type: none"> -Historical and legal documents -Survey research (Analysis of questionnaires results) 	<ul style="list-style-type: none"> -Project Management Body of Knowledge Guide, 5th edition, 2013 -Literature studies on project management methodology

<p>To create an implementation plan guide for using the proposed methodology.</p>	<p>-Historical and legal documents -Survey research (Analysis of questionnaires results)</p>	<p>-Project Management Body of Knowledge Guide, 5th edition, 2013 -Literature studies on project management methodology</p>
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Chart 3 shows a summary of the various primary and secondary sources of information that were used for each specific objective in order to successfully complete the FGP.

3.2 Research methods

Bajpai (2011) defines research methods as, “the systematic and scientific procedure of data collection, compilation, analysis, interpretation, and implication pertaining to any business problem”, (<https://research-methodology.net/research-methodology/research-types/>). A research method is systematic in that, there is a definite set of procedures and steps that will be followed, (Mahmood, 2011). Several types of research methods exists such as survey research (questionnaires, interviews), observational research, content analysis, case study, and the analysis of documents and historical records. The research methods used in this FGP were: questionnaires, content analysis and documentary analysis.

3.2.1 Questionnaires

Umunakwe, Iroeze and Eze, (2013) in a research article *Evaluation of a Questionnaire* cited Brown (2001) definition of a questionnaire “any written instrument that provides respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers”. The questionnaire is most frequently a very concise pre-planned set of questions designed to yield specific information to meet a particular need for research information about a pertinent topic, (Umunakwe etal, 2013). For this FGP questionnaires were used to garner information about the project management needs of the Environmental Health Unit at the St. Ann Health Department as it relates to community environmental health projects conducted by PHI Interns. The questionnaires consisted of both open and closed ended questions and were self administered by the author to the existing PHI Interns, PHIs who graduated in the year 2010 and afterwards and conducted their internship in St. Ann, PHI Intern Supervisors, Deputy Chiefs and the Chief Public Health Inspector.

3.2.2 Content Analysis

Content analysis according to sociologyguide.com is a research technique for the systematic, objective and quantitative description of the content of the research data procured through interviews, questionnaires, schedules and other linguistic expressions, written or oral, (<http://www.sociologyguide.com/research-methods&statistics/content-analysis.php>). For the FGP content analysis was used to analyze new material recorded by the researcher and to classify open-ended responses from the questionnaires.

3.2.3 Documentary Analysis

Documentary analysis is a social research method which is used as a tool for obtaining relevant documentary evidence to support and validate facts stated in a research, especially during the chapter of literature review, (Annum, 2016). This was used in the FGP to aid the author to extract the relevant sections from literatures that can be deemed as statements of facts to validate research objectives.

Chart 4 Research methods (Source: Compiled by Author)

Objectives	Research methods		
	Questionnaires	Content Analysis	Documentary Analysis
To evaluate the organization's project management needs in order to design the main components of the project management methodology.	Questionnaires will be used to garner information to assess the current project management needs of the Environmental Health Unit at the St. Ann Health Department as it relates to community environmental health projects conducted by PHI Interns.	Content analysis will be used to analyze any new material recorded by the researcher and to classify open-ended responses from the questionnaires.	This will be used to extract the relevant sections from information obtained from the St. Ann Health Department that will aid in designing the main components of the project management methodology.
To propose a		Content analysis	Documentary analysis

<p>project management methodology to fit the organization's project management needs</p>		<p>results will be used to propose the best suited project management methodology.</p>	<p>will be used to extract relevant sections from the literatures and PMBOK Guide to propose the best suited project management methodology.</p>
<p>To develop project templates and techniques to utilize for future projects.</p>		<p>Content analysis results will be used to develop the necessary project templates.</p>	<p>This will be used to extract the relevant sections from literatures and the PMBOK Guide in order to develop the necessary templates.</p>
<p>To explain the operation of the proposed methodology to management and intern supervisors to ensure thorough understanding of the methodology.</p>			<p>This will be used to extract the relevant sections from literatures and the PMBOK Guide that are necessary to provide a thorough explanation of the methodology.</p>
<p>To create an implementation plan guide for using the proposed methodology.</p>		<p>Content analysis results will be used as a guide to steer the development of the implementation plan guide.</p>	<p>This will be used to extract the relevant sections from literatures and the PMBOK Guide to develop the implementation plan guide.</p>

Chart 4 shows a summary of how the various research methods were applied in an effort to achieve each specific objective in order to successfully complete the FGP..

3.3 Tools

According to the PMBOK Guide, 5th edition, 2013 a tool is “something tangible such as a template or software program used in performing an activity to produce a product or result”, (p.565). Dictionary.com gave an even simpler definition “a tool is anything used as a means of accomplishing a task or purpose”, (<http://www.dictionary.com/browse/tool>). A research tool on the other hand is defined as “anything that becomes a means of collecting information for your study, for example observation forms, interview schedules, questionnaires, interview guides”, (<http://www.civilengineeringterms.com/research-methodology/definition-research-tool-forms/>).

To garner the necessary information for the successful completion of the FGP the following tools were utilized: analytical techniques, expert judgment, interactive communication and questionnaires.

3.3.1 Analytical techniques

Analytical techniques are the various techniques used to evaluate, analyze, or forecast potential outcomes based on possible variations of project or environmental variables and their relationships, (PMBOK Guide, 5th edition, 2013, p.528). Analytical techniques are used to solve specific issues in a particular task. For this FGP, analytical techniques was utilized in the assessment of the organization’s project management needs, in developing the project management methodology based on the resulting needs, to describe how said methodology will work and in developing its implementation plan guide.

3.3.2 Expert judgment

Expert judgment is judgment provided based upon expertise in an application area, knowledge area, discipline, industry, etc., as appropriate for the activity being performed, (PMBOK Guide, 5th edition, 2013, p.539). Alderman (2011) in a blog post *PMP Exam Tip* gave Crowe’s definition of expert judgment as “using knowledgeable groups or individuals to assist in project decisions”, (<https://www.velociteach.com/2011/04/pmp-exam-tip-expert-judgment-is-a-highly-favored-common-tool/>). Alderman further added that based on the latter definition someone who is knowledgeable enough to assist a project team is considered an expert, and that expert judgment is a highly favoured common tool (Alderman, 2011). Expertise utilized throughout the

FGP cycle were the lecturer for the graduation seminar, assigned tutor and the author having had the necessary theoretical knowledge throughout the Masters in Project Management Program.

3.3.3 Interactive communication

Interactive communication is defined by the business dictionary as “simultaneous or ‘real time’ exchange of information over a transmission medium such as during a telephone conversation, video conferencing or internet relay class sessions”, (<http://www.businessdictionary.com/definition/interactive-communications.html>). This was utilized in the FGP for interaction between lecturer/tutor and author and also for interaction between the author and management at the organization under study, the St. Ann Health Department.

3.3.4 Questionnaires

Questionnaires as defined by the PMBOK Guide, 5th edition (2013) are “written sets of questions designed to quickly accumulate information from a large number of respondents”, (p.557). For this FGP questionnaires were the primary data collection tool used to garner information about the project management needs of the Environmental Health Unit at the St. Ann Health Department as it relates to community environmental health projects conducted by PHI Interns.

Chart 5 Tools (Source: Compiled by Author)

Objectives	Tools
To evaluate the organization’s project management needs in order to design the main components of the project management methodology.	-analytical techniques -expert judgment -interactive communication -questionnaires
To propose a project management methodology to fit the organization’s project management needs	-analytical techniques -expert judgment -interactive communication
To develop project templates and techniques to	-analytical techniques

utilize for future projects.	-expert judgment -interactive communication
To explain the operation of the proposed methodology to management and intern supervisors to ensure thorough understanding of the methodology.	-analytical techniques -expert judgment -interactive communication
To create an implementation plan guide for using the proposed methodology.	-analytical techniques -expert judgment -interactive communication

Chart 5 shows a summary of the various tools utilized for each specific objective in order to successfully complete the FGP.

3.4 Assumptions and constraints

The assumptions and constraints are important aspects of any project. Assumptions are always made by the project team and the team is bound by constraints, (Usmani, 2017). Assumptions are anticipated events or circumstances that are expected to occur during your project's life cycle, (Usmani, 2017). The assumptions of the FGP were:

- The student grasps the knowledge and skills necessary from the preceding Masters in Project Management courses to complete the final graduation project.
- Final graduation project requirements are clear and understood by the student and will not change for the duration of the program.
- The organization under study will grant permission to the student to conduct the project and provide the needed support.
- An adequate support system will be provided by the assigned University staffs.
- All key stakeholders for the project will be identified and engaged.
- Timely review and feedback will be provided for each project deliverable
- The suggested tutor corrections will be made as required by student.

The PMBOK Guide 5th edition, 2013 defines a constraint as “a limiting factor that affects the execution of a project, program, portfolio or process, (p.533). All projects have constraints which are defined at the beginning of the project and the project have to work within the boundaries restricted by the constraints, (Usmani, 2017). Six (6) project constraints are recognized by the PMBOK Guide, 5th edition, 2013: cost, schedule, scope, quality, resources and risk.

Collectively, cost, schedule and scope are referred to as the triple constraints. The constraint of the FGP was that of time:

- The final graduation project had to be developed within the time allotted by the University.
- Balancing the FGP demands with work and personal life.

Chart 6 Assumptions and constraints (Source: Compiled by author)

Objectives	Assumptions	Constraints
To evaluate the organization's project management needs in order to design the main components of the project management methodology.	<ul style="list-style-type: none"> -The organization under study will grant permission to the student to conduct the project and provide the needed support. - All key stakeholders for the project will be identified and engaged 	<p>Time- relevant information must be obtained and analyzed within the allotted time frame.</p> <p>Quality- a representative sample of data collected is subjected to the willingness of inspectorate to participate in survey.</p> <p>Quality- the organization's current project management need is limited to results of data analysis.</p>
To propose a project management methodology to fit the organization's project management needs.	<ul style="list-style-type: none"> -The student grasps the knowledge and skills necessary from the preceding Masters in Project Management courses to complete the final graduation project. - All key stakeholders for the project will be identified and engaged. 	<p>Time – the assessment of the organization's project management needs must be completed before a project management methodology can be proposed.</p> <p>Quality- the PMM proposed is limited to only the results of the</p>

Objectives	Assumptions	Constraints
	<p>- Final graduation project requirements are clear and understood by the student and will not change for the duration of the program.</p>	<p>organization's project management assessment.</p>
<p>To develop project templates and techniques to utilize for future projects.</p>	<p>-The student grasps the knowledge and skills necessary from the preceding Masters in Project Management courses to complete the final graduation project. - Final graduation project requirements are clear and understood by the student and will not change for the duration of the program.</p>	<p>Quality- project templates and techniques are limited to proposed PMM.</p>
<p>To explain the operation of the proposed methodology to management and intern supervisors to ensure thorough understanding of the methodology.</p>	<p>-The student grasps the knowledge and skills necessary from the preceding Masters in Project Management courses to complete the final graduation project. - Final graduation project requirements are clear and understood by the student and will not change for the duration of</p>	<p>Time:</p> <ul style="list-style-type: none"> • Meeting to explain proposed methodology has to be done at convenience of manager and intern supervisors. • A sample project must be developed in order to explain the proposed

Objectives	Assumptions	Constraints
	the program.	methodology.
To create an implementation plan guide for using the proposed methodology.	<p>-The student grasps the knowledge and skills necessary from the preceding Masters in Project Management courses to complete the final graduation project.</p> <p>- Final graduation project requirements are clear and understood by the student and will not change for the duration of the program.</p>	Time- the implementation plan guide must be developed within the allotted time frame.

Chart 6 shows a summary of the assumptions and constraints for the FGP and their applicability to each specific objective of the FGP.

3.5 Deliverables

A deliverable according to the PMBOK Guide 5th edition is “any unique and verifiable product, result or capability to perform a service that is required to be produced to complete a process, phase or project, (p.538). A deliverable generally has a due date and is tangible, measurable and specific, (<http://smallbusiness.chron.com/deliverable-project-management-31615.html>).

The following deliverables were expected to be derived from the FGP:

- The organization’s project management needs.
- Project Management Methodology that will act as a guide for initiating, planning, executing, monitoring and controlling and closing of projects undertaken by the Public Health Inspector Interns at the St. Ann Health Department.
- Project management templates and techniques.
- Proposed methodology explanation.
- Implementation plan guide for proposed methodology.

Chart 7 Deliverables (Source : Compiled by author)

Objectives	Deliverables
To evaluate the organization's project management needs in order to design the main components of the project management methodology.	Report with the organization's current project management needs.
To propose a project management methodology to fit the organization's project management needs	A project management methodology tailored to the organization's project management needs.
To develop project templates and techniques to utilize for future projects.	Project management templates.
To explain the operation of the proposed methodology to management and intern supervisors to ensure thorough understanding of the methodology.	Detailed description of the proposed methodology.
To create an implementation plan guide for using the proposed methodology.	An implementation plan guide for the proposed methodology.

Chart 7 shows the specific objectives of the FGP and their corresponding deliverable.

4 RESULTS

4.1 Presentation of Findings

According to project management literature, a project management methodology serves the purpose of providing a framework that describes/outlines what is to be done, by whom and by when so that project deliverables can be achieved according to planned specifications. This PMM was developed by tailoring whereby, most suitable portions from industry standards were adopted to meet the needs of the project types normally undertaken by PHI Interns at the St. Ann Health Department. The following 3 steps as utilized by Plewiski, 2014 were employed:

- Maturity assessment
- Methodology development
- Methodology implementation

4.1.1 Status Quo

A questionnaire (see appendix 4) was used in order to collect data to determine the existing state of mind of the environmental health unit as it relates to projects undertaken by PHI interns. Thirteen (13) questionnaires were distributed to which the researcher received 100% response. Of the 13 respondents 9 had previously implemented internship projects (past PHI Interns), 3 have been intern supervisors and the other being top management. The first aspect of project management assessed was that of the knowledge level of the inspectorate in relation to the discipline of project management. This was rated from a scale of 0 to 5 with 0 being the lowest and 5 the highest. Majority of the respondents, 9 (69%) had little to no knowledge of project management (scale 0-2) whilst the remaining 4 (31%) had high knowledge (scale 4-5). The lack in project management knowledge was further supported by the results of subsequent questions as depicted in figure 4.

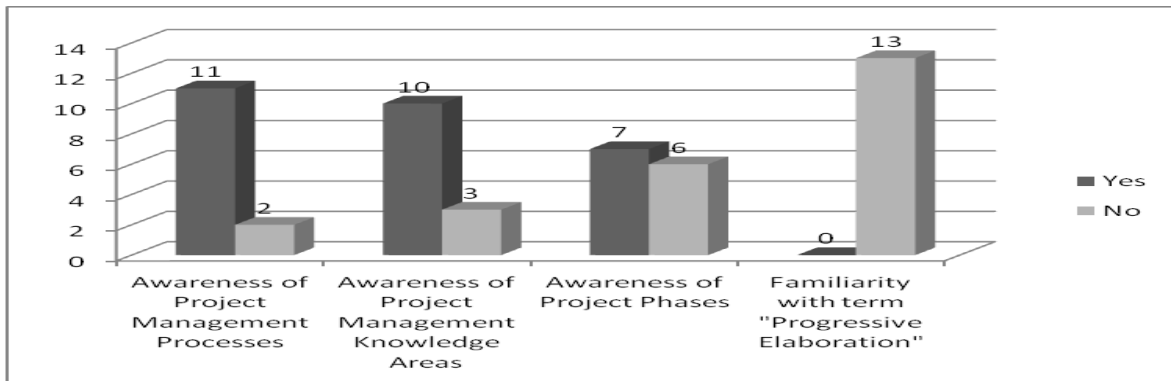


Figure 4. Project Management Awareness of Respondents. (Source: Compiled by author).

Figure 4 shows that majority, 11 (85%) of respondents were unaware of the different project management processes, 10 (77%) unaware of the various project management knowledge are, all respondents not being familiar with the project management term “progressive elaboration” and that 7 (54%) of the respondents were not aware of the fact that project has different phases which constitute a project life cycle. Of this 7 respondents 5 (56%) were from those who previously implemented internship projects.

When asked if respondents believed that there should be a project management guideline to be utilized by PHI Interns to aid in successful project implementation, 100% of the respondents said yes, 10 (77%) of the respondents believed that it would be very helpful whilst the remaining 3 (23%) said that it would be helpful. Notably are the challenges highlighted by respondents throughout the internship project implementation/supervision. Those challenges faced by the past interns are depicted in figure 5 below.

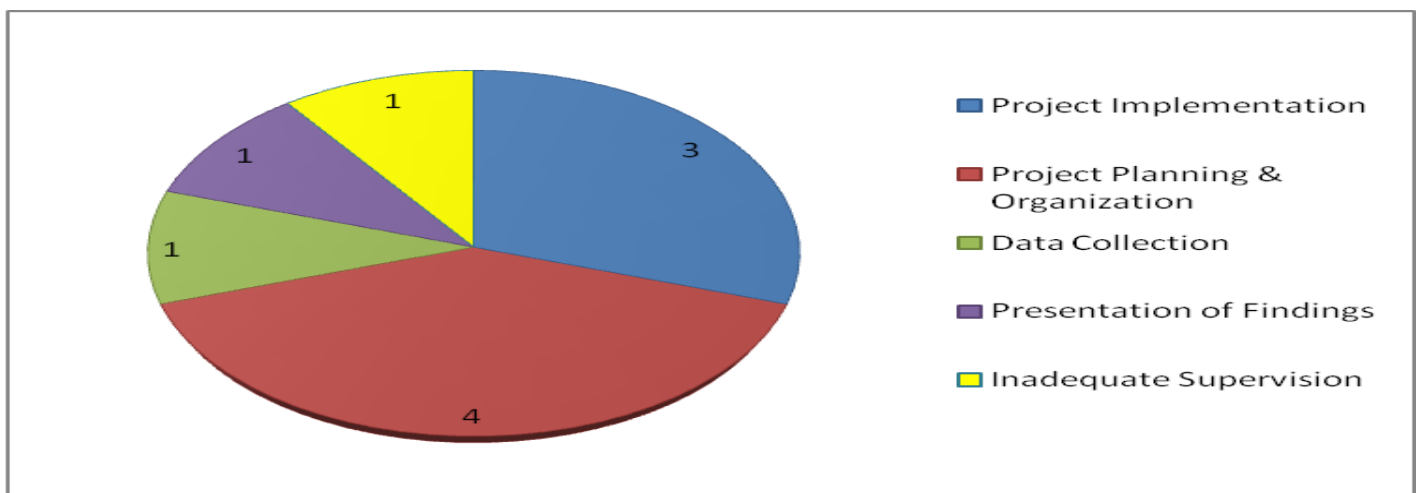


Figure 5. Challenges Encountered by Past PHI Interns. (Source: Compiled by author).

The two most common aspects of the internship project identified as most challenging by past interns were project planning and organization 4 (44%) and project execution 3 (33%) as highlighted in figure 5 above. Only 2 of the 3 supervisors shared challenges faced during intern supervision, they were: lack of sufficient resources (50%) , community mobilization (50%), collaboration between school and field, intern not being proactive (50%), inadequate time frame for effective evaluation of project (100%).

These findings positively supported the need for a project management methodology to be available to PHI interns to aid in the successful implementation of their projects. Along with this organizational survey the organizational process assets and enterprise environmental factors

were also considered to develop the most suited PMM. Organizational environmental factors that were considered were selection of study area, project overview and existing templates whilst the enterprise environmental factors were the current organizational structure as depicted in the organogram in chapter 2.

4.1.2 Organizational Process Assets

4.1.2.1 Selection of study area and project overview

For internship, PHI Interns are placed in communities selected by management that have significant environmental health concerns. The aim of each study is to determine the environmental health status of the locality by the collection of data that identifies the environmental health problems faced by the community. The problems are then prioritized and subsequently an attempt is made to solve the most feasible problem through the development and implementation of a programme plan that utilizes health education, community organization/participation and intersectoral collaboration.

Interns generally start the survey with premises inspections whereby the project is introduced to the respondents. Where there exists no statistical records in terms of number of dwelling units/premises the intern with the guidance of the supervisor must first determine the number of dwelling units in order to guide the type of survey to be done to obtain a representative sample of the population. After completion of data collection, the project is introduced formally to the community via community meeting. At this community meeting the environmental health problems identified from the survey are presented to the community along with the prioritized problem. The project team is selected at this meeting in the form of a health committee comprising of community members. The intern, being the project manager, works along with the committee to spear head the project and gain community participation for successful project execution.

4.1.2.2 Existing templates/guidelines

Before internship begins a one day seminar is held at the University where students are made aware of their placement parish and are introduced to both their academic and parish supervisor. At this meeting possible obstacles are discussed which are mostly related to community participation and intersectoral collaboration and solutions are proposed to prevent their occurrence or to deal with them if they arise. Guidelines for the internship are provided in a

book “internship manual” at the seminar which highlights the different areas/ milestones of the internship process. The Health Education pre-requisite course at the University covers development of a programme plan inclusive of a gantt chart. Additionally, soft copies of past projects may be sourced by students to be used as guides.

4.2. Project Management Methodology (PMM)

A project management methodology is being developed using results of the questionnaires analysis, the organization process assets (selection of study area and project overview, project templates/guidelines) and enterprise environmental factor (current organizational structure). The PMM featured in figure 6 below was developed based on the PMBOK Guide and incorporates the organization’s bureaucratic system and the critical path method of project management methodology.

4.2.1 Bureaucracy

The PMM takes into consideration the current bureaucratic procedure of the Environmental Health Unit of the St. Ann Health Department as explained in Chapter 2 and also considers the internship guide provided to the interns. The current internship process is altered to include the production of comprehensive project documents and continuous monitoring and controlling.

4.2.2 Project Governance

Planning and Organization and project execution were identified by past interns as the two most challenging aspects of the internship project. The PMM adequately covers these areas. The introduction of the project documents more so the Work Breakdown Structure, Network Diagram and the Project Charter will allow the interns to make appropriate plans for a successful implemented project. Having thorough understanding of these documents usage will allow for ease of transition into the actual execution of the project. Having provided an explanation of said methodology the additional problem of inadequate field supervision would have also been addressed by proposing this PMM.

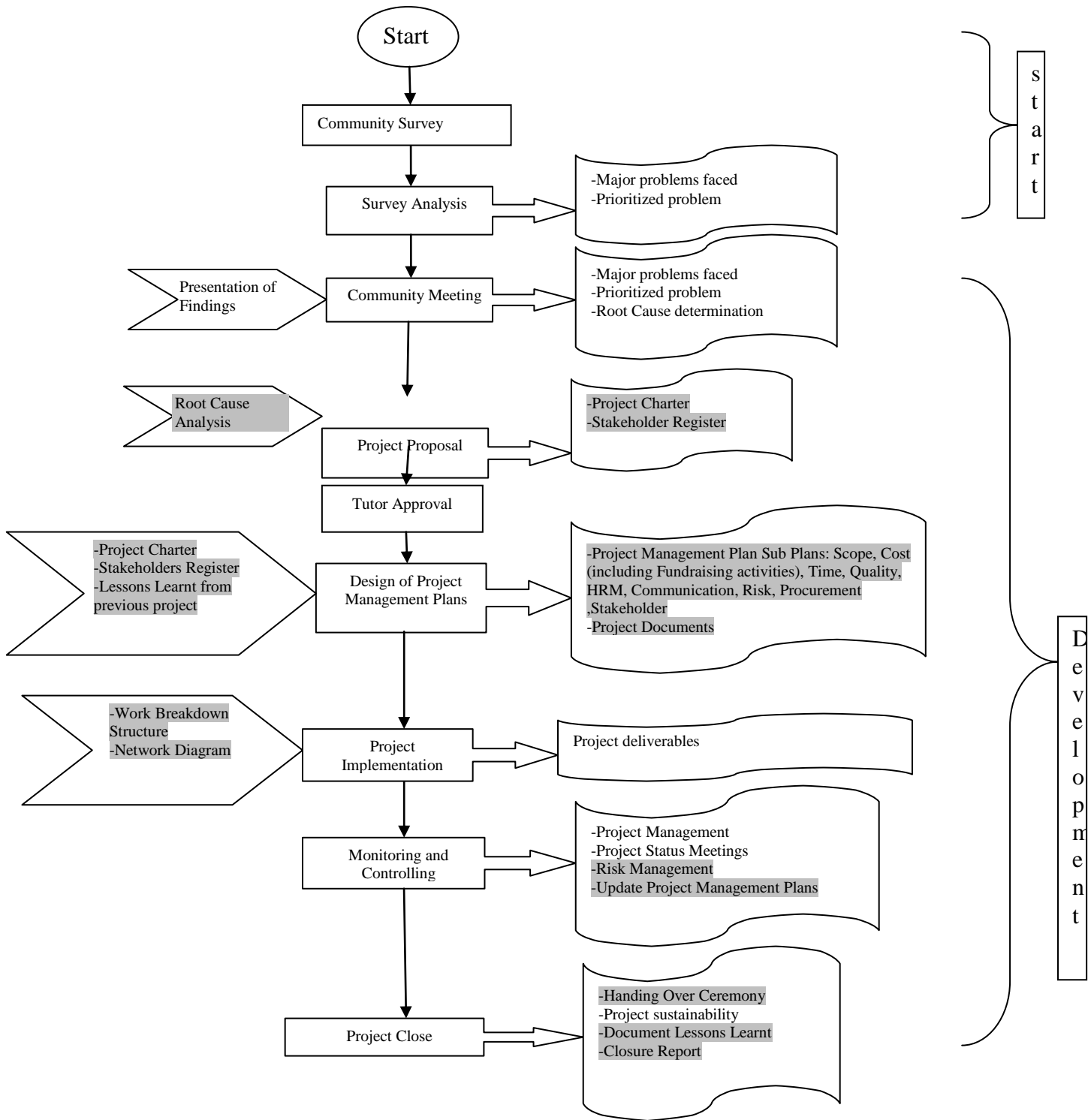


Figure 6. Proposed Project Management Methodology (Source: Compiled by author).

4.2.3 Description of Project Management Methodology

The PMM is divided into 2 stages (start and development), the highlighted items are the additions proposed to the current internship process.

4.2.3.1 Project Start

This is the initiation stage of the internship process where interns engage in a community survey with the aim of collecting data to ascertain the environmental health problems faced by the community. Having collected said data the identified problems should then be prioritized and the root cause(s) of prioritized problem determined.

4.2.3.2 Development Stage

The second stage is the development stage whereby the findings of the survey are communicated to the community via a community meeting. Outputs of the community meeting should be: agreement on the prioritized problem to be addressed, formation of a health committee (project team) and ideas for fundraising activities. After the meeting, the intern (project manager) should hold a first meeting with the health committee (project team) where a complete root cause analysis is done and a proposal is developed as an attempt to solve the prioritized problem. The proposal must receive tutor's approval before continuation. The development of a project charter and stakeholders register are to be outputs from the proposal. In order for a project to be successful, all stakeholders must be identified, their requirements, expectations, interests and level of influence determined and plans made on how to manage and communicate with these stakeholders in an effort to keep them engaged. The stakeholders' register will address this. The project charter is a very important document that is normally used to obtain sponsor approval for the go ahead of a project, but in the case of the interns, such document will be used to officially seek sponsorship for the project.

4.2.3.2.1 Project Management Plan

Having obtained tutor's approval the next step would be to develop a project management plan. A project management plan is a formal approved document that defines how a project is executed, monitored and controlled (Project Management Institute, 2013). It is used to define the approach that the project team will take to deliver the intended project management scope of the project. At the time of conducting the FGP interns would develop an action plan including

a Gantt chart that would be used as a guide for project execution. These are not sufficient to reap adequate project benefits. The PMM includes creation of a project management plan consisting of management plans for Integration, Scope, Schedule (Time), Cost, Quality, Human Resource, Risk, Procurement, Stakeholders and Communication and the creation of project documents , project roles and responsibilities, project charter, project status reporting, minutes of meeting, issue log, project closure report, lessons learnt, document distribution and archive). These will be further explained in section 4.3 project management templates.

4.2.3.2.2 Project Implementation

The project should then be implemented according to the sequence acquired in the critical path analysis. Throughout project execution there must be constant monitoring and controlling of the project, comparing actual with projected and making adjustments where necessary to the project management plan and project documents. Project status meetings should be held frequently and the way forward discussed.

4.2.3.2.3 Project Close

After the successful implementation of the project, there needs to be proper closure to ensure sustainability of the project. A closure report should be prepared and there should be an official handing over/closing ceremony where the community members and other stakeholders are thanked for their contributions and plans for sustainability of the project deliverables communicated to community members. Additionally lessons learnt should be documented and archived.

4.3. Project management templates

To obtain standardization of the environmental health projects conducted by PHI Interns of the Environmental Health Unit at the St. Ann Health Department, a total of ten (10) templates were developed. These templates are to be produced at specific points in the project with the aim of having an orderly flow throughout the project life. The templates can be classified as:

- **Project Management Plan (PMP)** - as explained in section 4.2 project management plan defines how the project is executed, monitored and controlled and closed, (http://oe.ucdavis.edu/local_resources/docs/pmpkickoff.pdf). In this document the stakeholder management plan acts as a subsidiary plan to the PMP and is produced

separately to foster early identification, planning and engagement of stakeholders as required by the existing bureaucracy of the internship program.

- **Project Documents-** these do not form part of the PMP but are substantiated by the essential two functions of documentation: (i) to ensure that project requirements are fulfilled and (ii) to establish traceability with regards to what has been done, who has done it and when it was done, (Eshna, 2017).

To make the templates available as a standalone and ready to use document the templates were annexed. The following table shows a list of the various templates as they appear in the appendix. Section 4.4 explains the use of the templates according to the project management methodology guideline.

Chart 8 Project templates, (Source: Compiled by Author)

	Template	Appendix
Project Management Plan	Project Management Plan (PMP)	5
	Stakeholder Management Plan	6
Project Documents	Project Roles & Responsibilities	7
	Project Charter	8
	Project Status Report	9
	Minutes of Meeting	10
	Issue Log	11
	Project Closure Report	12
	Lessons Learnt	13
	Document Distribution & Archive	14

4.4. Explanation of Proposed Methodology

As explained in figure 6 of section 4.2 the Project Management Methodology is divided into two phases, project start and project implementation. Within the methodology are various documents that are either used as input to a process/step or generated as outputs from the step/process. Figure 7 below shows the project start phase.

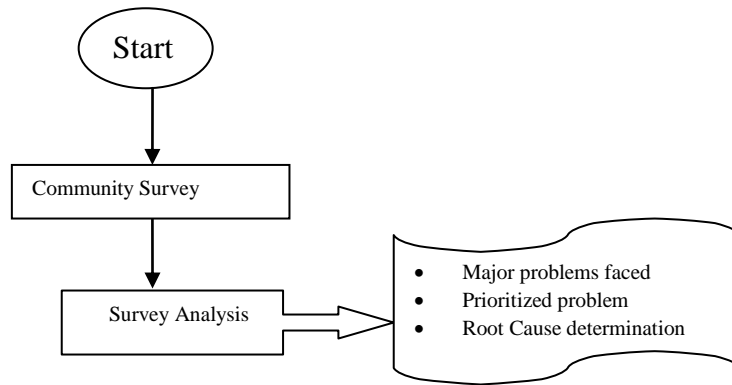


Figure 7 Project Start, (Source: Compiled by Author)

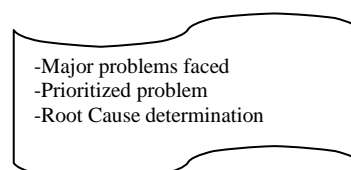
4.4.1 Project Start

This phase is where the project is initiated. Here, the environmental health status of the community is determined by conducting a community survey. This survey collects data that identifies the environmental health problems faced by the community. The problems are then prioritized and a presentation developed to communicate findings to community members in the next phase of the project.

4.4.2 Development phase

The second stage is the development phase which includes the development of a project proposal, design of project management plan, implementation, evaluation and closing of the project as shown in figure 8 below. The hosting of a community meeting begins the development phase of the project. At this meeting the findings of the survey (developed presentation from project start phase) are communicated to the community. Arising from the meeting should be: community agreement on the prioritized problem to be addressed, formation of a health committee (project team) and ideas for fundraising activities. For the formation of a health committee care must be taken to ensure that the roles and responsibilities of each executive position is presented at the community meeting in an effort to aid in nomination and selection of competent persons.

After the meeting, the intern (project manager) should hold a first meeting with the health committee (project team) where a complete root cause analysis is done of the prioritized problem.



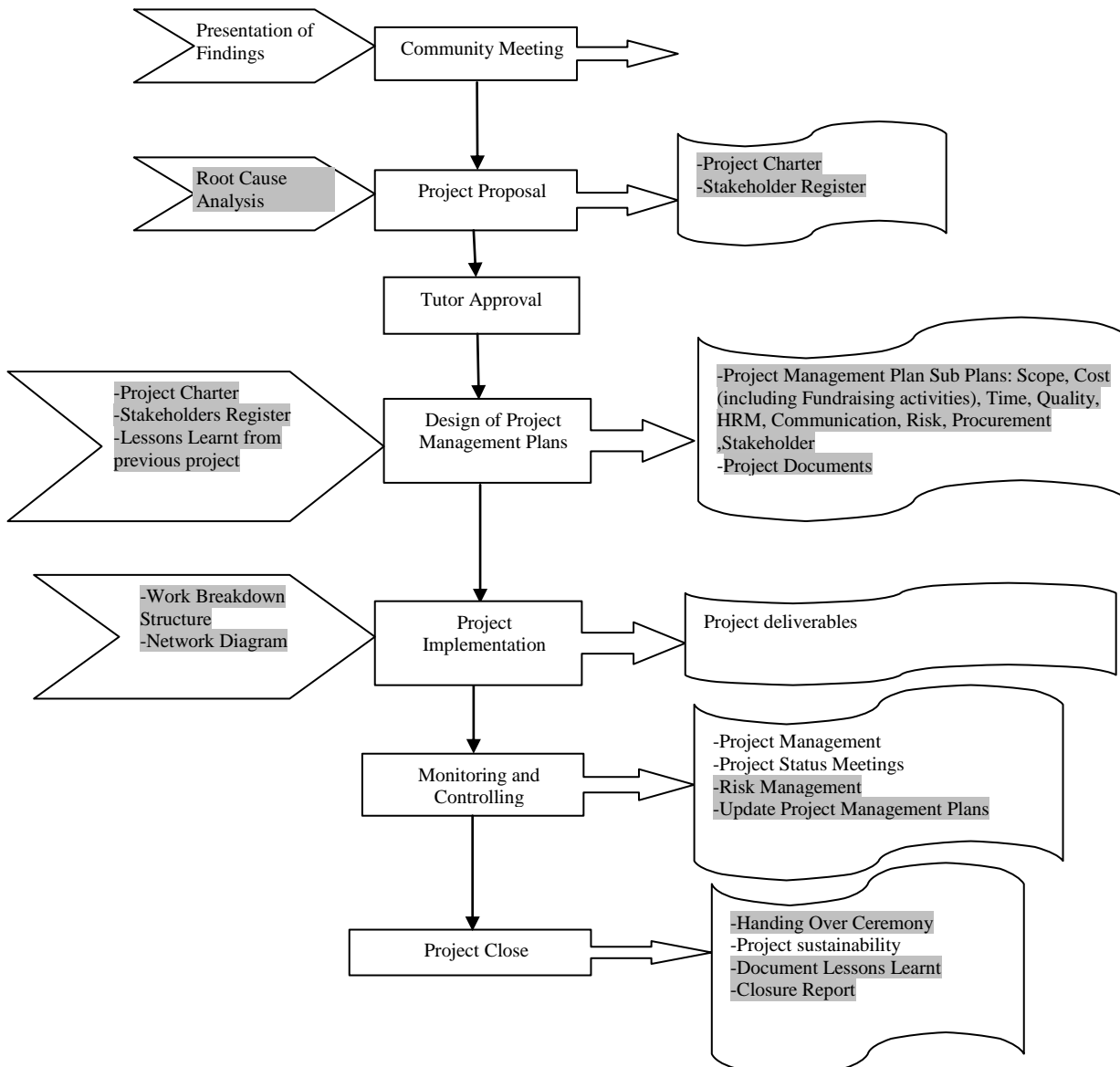


Figure 8 Project Implementation, (Source: Compiled by Author)

4.4.2.1 Root Cause Analysis

A Root Cause Analysis (RCA) is “a technique used to identify the conditions that initiate the occurrence of an undesired activity or state”, (<https://www.projectmanagement.com/wikis/233085/Root-Cause-Analysis>). Doing the root cause analysis with committee members is important as the committee members are from the community and should understand the problems, are more familiar with it and can thus aid the researcher in better understanding the issues. The following five steps were put forward to conduct a root cause analysis, (https://www.mindtools.com/pages/article/newTMC_80.htm):

- a. **Define the problem**- what is seen happening and what are the specific symptoms.

- b. **Collect Data-** proof that problem exists (this would have already been done from the community survey) and the impact(s) of the problem.
- c. **Identify possible causal factors (as many as possible)-** what sequence of events lead to the problem, what conditions allow the problem to occur and what other problems surround the occurrence of the central problem?
- d. **Identify the root cause(s) -** why does the causal factor exists, what is the real reason the problem occurred?
- e. **Recommend and implement solutions-** what can be done to prevent reoccurrence, how will the solution be implemented, who will be responsible for it and what are the risks of implementing the solution?

It is also important to plan ahead to predict the effects of the solution so that potential failure can be spotted before they happen. The root cause analysis should then be used as an input to develop the project proposal.

4.4.2.2 Project proposal

After the root cause analysis the project proposal should be developed as an attempt to solve the prioritized problem. In developing the proposal a project charter should be created along with a stakeholders register. After obtaining tutors approval of the project proposal the next step is to design project management plan.

4.4.2.2.1 Project Charter

The project charter formally authorizes the existence of a project and provide project managers with the authority to apply resources to project activities, (Project Management Institute, 2013). In this case however, the project charter will be used to seek sponsorship from identified stakeholders. A project charter template is provided in section 4.3.4.

4.4.2.2.2 Stakeholders

In order for a project to be successful all stakeholders must be identified, their requirements, expectations, interests and level of influence determined and plans made on how to manage and communicate with these stakeholders in an effort to keep them engaged. A stakeholder's management plan template is provided in section 4.3.2.

4.4.2.3 Design project management plans

As explained in the methodology the project charter, stakeholders register and lessons learnt are inputs to designing the project management plan (PMP). The PMM includes creation of a project management plan consisting of management plans for Integration, Scope, Schedule (Time), Cost, Quality, Human Resource, Risk, Procurement, Stakeholders and Communication. The PMP template in Appendix 5 provides keen instructions as to how to develop each area of the plan. Each of these subsidiary plans serves a different purpose as detailed below.

4.4.2.3.1 Project Integration Management

Project integration management is the first section of the project management plan and is the knowledge area in project management that ensures good coordination between project activities, (<http://www-kiv.zcu.cz/~pergl/SAI/PMIBOK/project4.htm>). The integration management plan focuses on making choices about resource allocation, making trade-offs among competing objectives and alternatives, and managing the interdependencies among the other project management knowledge areas, (PMBOK Guide, 5th Edition , 2013. Pg 63).

4.4.2.3.2 Project Scope Management

Project scope is defined by the PMBOK Guide 5th edition as” the work performed to deliver a product, service, or result with the specified features and functions”. (p. 555). Scope management is the process of defining what work is required and then making sure all of that work, and only that work is done, (PMBOK Guide, 5th Edition, 2013). One of the project manager’s responsibilities is to ensure that only the required work (the scope) will be performed and that each of the deliverables can be completed in the allotted time and within budget, (Monnappa, 2017). Documenting the scope of the project (scope management plan) explains the boundaries of the project, establish the responsibilities of each team member, and set up procedures for how work that is completed will be verified and approved, (Monnappa, 2017).

4.4.2.3.3 Project Schedule Management

Having determined the project scope then a schedule must be set in order for the project activities to be completed on time. Project Time/Schedule Management includes the processes required to manage the timely completion of the project, (PMBOK Guide, 5th edition, 2013, pg.141). It identifies a scheduling method and scheduling tool, sets the format and establishes criteria for developing and controlling the project schedule. The schedule management plan is a

component of the project management plan that establishes the criteria and the activities for developing, monitoring and controlling the schedule, (PMBOK Guide, 5th Edition, 2013, p.561). For the proposed PMM, the scheduling method proposed is the Critical Path Method, (CPM) based on the nature of the project being undertaken and the strict time frame that the intern has to adhere to.

4.4.2.3.3.1 Critical Path Method

According to the PMBOK Guide the critical path “is the sequence of activities that represents the longest path through a project, which determines the shortest possible project duration.” (p. 176). The critical path method breaks the project into several work tasks, displays them in a flow chart and calculates the projected duration based on estimated duration of each tasks. It identifies tasks that are critical in completing the project. The following six methods are put forward for utilizing this method, (<https://www.smartsheet.com/critical-path-method>):

a. Specify each activity- identify the main deliverables of the project and the sub tasks needed to achieve each deliverable.

b. Sequence activities- establish any dependencies; some activities will be dependent on another activity to finish before it can start. Listing the immediate predecessor of each activity can help identifying the correct order. To do this, answer the following 3 questions for each activity listed:

1. Which tasks should take place before this task happens?
2. Which task should be finished at the same time as this task?
3. Which task should happen immediately after this task?

c. Draw Critical Path Analysis Chart (network diagram) - this is a visual representation of the order of activities based on dependencies.

d. Estimate Activity Completion time- using expert advice (supervisor, project team) or best guess, estimate the time required to complete each activity. Optionally a “three-point estimate” can be used where 3 estimates are done for each activity (a- optimistic time m- most likely b- pessimistic). Once identified they can be used in either of the following two formulas to obtain the estimate: $E = (a+4m+b)/6$, $E = (a+m+b)/3$ where E= estimate and 6 and 3 are standard methods.

e. Identify the Critical path- add the estimated time for each activity to the network diagram then look for the longest path for completion (in terms of time not most boxes/nodes).

f. Update the Critical Path Diagram to show progress- updating the critical path diagram with the actual activity completion times as the project progresses allows for the calculation of a new critical path which would give a more realistic view of project completion date. This will tell if the project is on schedule, ahead of schedule or falling behind.

4.4.2.3.4 Project Cost Management

Cost management is concerned with the process of planning and controlling the budget of a project or business and includes activities such as planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be completed within the approved budget, (Des Bouvrie, 2018). A cost management plan is developed as an output from planning cost management, the plan is a component of a program or project management plan that describes how project cost will be planned structured and controlled, (PMBOK Guide, 2013, p.534).

4.4.2.3.5 Project Quality Management

Project Quality Management includes the processes and activities of the performing organization that determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken, (PMBOK Guide, 2013, p.227). Project Management Advisor v2.2 postulated that the quality management plan defines the acceptable level of quality, which is typically defined by the customer, and describes how the project will ensure this level of quality in its deliverables and work processes, (<https://pma.doit.wisc.edu/plan/3-2/what.html>). It further expounded that quality management activities ensure that products are built to meet agreed-upon standards and requirements, work processes are performed efficiently and as documented and non-conformance are identified and appropriate corrective action is taken.

4.4.2.3.6 Project Human Resource Management

The success of most projects can be attributed to the project team. Project human resource management involves organizing and managing a project team which is usually made up of people with specific skills and responsibilities, (<https://project-management-knowledge.com/definitions/p/project-human-resource-management/>). It is required to make the most effective use of the people involved with the project, (Krishna, 2013). Project human resource processes include, human resource planning, acquiring the project team, developing

the project team and subsequently managing the project team. When planning human resource management, the first thing to do is to identify all the project roles and responsibilities. This will lead to a human resource management plan which is a component of the project management plan that describes how the roles and responsibilities, reporting relationships, and staff management will be addressed and structured, (PMBOK Guide, 5th Edition, 2013, p. 542). The PMBOK Guide further explains that the human resource management plan also contains the staffing management plan including timetables for staff acquisition and release, identification of training needs, team-building strategies, plans for recognition and rewards programs, compliance considerations, safety issues, and the impact of the staffing management plan on the organization, (PMBOK Guide, 5th Edition, 2013, p.259).

4.4.2.3.7 Project Communications Management

In order for a project to be successful, it is vital that the right information is communicated to the right person in a timely manner. Project communications management includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information , (PMBOK Guide, 5th Edition, 2013, p.287). In planning communications management, an appropriate approach must be developed taking into consideration stakeholder's information needs and requirements and the available organizational assets. The key benefit of this process is that it identifies and documents the approach to communicate most effectively and efficiently with stakeholders, (PMBOK Guide, 5th Edition, 2013 p.439). The key output, a communications management plan serves the purpose of defining the communication requirements for the project and how information will be distributed, (<http://www.projectmanagementdocs.com/project-planning-templates/communications-management-plan.html#axzz5DiwkUJ5o>).

4.4.2.3.8 Project Risk Management

No project exists without risks. Risks can be either good (opportunities) or bad (threats) and thus proper management is important for project success. Project risk management is the process of identifying, analyzing and then responding to any risk that arises over the life cycle of a project to help the project remain on track and meet its goal, (Landau, 2016). The PMBOK Guide 5th edition highlighted that the objective of risk management is to increase the likelihood and impact of positive events (opportunities) and decrease the likelihood and impact of negative

events (threats) in project management, (PMBOK Guide , 5th Edition, 2013). A project risk management plan is a component of the project, program or portfolio management plan that describes how the risk management activities will be structured and performed, (PMBOK Guide, 5th Edition, 2013, p.560)

4.4.2.3.9 Project Procurement Management

Most projects require some form of external purchasing (procurement) in order to meet their goals. Project procurement management is the part of the project management process in which products or services are acquired or purchased from outside the existing employee base (which would work on the project) in order to complete the task or project,(<https://project-management-knowledge.com/definitions/p/project-procurement-management/>). A procurement plan is developed as a component of the project or program management plan and describes how a project team will acquire goods and services from outside the performing organization, (PMBOK Guide, 2013).

4.4.2.3.10 Project Stakeholders Management

“Any project is a success if it meets its objectives and fulfills (or ideally exceeds) the expectations of its project stakeholders”, (<https://www.wrike.com/project-management-guide/faq/what-is-project-stakeholder-management/>). It is important to identify all stakeholders, know their expectations, interests, power and impact in order to determine the best strategy to apply among them. “Plan stakeholder management identifies how the project will affect stakeholders, which then allows the project manager to develop various ways to effectively engage stakeholders in the project, to manage their expectations, and to ultimately achieving the project objectives”,(PMBOK Guide, 5th Edition 2013, p. 406). The key output from performing stakeholder management, the stakeholder management plan, provides a clear, actionable plan to interact with project stakeholders to support the project’s interest, (PMBOK Guide, 2013, p. 399). The stakeholders' management plan, though a part of the PMP is elaborated in a separate template (Appendix 6) in an effort to first define stakeholders requirements and subsequently developing the PMP according to the defined requirements.

4.4.2.4 Project Implementation

Using the WBS and network diagram as inputs, the project should then be implemented according to the sequence acquired in the critical path analysis.

4.4.2.5 Monitoring and controlling

This must be done throughout the project execution and the actual results compared with the projected. The necessary documents and sections of the project management plan must be updated as new and more reliable information becomes available. For example, the network diagram should be updated after completion of each activity to show the actual duration and not the estimated duration. This will give a truer estimate of the completion time of the project. Project status meetings should be held frequently and the way forward discussed according to the results presented.

4.4.2.6 Project Close

To ensure sustainability of the project a formal closure of the project should be done. A project closure report should be done and an official handing over ceremony is recommended whereby the community members and other stakeholders are thanked for their contributions to the project success and plans for sustainability of the project deliverables communicated to community members. Additionally, lessons learnt should be documented and archived as deemed appropriate.

4.5 Project Management Methodology Implementation Plan Guide

As explained in section 2.3.3 due to time constraints the proposed methodology will not be implemented, however an implementation guide was developed. This guide shows the methodology application to a typical project case utilizing the project management plan and project documents. This is shown in section 4.5.1.

For implementation of the PMM it is suggested that a gradual roll out be done whereby the methodology is pilot tested for 2 years. In these two years only one of the interns received by the SAHD should be allowed to use the proposed methodology and each year a different intern supervisor should be allowed to supervise the selected intern.

To utilize the PMM, firstly all intern supervisors must be made aware by management via a meeting of this intent. Here the methodology will be thoroughly explained and the supervisor to start the pilot testing chosen. The intern supervisor must then be charged with the responsibility of explaining the PMM to the intern using the typical project case provided in this document for ease of understanding. At the completion and before the start of each major section of the methodology an assessment must be made of adherence to the plan; that is a comparison done of the actual versus the projected. At project completion an overall assessment must be done and the supervisor compares outcomes of previous projects without the PMM and that which utilized the methodology. Adjustments can be made to the PMM where deemed necessary. If management is satisfied with the results then after the 2 years pilot testing all interns thereafter can be allowed to utilize the methodology. The methodology can then be introduced in the other parishes in the region and then possibly the entire island using the same gradual roll out.

4.5.1 Sample project

Chart 9 Project Charter Sample, (Source: Created by author)

PROJECT CHARTER	
Formalizes the project start and confers the project manager with the authority to assign company resources to the project activities. Benefits: it provides a clear start and well defined project boundaries.	
Date	Project Name:
April 20, 2018	Keeping the Community Clean is Everyone's Business
Knowledge Areas / Processes	Applicacion Area (Sector / Activity)
Knowledge areas: <ol style="list-style-type: none"> 1. Project Integration Management 2. Project Scope Management 3. Project Schedule Management 4. Project Costs Management 5. Project Quality Management 6. Project Human Resources Management 7. Project Communications Management 8. Project Risks Management 9. Project Procurement Management 10. Project Stakeholders Management Process groups: <ol style="list-style-type: none"> 1. Initiating 2. Planning 3. Executing 4. Monitoring and Controlling Closing	Environmental Health
Start date	Finish date
April 20, 2018	June 22, 2018

<p>Project Objectives (general and specific)</p> <p>General Objective To contribute to the improved quality of life of residents in the Mango Pan community by providing a healthy and relatively safe environment.</p> <p>Specific Objectives</p> <ol style="list-style-type: none"> 1. To eliminate all illicit dumpsites in the community. 2. To increase the number of garbage collection points. 3. To improve garbage collection frequency. 4. To educate the population on proper solid waste management and the impacts of not practicing said.
<p>Project purpose or justification (merit and expected results)</p> <p>Public Health Inspector (PHI) Interns of the University of Technology (UTECH), Jamaica Bachelors of Science in Environmental Health Programme with a major in Public Health Inspection are placed in each of the 14 parishes in Jamaica on a yearly basis for 6 months. It is mandatory that these PHI interns successfully undertake a community social project in order to obtain their Bachelors of Science degree from the University. The aim of each social project is to determine the environmental health status of the locality by the collection of data that identifies the environmental health problems faced by the community. The problems must then be prioritized by the application of appropriate problem prioritization techniques and subsequently an attempt made to solve the most feasible by development and implementation of a project management plan that utilizes health education, community organization/ community participation and intersectoral collaboration.</p> <p>The community survey conducted by the Public Health Inspector Intern in the community of Mango Pan, St. Ann revealed 10 environmental health problems being faced by the community. Only those identified by more than 15% of the respondents (improper solid waste management and rodent infestation) were prioritized, the other problems though important were considered negligible. Improper solid waste management came out as the priority problem. This project therefore seeks to improve solid waste management in the Mango Pan community by removing the illicit dumpsites in the community, provision of proper and adequate garbage disposal receptacles, providing health education to residents on proper solid waste management methods and forming an alliance with the National Solid Waste Management Authority (NSWMA) to have more frequent collection of solid waste.</p>
<p>Description of Product or Service to be generated by the Project – Project final deliverables</p> <p>The following are the expected deliverables of the project:</p> <ol style="list-style-type: none"> 1. Elimination of illicit dumpsites. 2. Increased number of garbage collection points. 3. More frequent Collection of solid waste by the National Solid Waste Management Authority (NSWMA). 4. Better community participation and involvement in the general sanitation of the community.
<p>Assumptions</p> <p>Based on the current knowledge today, the project assumptions are listed below. If an assumption is invalidated at a later date, then the activities and estimates in the project plan will be adjusted accordingly.</p> <ul style="list-style-type: none"> ▪ Project schedule dates are accurate vendors/contractors will deliver materials on time. ▪ NSWMA will commit to coordinating logistics. ▪ Health education sessions will be effective and community members will understand the importance of the community initiative and will be motivated to be fully engaged in the initiative. ▪ Vendor/contractors will be paid without delay. ▪ Project members have the knowledge, skills and experience required and will perform optimally to ensure project objectives are achieved. ▪ Key project members will be available for the duration of the project. ▪ Full commitment from project sponsors throughout the life of the project. ▪ Enough land space will be available to have additional garbage collection points. ▪ Available land space will receive Parish Council approval for garbage collection points
<p>Constraints</p>

1. Scope:
 - a. Availability of NSWMA trucks to cover expected routes for solid waste collection.
 - b. Commitment of the community members.
 - c. Availability of land space for approved garbage collection points.
2. Schedule:
 - a. 6 months time frame for project completion.
3. Cost:
 - a. Project is limited to funds generated from fundraising activities and sponsorship.
4. Quality:
 - a. Suitability of land space for approval as a garbage collection points.
5. Resources:
 - a. Competing project proposals from neighbouring communities.

Preliminary risks

The following are deemed as the uncertain things that can jeopardize the project's success:

- Delays in community clean up due to unfavorable weather conditions.
- Conflicts arising amongst stakeholders due to inaccurate expectations caused by poor communication.
- Delays in project execution due to the emergence of overlooked project stakeholder or stakeholders becoming disengaged.
- Budget overrun due to inaccurate cost estimates.

Budget

The project's budget is estimated at \$183,700 JMD.

Milestones and dates

Milestone	Start date	End date
Community Survey	February 5, 2018	March 23, 2018
Community Sensitization	February 5, 2018	May 28, 2018
Community Meeting	April 13, 2018	April 13, 2018
Stakeholders Identification & Engagement/ Intersectoral Collaboration	April 16, 2018	April 20, 2018
Project Proposal	April 22, 2018	April 22, 2018
Fundraising	April 23, 2018	May 15, 2018
Community Clean-Up	May 23, 2018	May 25, 2018
Health Education	April 23, 2018	June 14, 2018
Project Close	June 22, 2018	June 22, 2018

Relevant historical information

The community of Mango Pan, St. Ann has been without a resident Grade one Public Health Inspector (PHI) for many years. The presence of the PHI has only been felt through investigation of complaints and meat inspections. As a result the community may be faced with numerous environmental health problems which are not recognized leading to an unhealthy community.

Stakeholders

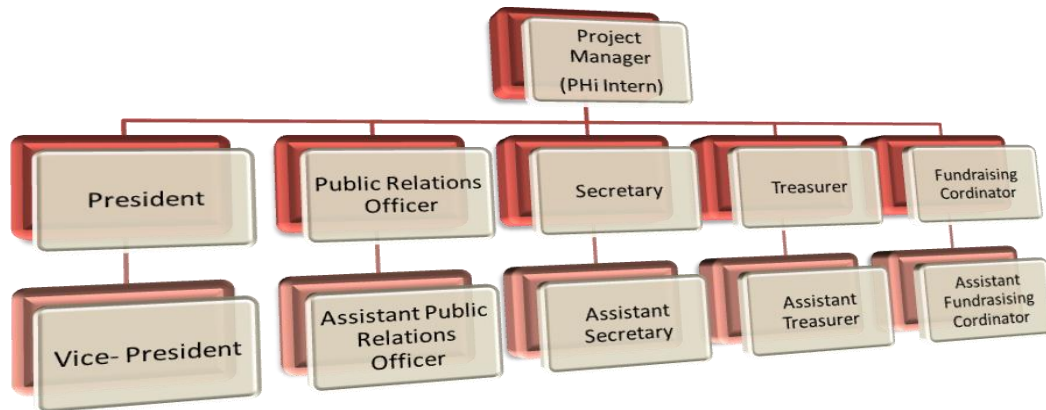
The following are the project stakeholders.

1. Project Team
2. PHI Intern (Project Managers)
3. Residents
4. St. Ann Parish Council
5. Member of Parliament, North East, St. Ann
6. Opposition Member of Parliament, North East, St. Ann
7. Mystic Mountain Jamaica Ltd
8. Dolphin Cove Jamaica Ltd
9. Island Dairies Ltd

10. St. Ann Heath Department 11. National Solid Waste Management Authority 12. Intern Supervisor (Academics) 13. Intern Supervisor (Field) 14. Community Business Operators 15. Suppliers	
Project Manager: Lunce Dowdie-Campbell	Signature: L.D-Campbell
Authorized by:	Signature:

Chart 10 Project Management Plan- Sample Project, (Source: Compiled by Author)

PROJECT MANAGEMENT PLAN (Sample Project)				
Defines the approach that the project team will take to deliver the intended project management scope of the project				
Project Name		Version History		
Keeping the Community Clean is Everyone’s Business	Version	Comments	Release date	Revised By
	1.0	Approved	February	Intern Supervisor
Document Owner		Document Purpose		
This document is produced by the project manager.		This document describes how the project will be executed, monitored and controlled and closed.		
Introduction				
<p>“Keeping the Community Clean is Everyone’s Business” is a project to be undertaken by the Mango Valley Health Committee. The project manager (Lunce Dowdie-Campbell-PHI Intern)has received the go ahead to carry out a community environmental project geared at improving the quality of life of residence in the Mango Valley community by providing a healthy and relatively safe environment. This will be achieved by addressing the issue of improper solid waste management in the community. Benefits to be derived from the project are:</p> <ul style="list-style-type: none"> • Elimination of all illicit dumpsites • Increased storage capacity by the increase in the number of solid waste collection points and provision of proper and adequate garbage disposal receptacles at these points. • Health education of residents on proper solid waste management methods and • Formation of an alliance with the National Solid Waste Management Authority (NSWMA) to have more frequent collection of solid waste. 				
Integration Management				
<p>The project Manager, Lunce Dowdie-Campbell has the overall authority and responsibility for managing and executing this project according to this Project management plan and its subsidiary plans. The project team will consist of the Project Manager and a 10 members health committee; president, treasurer, secretary, fundraising coordinator and one assistant each as depicted in the following arganogram.</p>				

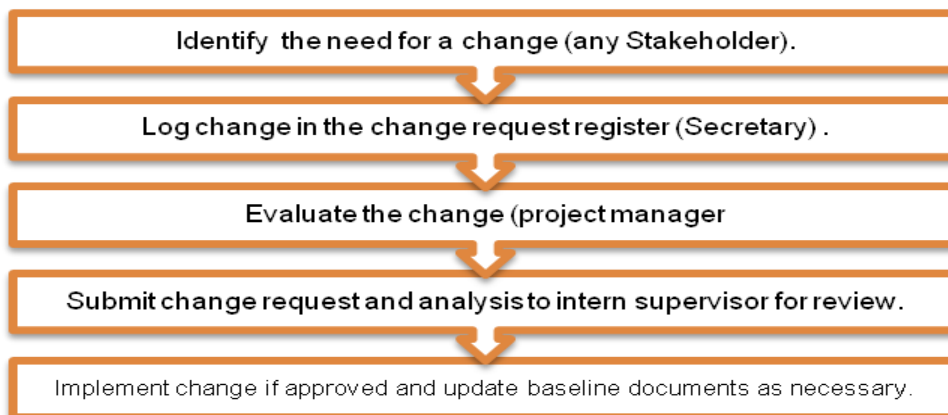


The roles and responsibilities template provides additional information. The project manager will work with all resources to perform project planning, implementation and closing. All project and subsidiary plans will be reviewed and approved by the intern supervisor. Funding decisions will be made by the project team via voting at meetings. The project manager is responsible for ensuring that timely and accurate communication is done to all project stakeholders

Change Request

Due to the nature of the project being undertaken. The Mango valley Health Committee has decided on the following change control process:

- i. Identify the need for a change (any stakeholder)
- ii. Log change in the change request register (Secretary)
- iii. Evaluation of the change- the project manager will conduct an evaluation of the impact of the change to cost, risk, schedule, quality and scope. Only changes within the project scope will be analyzed.
- iv. Submit change request and analysis to intern supervisor for review.
- v. If approval is granted, change should be implemented and project manager should ensure that any baseline project documentations are updated as necessary as well as ensure that any changes are communicated to team and stakeholders.



Close Project or Phase

There are 4 major phases to be considered for this project: community survey, community group formation, project implementation and project closure. At the end of each phase an assessment will be made whereby a project phase report will be generated using the project closure report template in section and any lessons learnt will be documented using the lessons learnt template in .

Scope Management

This project will see the improvement of the community's solid waste management approach by the elimination of all illicit dumpsites, provision of increased solid waste collection points with adequate and proper garbage receptacles, health education of residents on proper solid waste management and the formation of an alliance with NSWMA. The project consist of a 10 member health committee plus the project manager. Their responsibilities are discussed in the roles and responsibilities template. The WBS and the WBS dictionary for the project are presented below. For each deliverable acceptance is based on the acceptability criteria of the procured items as detailed in the quality management section of the plan.

Work Breakdown Structure (WBS)

Level 1- Project Title: Keeping the Community Clean is Everyone's Business			
Level 2	Level 3	Level 4	
1.1 Community Mobilization	1.1.1 Community Survey 1.1.2 Community Project Sensitization 1.1.3 Community Group Formation 1.1.4 Community Health Education 1.1.5 Community Group Progress Reports 1.1.6 Community Engagement		
1.2 Procurement	1.2.1 Contracting 1.2.2 Fundraising activities 1.2.3 Sponsorship		
1.3 Project Management	1.3.1 Ongoing Project Management	1.3.1.0 Current Situation 1.3.1.1 Problem Solving 1.3.1.2 Stakeholders 1.3.1.3 Project Requirements 1.3.1.4 Required Material	
1.4 Increase storage capacity	1.4.1 Increased number of garbage collection points 1.4.2 Increased Garbage Collection Frequency	1.4.1.0 Secure land space 1.4.1.1 Parish Council Approval 1.4.1.2 Erect garbage receptacle 1.4.2.0 NSWMA engagement 1.4.2.1 Community Clean-Up 1.4.1.2 Erect No Dumping Signs	
1.5 Project Close	1.5.1 Evaluate Project 1.5.2 Handing Over Ceremony		

WBS Dictionary

This contains all the details of the work packages necessary to successfully complete the project and also includes a definition/description for each work package. The predecessors are the immediate ones.

WBS Code	Sequence	Predecessor	WBS Name	Description/Definition	Resources
1.1.1	1	NA	Community survey	Establishment of the demographics of the community for analysis and segmentation to select outreach strategy.	PHI Intern, Intern Supervisor, data collection tool
1.1.2	2	1	Community project sensitization	Meet and greet, Distribution of, pamphlets and posters, Phone calls, Public broadcasting. E.g Loudspeakers, & mass media	PHI Intern (PM), Intern Supervisor

1.1.3	4	1,3	Community group formation	Project manager will select community members as the project team members	PHI Intern (PM), Intern Supervisor, PHI, St. Ann Health Department , Community members,
1.1.4	10	5	Community Health education	Public meetings, school visits, Home visits, Distribution of flyers and pamphlets	PHI Intern (PM), Mango Valley Health Committee Public Health Inspectors,
1.1.5	16	16	Community group progress reports	Periodic community group meetings	Project team
1.1.6	9	4	Community engagement	Establish an alliance between community groups and the St. Ann health department	Mango Valley Health Committee (Project team) , Intern Supervisors, St. Ann Health Department,
1.3.1.0	3	1	Current Situation	Analyze the current situation of the community, study the main problems of the community of Hyatt's Field, St. Ann, Jamaica	PHI Intern, St. Ann Health Department
1.4.2.1	17	16	Community Clean-up	Organize community cleanup day to include clean-up of all illicit dumpsites	Project team, community members, sponsors,
1.2.1	12	6	Contracting	Communicate with sponsoring organizations/suppliers on delivery dates and payment conditions Oversee delivery and payment processes	Project Manager
1.4.2.2	18	18	Erect No Dumping Signs	Erect no dumping signs at previously illicit dumpsites	Project team, community members
1.4.1.2	19	18	Erect Receptacles	Erect 1 communal receptacle per collection site and placement of 5 metal barrels in each receptacle.	Project team, community members
1.5.1	21	20	Evaluate Project	Final evaluation of project, complete project closure report and document lessons learnt.	Project team
1.2.2	10	8	Fundraising activities	Activities designed to gain monetary support for the project such as walkathon, raffle tickets.	Project team, community members
1.5.2	22	21	Handing over Ceremony	Have a handing over ceremony where by project deliverables are officially handed over to the community and community members thanked for their support and encouraged to ensure sustainability of said deliverables	All project stakeholders
1.4.1.1	14	14	Parish Council Approvals	Obtain required approvals from Parish Council	Project Manager

1.3.1.1	5	4	Problem Solving	Determine root cause of environmental health problems and develop plan to solve said	Project Team, Mango valley Citizen Association members
1.3.1.3	7	4	Project Requirements	Define project requirements for Garbage collection points and garbage receptacles	Project Team,
1.3.1.4	8	7	Required Material	Develop and approve a list of procurement items necessary for the project implementation	Project Team
1.3.1.2	6	4	Stakeholders	Identify and engage key project stakeholders.	Project Team
1.2.3	11	8	Sponsorship	Distribute list to specified sponsoring organizations/suppliers	Project Team
1.4.1.0	13	8	Secure Land space	Identify potential land space for garbage collection point	Project Team
1.4.2.0	15	15	NSWMA Engagement	Obtain commitment from NSWMA for garbage collection on community clean-up day and once per week after receptacles are erected	Project manager, NSWMA representative

Time Management

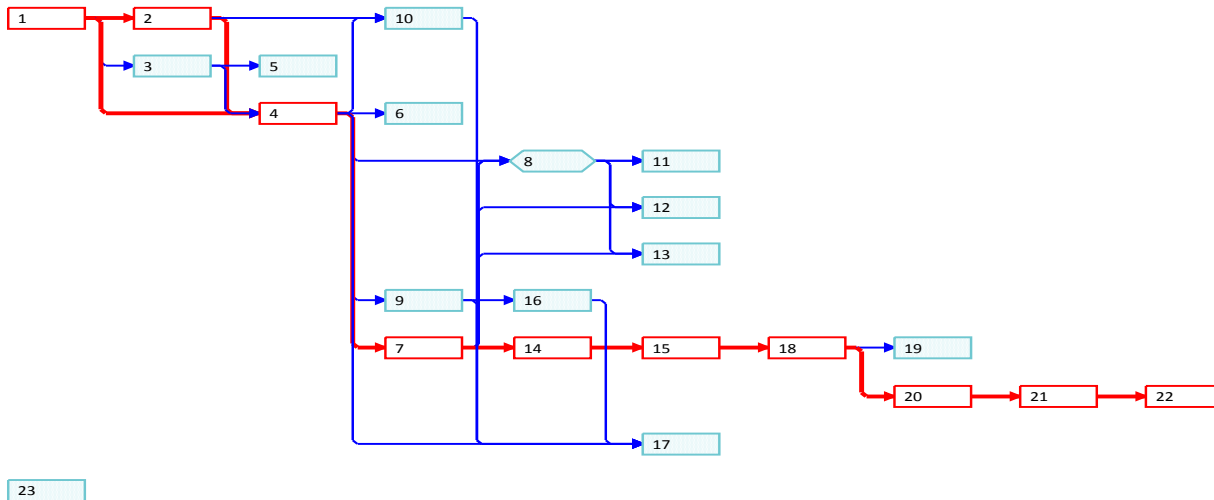
The Critical Path Method will be used to determine the project schedule. The activities from the WBS along with its sequence are listed below along with the estimated activity durations in days. The network diagram and Gantt chart will then be developed.

Sequence	Activity Name	Predecessor	Optimistic Duration [tO]	Most Likely Duration [tM]	Pessimistic Duration [tP]	Expected Duration [tE] $E=(a+4m+b)/6$
1	Community survey	NA	31	35.25	38	35
2	Community project sensitization	1	75	81.5	85	81
3	Current Situation	1	4	5	6	5
4	Community group formation	1,3	0.5	1	1.5	1
5	Problem Solving	4	4	5	6	5
6	Stakeholders	4	4	5	6	5
7	Project Requirements	4	4	5	6	5
8	Required Material	7	4	5	6	5
9	Community engagement	4	44	52	54	51
10	Community Health education	5	34	39	44	39
11	Fundraising activities	8	35	40	45	40
12	Sponsorship	8	18	23.5	26	23
13	Contracting	6	18	23.5	26	23
14	Secure Land space	8	0.5	1	1.25	1
15	Parish Council Approvals	8	5	8	11	8
16	NSWMA Engagement	15	3	4.75	8	5
17	Community group progress reports	16	3	4.75	8	5
18	Community Clean-up	16	2	3	4	3

19	Erect No Dumping Signs	18	2	3	4	3
20	Erect Receptacles	18	1.25	2	3	2
21	Evaluate Project	20	12	15	18	15
22	Handing over Ceremony	21	0.5	1	1.25	1

Network Diagram

The red line denotes the critical path for the project.



Gantt Chart

ID	WBS Code	Task Name	Duration	Start	Finish	Timeline (Feb 11, '18 to Aug 26, '18)						
1	1.1	Community survey	35 days	Mon 2/5/18	Fri 3/23/18	[Gantt bar]						
2	1.1.2	Community project sensitization	139 days	Mon 2/5/18	Thu 8/16/18	[Gantt bar]						
3	1.3.1.0	Current Situation	5 days	Mon 3/26/18	Fri 3/30/18	[Gantt bar]						
4	1.1.3	Community group formation	1 day	Fri 4/13/18	Fri 4/13/18	[Gantt bar]						
5	1.3.1.1	Problem Solving	5 days	Mon 4/16/18	Fri 4/20/18	[Gantt bar]						
6	1.3.1.2	Stakeholders	5 days	Mon 4/16/18	Fri 4/20/18	[Gantt bar]						
7	1.3.1.3	Project Requirements	5 days	Mon 4/16/18	Fri 4/20/18	[Gantt bar]						
8	1.3.1.4	Required Material	5 days	Mon 4/16/18	Fri 4/20/18	[Gantt bar]						
9	1.1.6	Community engagement	51 days	Fri 4/13/18	Fri 6/22/18	[Gantt bar]						
10	1.1.4	Community Health education	39 days	Mon 4/23/18	Thu 6/14/18	[Gantt bar]						
11	1.2.2	Fundraising activities	40 days	Mon 4/23/18	Fri 6/15/18	[Gantt bar]						
12	1.2.3	Sponsorship	23 days	Mon 4/23/18	Wed 5/23/18	[Gantt bar]						
13	1.2.1	Contracting	23 days	Fri 4/27/18	Tue 5/29/18	[Gantt bar]						
14	1.4.1.0	Secure Land space	1 day	Mon 4/23/18	Mon 4/23/18	[Gantt bar]						
15	1.4.1.1	Parish Council Approvals	8 days	Mon 4/30/18	Wed 5/9/18	[Gantt bar]						
16	1.4.2.0	NSWMA Engagement	5 days	Fri 4/27/18	Thu 5/3/18	[Gantt bar]						
17	1.1.5	Community group progress report	5 days	Wed 5/9/18	Tue 5/15/18	[Gantt bar]						
18	1.4.2.1	Community Clean-up	3 days	Wed 5/23/18	Fri 5/25/18	[Gantt bar]						
19	1.4.2.2	Erect No Dumping Signs	3 days	Wed 5/23/18	Fri 5/25/18	[Gantt bar]						
20	1.4.1.2	Erect Receptacles	2 days	Fri 5/25/18	Mon 5/28/18	[Gantt bar]						
21	1.5.1	Evaluate Project	15 days	Tue 5/29/18	Mon 6/18/18	[Gantt bar]						
22	1.5.2	Handing over Ceremony	1 day	Fri 6/22/18	Fri 6/22/18	[Gantt bar]						

Cost Management

The associated costs for the activities of the project will be determined using past projects budgets and the current price trends. Current price trends will be obtained from calling suppliers and or visit to stores. The below chart shows the project budget..

		Cost Total(\$)	Cost Actual (\$)
WBS Code	Activity		
1.1	Community survey	5,000	
1.1.2	Community project sensitization	10,000	
1.3.1.0	Current Situation	1,200	
1.1.3	Community group formation	15,000	
1.3.1.1	Problem Solving	1,000	
1.3.1.2	Stakeholders	1,000	
1.3.1.3	Project Requirements	5,000	
1.3.1.4	Required Material	5,000	
1.1.6	Community engagement	3,500	
1.1.4	Community Health education	15,000	
1.2.2	Fundraising activities	8,000	
1.2.3	Sponsorship	500	
1.2.1	Contracting	5,000	
1.4.1.0	Secure Land space	-	
1.4.1.1	Parish Council Approvals	2,000	
1.4.2.0	NSWMA Engagement	1000	
1.1.5	Community group progress reports	10,000	
1.4.2.1	Community Clean-up	50,000	
1.4.2.2	Erect No Dumping Signs	4,500	
1.4.1.2	Erect Receptacles	55,000	
1.5.1	Evaluate Project	1,000	
1.5.2	Handing over Ceremony	25,000	
Total		223,700	

Quality Management

The following table displays the acceptability criteria for procured items. Only the first two of the items will be purchased all others are intended to be obtained through sponsorship.

WBS	Activity	Item	Acceptability Criteria	Comment
1.4.2.2	Erect No-Dumping Signs	No dumping signs	Should be made from zinc material and words legible written, must be attached to a metal post for erection from ground.	
1.4.1.2	Erect Garbage Receptacles	Garbage receptacle (steel)	Must be made of steel and of the capacity to properly hold 55 gallons metal barrels.	
1.4.1.2	Erect Garbage Receptacles	Metal barrels	Have a capacity of 55 gallons and comes with closely fitted cover.	
1.1.3	Community Meeting	Venue	Should be a covered area, have seating available, rest room available, be able accommodate minimum of 30 persons, electricity available, space for projection	Community Primary School chosen

Human Resources Management

The project team will consist of 11 members Health Committee: Project Manager (PHI-Intern), President, Vice-President, Secretary, Assistant Secretary, Public Relations Officer, Assistant Public Relations Officer, Treasurer, Assistant Treasurer, Fundraising Coordinator and Assistant Fundraising Coordinator. This committee will be formed at the first community meeting. Here the roles and responsibilities of each project team member will be presented and community members nominate persons whom upon acceptance will be voted for. Upon formation of the committee the first committee meeting will be used to more acquaint members of the project and their roles and responsibilities. From this meeting project team members will be assigned specific tasks. Health education will be utilized for training of the community members on proper solid waste management techniques. Brochures will be prepared and distributed at the community meetings and other selected health education locations as well as demonstrations will be made during the presentations.

The following chart describes all the human resources that will be needed for each activity.

WBS Code	Activity	Resources
1.1.1	Community survey	PHI Intern, Intern Supervisor, data collection tool
1.1.2	Community project sensitization	PHI Intern (PM), Intern Supervisor
1.1.3	Community group formation	PHI Intern (PM), Intern Supervisor, PHI, St. Ann Health Department , Community members,
1.1.4	Community Health education	PHI Intern (PM), Mango Valley Health Committee Public Health Inspectors,
1.1.5	Community group progress reports	Project team
1.1.6	Community engagement	Mango Valley Health Committee (Project team) , Intern Supervisors, St. Ann Health Department
1.3.1.0	Current Situation	PHI Intern, St. Ann Health Department
1.4.2.1	Community Clean-up	Project team, community members, sponsors,
1.2.1	Contracting	Project manager
1.4.2.2	Erect No Dumping Signs	Project team, community members
1.4.1.2	Erect Receptacles	Project team, community members
1.5.1	Evaluate Project	Project team
1.2.2	Fundraising activities	Project team, community members
1.5.2	Handing over Ceremony	All project stakeholders
1.4.1.1	Parish Council Approvals	Project Manager
1.3.1.1	Problem Solving	Project Team, Mango valley Citizen Association members
1.3.1.3	Project Requirements	Project Team,
1.3.1.4	Required Material	Project Team
1.3.1.2	Stakeholders	Project Team
1.2.3	Sponsorship	Project Team
1.4.1.0	Secure Land space	Project Team
1.4.2.0	NSWMA Engagement	Project manager, NSWMA representative

Communications Management

All internal communications will take place via Project Team WhatsApp group and phone calls. Emails should be used for the sending of all documents such as meeting minutes, progress reports are to be sent , email must be used. For external communications this will be done via phone calls and emails. The stakeholder management plan contains information on communication with the various stakeholders. The following communication log will be used to track communications for the project.

Each major communication will be added as they occur

Information	Channel/Medium	Stakeholder	Sender/Owner	Date	Delivery Confirmation
Health Education Plan	Email	School Supervisor (tutor)	Project Manager	16.4.18	Yes
Progress Report	Email	All sponsors	Project Manager	28.5.18	Yes

Risk Management

The following chart depicts the risks identified for the project, their impacts, likelihood of and preventative and or corrective measures.

WB S	Activity	Risk	Impact	Occurrence	Preventative/Corrective Measure
1.1.3	Community Engagement	Power Outage	High	Medium	Make hard copies of presentation, generate pamphlets with highlights of the presentation for each indoor health education session.
1.4.2.1	Community Clean-Up	Delays in community clean up due to unfavorable weather conditions	High		Schedule 3 separate days for community clean –up
1.3.1.2	Stakeholders	Conflicts arising amongst stakeholders due to inaccurate expectations caused by poor communication.	High	Medium	Ensure that each stakeholder has full understanding of their interest and power level throughout the project and their expectations.
1.3.1.2	Stakeholders	Delays in project execution due to the emergence of overlooked project stakeholder or stakeholders becoming disengaged.	High	Low	Ensure that all project stakeholders are identified at project start and that the correct measures are in place to keep them engaged.
1.3.1.3	Project Requirements	Budget overrun due to inaccurate cost estimates	Medium	Medium	Ensure that all items needed for each activity is included in the budget and that estimates for item costs are as close as possible to the true value.

Procurement Management

The budgeted funds will be obtained using fundraising activities and seeking sponsorship from stakeholders. For each major item to be procured quotations will be sought from 3 vendors and reason for vendor choice given as shown in the table below.

WBS	Activity	Item	Quantity	Vendor 1		Vendor 2		Vendor 3		Remarks
				Unit Price(\$)	Total Price (\$)	Unit Price (\$)	Total Price (\$)	Unit Price(\$)	Total Price(\$)	
1.4.2.2	Erect No-Dumping Signs	No dumping signs (Zinc)	3	1500	4500	1600	4800	1550	4650	Vendor 1 chosen due to lowest price offered
1.4.1.2	Erect Garbage Receptacles	Garbage receptacle (steel)	5	10000	50000	10500	52500	11000	55000	Vendor 3 chosen due to close proximity to venue and flexibility for payment.

Chart 11 Stakeholder Management Plan Sample , (Source: Compiled by Author)

STAKEHOLDERS MANAGEMENT PLAN						
Formal document outlining how stakeholders will be engaged in the project.						
Author: Lunce Dowdie-Campbell		Issue Date: April 19, 2018				
Project Name		Version History				
Keeping the Community Clean is Everyone's Business	Version	Comments	Release Date	Revised by		
	1.0	First Draft	16.4.18	Project Manager		
	2.0	Final Draft	19.4.18	Intern Supervisor		
Stakeholder Identification and Approach						
For the project all stakeholders will be identified at the project team first meeting based on the nature of the project to be undertaken. A stakeholders register as depicted below will then be created to show the stakeholder's power and interest and how the stakeholder will be kept engaged throughout the project's life.						
Power	High	Keep Satisfied	Manage Closely			
	Low	Monitor	Keep Informed			
	Low	High				
			Interest			
No.	Stakeholder Name	Stakeholder Position	Contact Information	Power	Interest	stakeholder Engagement
1	St. Ann Health Department	Sponsor	876-972-2215	High	High	Provide frequent project status information.
2	PHI Intern	Project Manager	876-398-5167	High	High	Ensure that all communications are carried out effectively and all project deadlines are met.

3	Mango Valley Health Committee	Project Team	mvhealthcommittee@yahoo.com	High	High	Work closely with project manager, community members and sponsors.
4	St. Ann Parish Council	Regulator	876-972-5668	High	Low	Give stakeholder adequate time to review approval request.
5	Opposition Member of Parliament, North East, St. Ann	Sponsor	876-684-8687	Low	Low	Provide frequent project status information.
6	Member of Parliament, North East, St. Ann	Sponsor	876-547-2485	Low	Low	Provide frequent project status information.
7	National Solid Waste Management	Sponsor	876-972-8456	High	Low	Provide frequent project status information.
8	Community Business Operators	Sponsors	-	Low	Medium	Provide frequent project status information.
9	Intern Supervisor	Academics	ajohnson@gmail.com	High	High	Provide document deliverables according to schedule.
10	Intern Supervisor	Field (SAHD)	aclarke@gmail.com	High	High	Provide document deliverables according to schedule.
11	Mystic Mountain Jamaica Ltd	Sponsor	mysticja@gmail.com	High	Medium	Provide frequent project status information.
12	Dolphin Cove Jamaica Limited	Sponsor	dcjamaica@gmail.com	High	Medium	Provide frequent project status information.
13	Island Dairies Jamaica Limited	Sponsor	islanddairies@gmail.com	High	High	Provide frequent project status information.
14	Suppliers	Suppliers	-	High	low	Frequent communication re delivery dates and statuses.
15	Residents	Customer	-	High	High	Provide frequent project status information.

Stakeholder Communication Strategy

The below chart shows the communication strategy based on communication plan (see PMP template).

Stakeholder	Owner	Information Needs	Channel/Medium	Frequency
Residents	President	Project Status Reports	Community Notice Board	Month
Sponsors	Project Manager	Project Status Reports	Email	Monthly
Project Team	Secretary	Meeting Minutes	Email	Monthly, or as need arises
Intern Supervisors	Project Manager	Internship document deliverables	Email	According to schedule

Chart 12 Project Roles & Responsibilities Sample, (Source: Compiled by Author)

PROJECT ROLES AND RESPONSIBILITIES	
Project Name:	
	Purpose

This template is used to determine the various roles and responsibilities within the project and consists of project team contact information and a RACI chart.

Project Team Information

The following chart shows project team information.

Name	Position	Telephone	Email
Lunce Dowdie-Campbell	Project Manager	876-398-5167	luncedowdie@yahoo.com
Suzette Bennett	President	876-587-1772	sbennett@gmail.com
Tiara Patterson	Vice-President	876-258-5862	spatterson@live.com
Shaquin Dennis	Public Relations Officer (PRO)	876-367-9685	nwilliams@gmail.com
Naela Williams	Assistant PRO	876-857-9689	dennisshaquin@yahoo.com
O'Bryan Campbell	Secretary	876-350-5415	o.campbell@gmail.com
Kimarley Walters	Assistant Secretary	876-561-2056	kimmywalt@yahoo.com
Nauseen Lawrence	Treasurer	876-562-2756	nlawrence@gmail.com
Suzan Dowdie	Assistant Treasurer	876-856-8751	s.dowdie@yahoo.com
Cian Walters	Fundraising Coordinator	876-568-8512	c.walters@yahoo.com
Krystal Simpson	Assistant Fundraising Coordinator	876-687-6850	krysel@yahoo.com

RACI Chart

The following key was used to complete the RACI chart below.

(R) Responsible- person assigned to get the work done.

(A) Accountable- person who makes the final decision and has the ultimate ownership of the activity.

(C) Consulted- person who must be consulted before a decision or action is taken.

(I) Informed- person who must be informed that a decision or action is taken.

WBS Code	Activity	RACI			
		Responsible	Accountable	Consult	Informed
1.1.1	Community Survey	PM	PM	Intern Supervisors	Intern Supervisors
1.1.2	Community Project Sensitization	PM	PM	PM	PM
1.1.3	Community Group Formation	PM	PM	PM	PM
1.1.4	Community Health Education	PM	PM	PM	PM
1.1.5	Periodic community group meetings (before project team selection)	PM	PM	PM	PM
1.1.5	Periodic community group meetings (after project selection)	PRO	PM	PM	PM
1.1.6	Establish an alliance between community groups and the St. Ann health department	President	PM	All project team members	All project team members
1.3.1.0	Analyze the current situation of the community	PM	PM	Intern Supervisors	Intern Supervisors
1.4.2.1	Organize community cleanup day	PM	PM	All project team members	All project team members
1.2.1	Communicate with sponsoring organizations/suppliers on delivery dates and payment conditions	Treasurer	PM	PM	All project team members
1.4.2.2	Erect no dumping signs	PM	PM	All project team members	All project team members
1.4.1.2	Placement of 5 metal barrels in each receptacle.	PM	PM	All project team members	All project team members

1.5.1	Final evaluation of project	PM	PM	PM	PM
1.2.2	Fundraising Activities	Fundraising Coordinator	PM	All project team members	All project team members
1.5.2	Plan handing over ceremony	All project team members	PM	All project team members	All project team members
1.4.1.1	Obtain required approvals from Parish Council	PRO	PM	All project team members	All project team members
1.3.1.1	Root Cause Analysis	All project team members	PM	All project team members	All project team members
1.3.1.3	Define project requirements for Garbage collection points and garbage receptacles	All project team members	PM	All project team members	All project team members
1.3.1.4	Develop and approve a list of procurement items necessary for the project implementation	All project team members	PM	All project team members	All project team members
1.3.1.2	Identify and engage key project stakeholders.	All project team members	PM	All project team members	All project team members
1.2.3	Distribute list to specified sponsoring organizations/suppliers	PRO	PM	All project team members	All project team members
1.4.1.0	Identify potential land space for garbage collection point	All project team members	PM	All project team members	All project team members
1.4.2.0	Obtain commitment from NSWMA for garbage collection on community clean-up day and once per week after receptacles are erected	President	PM	All project team members	All project team members

Please note that project team members may work with their assistant and or delegate duties to them. Where either is done the chart must be adjusted accordingly.

Chart 13 Project Status Reporting Sample, (Source: Compiled by Author)

PROJECT STATUS REPORT			
Date: May 30, 2019			
Project Name:			
Keeping the Community Clean is Everyone's Business			
Project Areas Status Breakdown			
This status report was done after the first committee meeting was held and before community clean-up. All areas of the project are on track based on projections. The areas of cost has some minor errors. For the cost additional cost was incurred to print more raffle tickets forms as more tickets were being sold than projected..			
	Overall Status		
Project Area	On Track	On Track with Minor Errors	Off Track
Scope			
Schedule			
Cost			
Resources			
Quality			
<Other>			
Project Activities Breakdown			

Fill out the chart below to give an overall breakdown of activities.

Activities Status					
ACTIVITIES COMPLETED					
Activity Name	Projected		Actual		Notes
	Start Date	End Date	Start Date	End Date	
Community Survey	5.2.18	23.3.18	5.2.18	20.3.18	
Survey Analysis	26.3.18	30.3.18	21.3.18	27.3.18	Solid waste management was the prioritized problem.
Community Meeting	13.4.18	13.4.18	13.4.18	13.4.18	10 member health committee formed
1 st Committee Meeting	16.4.18	16.4.18	20.4.18	20.4.18	Root cause analysis, project charter and stakeholder register developed
Project Proposal	20.4.18	20.4.18	22.4.18	22.4.18	Proposal was approved and go ahead granted. Project management plan to be designed.
ACTIVITIES IN PROGRESS					
Fundraising activities (donation forms)	23.4.18	23.4.18	30.4.18		\$30,000 have been collected from raffle tickets to date.
MISSED DEADLINES					
None					
UPCOMING ACTIVITIES					
Walkathon	20.5.18	20.5.18			To be conducted on Saturday May 20, 2018.
Community Clean-Up	23.5.18	25.5.18			No-dumping signs to be installed on day of illicit dump site clean-up. Refreshments to be provided. Tractor for grading of illicit dumpsite area to be provided by MP.

Chart 14 Minutes of Meeting Sample, (Source: Compiled by Author)

MINUTES OF PREVIOUS MEETING		
Date:	Start Time:	End Time:
May 20, 2017	3:30 pm	6:45 pm
Project Manager:	Meeting Chairman:	Minute Secretary:
Lunce Dowdie-Campbell	Sharon Hayles	O'Bryan Campbell
Attendees		
<ol style="list-style-type: none"> 1. Lunce Dowdie-Campbell (Project Manager) 2. Suzette Bennett (Health Committee President) 3. O'Bryan Campbell (Secretary) 4. Nauseen Lawrence (Treasurer) 5. Suzan Dowdie (Assistant Treasurer) 6. Cian Walters (Fundraising Coordinator) 7. Krystal Simpson (Assistant Fundraising Coordinator) 8. Sharon Hayles (Citizen Association President) 9. Dudley Walters (Citizen Association member) 10. Shaquin Dennis (Public Relations Officer) 11. Naela Williams (Assistant Public Relations Officer) 12. Tiara Patterson (Health Committee Vice-president) 		

Apologies														
Apologies were sent from Kimarley Walters (assistant secretary)who had a family emergency and was unable to attend the meeting. NauseenLawrence sent apologies for being late.														
Agenda														
<ul style="list-style-type: none"> • Welcome and prayer • Root cause analysis • Stakeholders identification • Project charter • Project proposal 														
Meeting Notes														
<p>Meeting was called to order at 3:30 pm by meeting chairman Sharon Hayles with 11 members. All attendees were welcomed and Mr. Dudley Walters (citizen association member) asked to offer prayers. The meeting agenda was then disstributed. Project Manger Lunce Dowdie-Campbell explained the concept of root cause analysis and the approach to be taken. The root causes of the improper solid waste management were determined to be limited number of garbage colleciton point resulting in inadequate number of garbage receptacles.</p> <p>Next the stakeholders were identified for the project. The following is a list of identified stakeholders:</p> <ol style="list-style-type: none"> 1. Project Team 2. Residents 3. St. Ann Parish Council 4. Members of Parliament, North East, St. Ann 5. Opposition Member of Parliament, North East, St. Ann 6. Mystic Mountain Jamaica Ltd 7. Dolphin Cove Jamaica Ltd 8. Island Dairies Ltd 9. St. Ann Heath Department 10. National Solid Waste Management Authority 11. Intern Supervisor (Academics) 12. Intern Supervisor (Field) <p>After stakeholders identification a stakeholders register was developed and then the project charter as depicted in the attached project charter.</p> <p>The project proposal was then finalized and the project manager was to send said to the tutor for approval. Two donation forms were given out to the Committee Members and they were given strict instructions to wait on go head from PM before using the forms. They were instructed to allow each giver to sign to the amount given. The next meeting date was decided on and the meeting was adjourned at 5:45 pm by Cian Walters (fundraising coordinator) and seconded by Suzan Dowdie (Assistant Treasurer).</p>														
Resolutions														
<table border="1"> <thead> <tr> <th style="background-color: #d9ead3;">No.</th> <th style="background-color: #d9ead3;">Description</th> <th style="background-color: #d9ead3;">Action</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Development of project proposal (root cause analysis was done for the input and project charter and project stakeholders register developed as the outputs)</td> <td>Proposal to be submitted for approval.</td> </tr> <tr> <td>2.</td> <td>Fifty raffle tickets distributed to each committee member</td> <td></td> </tr> <tr> <td>3.</td> <td>Next meeting date (Saturday May 19, 5:30 pm, President's home, Mango Pan))</td> <td>Meeting to be held immediately after completion of walkathon</td> </tr> </tbody> </table>			No.	Description	Action	1.	Development of project proposal (root cause analysis was done for the input and project charter and project stakeholders register developed as the outputs)	Proposal to be submitted for approval.	2.	Fifty raffle tickets distributed to each committee member		3.	Next meeting date (Saturday May 19, 5:30 pm, President's home, Mango Pan))	Meeting to be held immediately after completion of walkathon
No.	Description	Action												
1.	Development of project proposal (root cause analysis was done for the input and project charter and project stakeholders register developed as the outputs)	Proposal to be submitted for approval.												
2.	Fifty raffle tickets distributed to each committee member													
3.	Next meeting date (Saturday May 19, 5:30 pm, President's home, Mango Pan))	Meeting to be held immediately after completion of walkathon												

Chart 15 Issue Log Sample (Source: Compiled by Author)

ISSUE LOG	
Project Name: Keeping the Community Clean is Everyone's Business	
Project Manager: Lunce Dowdie-Campbell	
Description	

Issues are to be recorded in chart as they occur and the following following colours used to represent issue level:

High
Medium
Low

No	Issue Title	Date Created	Issue Type	Issue Owner	Issue Status	Date Resolved
1	Complaint from opposition member of parliament	February 1, 2019	High	Project Manager	Resolved	February 7, 2019

Chart 16 Lessons Learnt Sample, (Source: Compiled by Author)

LESSONS LEARNT			
Project Name:		Project Manager	
Keeping the Community Clean is Everyone's Business		Lunce Dowdie-Campbell	
Description			
One major incident occurred in the early stage of the project whereby the opposition member of parliament was hesitant to participate as she felt that favoritism was being granted to the Member of Parliament who received an earlier notification of the intent of the community project. This was addressed via an apology and justification given as to why the Member of Parliament was in receipt of the letter first, both were accepted and the stakeholder remained committed throughout the project.			
Lessons Learnt Log			
Summarize events described above in the following table.			
No.	Occurrence that required intervention or needed to be addressed	Impact of the occurrence	Preventative Measure
1	Councillors of the division complained of favoritism for the project.	High	Ensure that notifications are sent to all political representatives at the same time, preferably by a means such as email where the proof is readily available.

Chart 17 Document Distribution and Archive Sample, (Source: Compiled by Author)

DOCUMENTS DISTRIBUTION & ARCHIVE	
Project Name:	
Keeping the Community Clean is Everyone's Business	
Project Manager	
Lunce Dowdie-Campbell	
Description	
The established distribution and archiving of the generated documents are summarized below.	
Item	Location
All templates (soft copies)	SAHD cloud storage, SAHD Internship projects thumb drive
Soft Copy of Internship Project	SAHD cloud storage, SAHD Internship projects thumb drive

Hard Copy of Internship Survey	Chief's Office, SAHD
Appendix	
Attach appendix if applicable.	

Chart 18 Project Closure Report Sample, (Source: Compiled by Author)

PROJECT CLOSURE REPORT						
Project Name:			Project Manager			
Keeping the Community Clean is Everyone's Business			Lunce Dowdie-Campbell			
Document Approval			Version History			
Author	Reviewed by	Authorized by	Version	Comments	Release Date	Revised by
Project Manager	Project Team	Intern Supervisor	1.0	Draft	June 18, 2018	Project Team
Project Performance Breakdown						
Complete table to show project performance						
	Planned	Actual	Variance			
Start Date	February 5, 2018	February 5, 2018	None			
End Date	June 22, 2018	June 22, 2018	None			
Budget	183,700	150,700	23000			
Project Summary						
<p>This project assisted in discovering the environmental health problems faced by the community of Mango Pan, St. Ann. The problems were then prioritized and an attempt made to solve the most feasible problem. Prioritization allowed the researcher, the health department and community to direct resources, time, and energy to address the improper solid waste management problem that was deemed most critical and practical to address. Funds to implement the project was generated through fundraising activities and sponsorship from various stakeholders. The project took a timeframe of 5 months to be completed and saw the provision of 5 additional garbage collection sites to the community, elimination of 3 illicit dumpsites and erection of 3 no dumping signs, 1 at each previously illicit dumpsite. The collection sites were in the form of steel communal garbage receptacles with 5 metal barrels in each.</p> <p>For project implementation the first major event was the community clean-up day whereby the 3 illicit dump sites in the community were cleaned and subsequently the placement of no-dumping signs. Also, community de-bushing was done as a part of the clean-up day and residents were instructed to take out any unnecessary articles from their premises which was done. The solid waste generated from the community clean-up was collected by NSWMA said day. The following day the additional 5 communal garbage receptacles were erected and 5 metal barrels placed in each. Following this, a final health education was done at the handing over ceremony whereby residents were reminded of the correct way to package their solid waste before placement in storage containers and also on alternative ways to dispose of waste such as use for manure and recycling.</p>						

One major incident occurred in the early stage of the project whereby the opposition member of parliament was hesitant to participate as she felt that favoritism was being granted to the Member of Parliament who received an earlier notification of the intent of the community project. This was addressed via an apology and justification given as to why the Member of Parliament was in receipt of the letter first, both were accepted and the stakeholder remained committed throughout the project.

The St. Ann Health Department benefitted from this project as relevant information for the community such as the demographics and environmental health problems being faced was obtained. The community benefitted through community mobilization whereby community members were fully engaged and participated throughout the entire project by supporting all major activities such as meetings, clean-up campaign and the fundraising activity of walkathon. This project was also beneficial to the researcher as the community intervention involved allowed for the transition of the researcher's previous theoretical knowledge into practice.

The project had an excess of \$23, 00 which will be used by the Health Committee for community sustainability purposes.

5 CONCLUSIONS

1. A survey was conducted utilizing questionnaires as the main data collection tool to garner information in an effort to make an assessment of the organization's project management needs.
2. Results of the survey revealed several challenges being faced by previous PHI Interns at the St. Ann Health Department. Planning and organization (44%) and project implementation (33%) were the two major challenges faced.
3. Sixty five percent (65%) of the respondents had little to no Project Management knowledge at the time of their internship.
4. These findings strongly supported the need for a Project Management Methodology (PMM) which would allow for documentation of project development which can be a useful part of lessons learnt for future projects.
5. A PMM was developed within the PMI standards and designed to fit the project management needs of the organization obtained from the study results. The PMM also took into consideration existing bureaucracy and organizational process assets.
6. To support the PMM and to obtain standardization for future projects, a total of 10 templates were developed that spanned the 10 knowledge areas; a project management plan with a subsidiary stakeholder management plan and 8 project documents.
7. The operation of the methodology incorporating the templates was explained to management and intern supervisors to ensure thorough understanding of the methodology.
8. An implementation plan guide was developed encompassing gradual roll out to ensure proper implementation of the PMM.
9. A sample project was also created demonstrating the application of the PMM to a typical project of the organization.

6 RECOMMENDATIONS

The following recommendations are put forward to management of the Environmental Health Unit at the St. Ann Health Department which if implemented should see a marked increase in the quality and benefits of the projects undertaken by the PHI Interns of the unit.

1. Assess each PHI Intern to determine their project management knowledge and provide knowledge where lacking before allowing them to undertake any project.
2. Ensure that training is provided for each new intern supervisor so that they have a thorough understanding of the PMM inclusive of the use of the templates.
3. Conduct meetings at predetermined intervals with interns and their supervisors to address any concerns that there might be during the internship period.
4. Initiate the archiving of hard copies of the projects conducted by PHI Interns.
5. Keep a separate hard copy of the lessons learnt log for each project.
6. Update the PMM along with the templates regularly to ensure that they respond effectively to the organization needs and changes in bureaucracy; they are not static documents.
7. Encourage the use of the proposed project management methodology (PMM) by the PHI Interns as the PMM is based on the good practices outlined by the project management institute (PMI) and the PMBOK Guide which contains the globally recognized standards and guide for project management.
8. Ensure that the PMM described is only applied to projects of the nature of those conducted by PHI Interns; they should not be applied uniformly to all projects of the organization, the organization and or project management team is responsible for tailoring the project management processes by determining what is appropriate for any given project.
9. Ensure that the implementation plan guide for using the proposed methodology is strictly followed.

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8 APPENDICES

Appendix 1: FGP Charter

PROJECT CHARTER	
Date	Project Name:
November 13, 2017	The Development of a Project Management Methodology for Public Health Inspector Interns at the St. Ann Health Department, Jamaica.
Knowledge Areas / Processes	Application Area (Sector / Activity)
Knowledge areas: <ol style="list-style-type: none"> 1. Project Integration Management 2. Project Scope Management 3. Project Schedule Management 4. Project Costs Management 5. Project Quality Management 6. Project Human Resources Management 7. Project Communications Management 8. Project Risks Management 9. Project Procurement Management 10. Project Stakeholders Management Process groups: <ul style="list-style-type: none"> • Initiating • Planning • Executing • Monitoring and Controlling • Closing 	Environmental Health
Start date	Finish date
November 13, 2017	July 6, 2018
Project Objectives (general and specific)	
<p>General objective:</p> <p>To develop a Project Management Methodology to be used by the Public Health Inspector Interns at the St. Ann Health Department in order to improve project execution through standardization.</p> <p>Specific objectives:</p> <ol style="list-style-type: none"> 1. To evaluate the organization's project management needs in order to design the main components of the project management methodology. 2. To propose a project management methodology to fit the organization's project management needs. 3. To develop project templates and techniques to utilize for future projects. 4. To explain the operation of the proposed methodology to management and intern supervisors to ensure thorough understanding of the methodology. 5. To create an implementation plan guide for using the proposed methodology. 	
Project purpose or justification (merit and expected results)	
Public Health Inspector (PHI) Interns of the University of Technology (UTECH), Jamaica Bachelors of	

Science in Environmental Health Programme with a major in Public Health Inspection are placed in each of the 14 parishes in Jamaica on a yearly basis for 6 months. It is mandatory that these PHI interns successfully undertake a community social project in order to obtain their Bachelors of Science degree from the University.

In the parish of St. Ann Jamaica, there is no formal structure as to how these projects are initiated, planned, executed, monitored, controlled and closed. Thus, the students having little to no knowledge of project management are left to develop their own strategies in an effort to aid in the successful completion of said projects. This often leads to poor selection of project topics, projects not being completed on time, poorly executed projects, budget overruns and in a few cases failure to execute the project.

This FGP aims to develop a project management methodology within the standards of the Project Management Institute (PMI) to be utilized by these Interns in the parish. This methodology will provide guidelines for project execution by the PHI interns within the organization and it is hoped that this methodology will become the organization standard. The use of this methodology will significantly improve the selection and organization of projects and the overall quality of the project execution and its deliverables within this realm in the parish.

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

The following are expected to be derived from the FGP:

- The organization project management needs.
- Project Management Methodology that will act as a guide for initiating, planning, executing, monitoring and controlling and closing of projects undertaken by the Public Health Inspector Interns at the St. Ann Health Department.
- Project management templates and techniques.
- Proposed methodology explanation.
- Implementation plan guide.

Assumptions

- The student grasps the knowledge and skills necessary from the preceding Masters in Project Management courses to complete the final graduation project.
 - Final graduation project requirements are clear and understood by the student and will not change for the duration of the program.
 - The organization under study will grant permission to the student to conduct the project and provide the needed support.
 - An adequate support system will be provided by the assigned University staffs.
 - All key stakeholders for the project will be identified and engaged.
 - Timely review and feedback will be provided for each project deliverable.
- The suggested tutor corrections will be made as required by student.

Constraints

Time:

- Each deliverable must be developed and submitted according to project schedule.
- Approval must be obtained from the organization to conduct project.

Quality:

- The PMM proposed is limited to only the results of the organization's project management assessment.

A sample project must be developed in order to explain the proposed methodology.

Preliminary risks

- Limited data collection due to a representative sample of the inspectorate not being available to complete questionnaire or refusal to answer said questionnaires.
- True status of the organization's project management needs not ascertained from analysis of data gathered because respondents were not truthful in answering questionnaires or a

representative sample of respondents was not obtained.

- Management having limited understanding of proposed PMM can negatively impact his ability to provide guidance on use of said PMM to future intern supervisors.

Budget

The development of this project management methodology will cost \$10,000 Jamaican Dollars.

Milestone	Start date	End date
FGP Charter Approval	February 22, 2018	February 28, 2018
FGP Approval by tutor	May 07, 2018	May 11, 2018
FGP Submission to Reviewers	May 18, 2018	May 18, 2018
Reading by Reviewers & Report	May 21, 2018	June 1, 2018
Adjustments by researcher	June 4, 2018	June 29, 2018
Presentation to Board of Examiners	July 2, 2018	July 6, 2018

Relevant historical information

The organization for which the project management methodology is being developed, St. Ann Health Department is a Government Office mandated by the North East Regional Health Authority under the Ministry of Health, Jamaica. The department is responsible for the health and safety of communities within the parish.

Stakeholders

- Lunce Dowdie-Campbell (Project Manager)
- Management of St. Ann Health Department

Inspectorate of St. Ann Health Department

Project Manager: Lunce Dowdie-Campbell

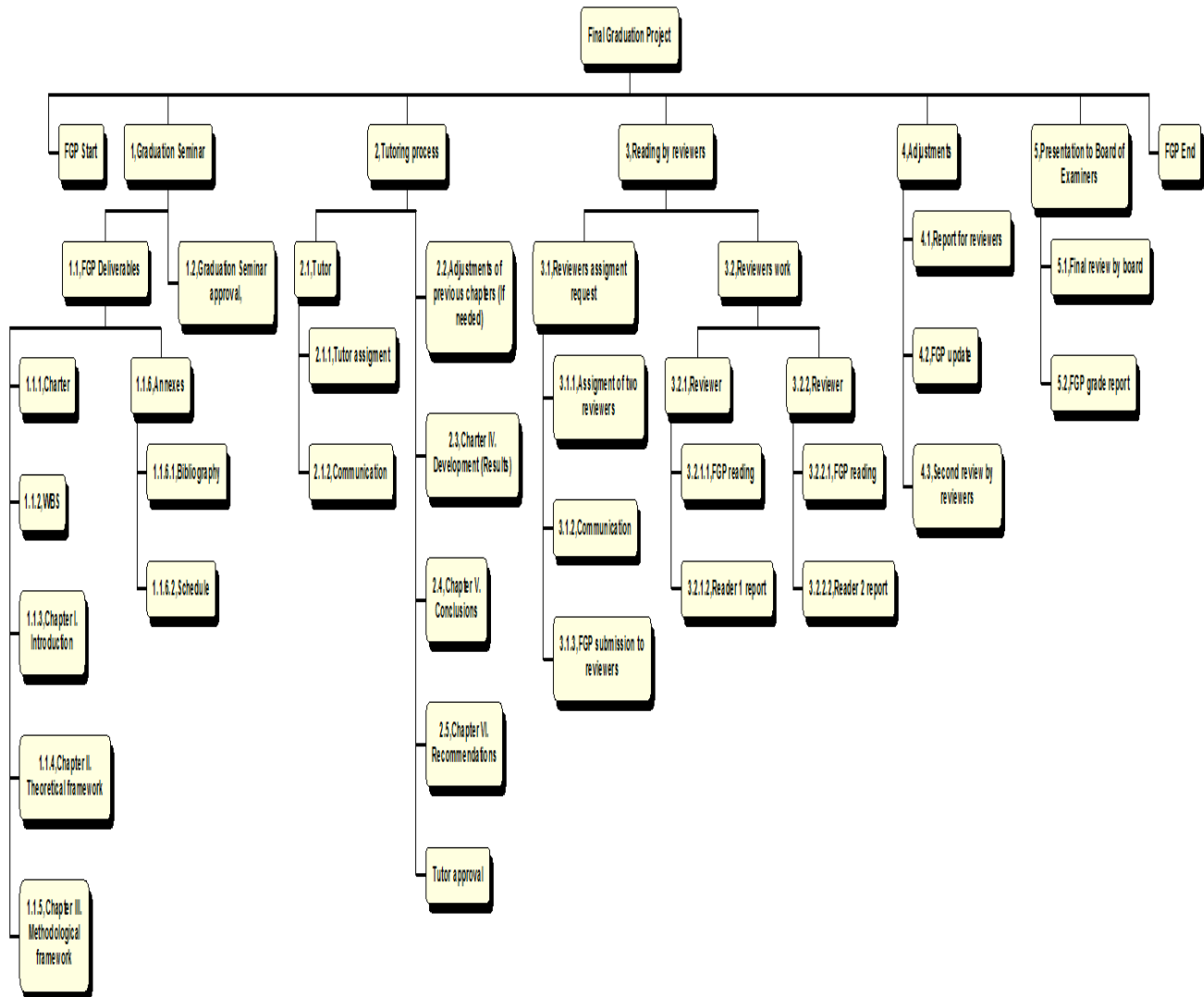
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X

Authorized by: Sophia Crawford

Signature:

Appendix 2: FGP Work Breakdown Structure , (Source: Compiled by Author)



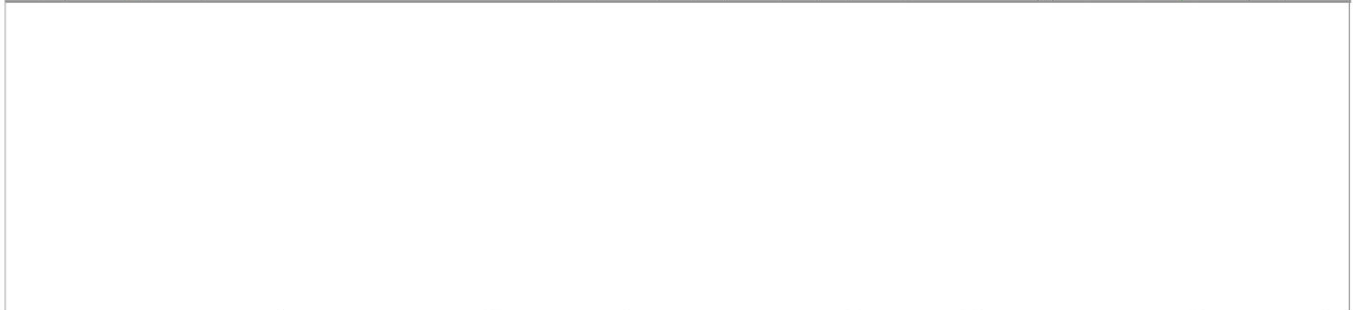
Appendix 3A: FGP Schedule, (Source: Compiled by Author)

FINAL GRADUATION PROJECT DEVELOPMENT SCHEDULE											
ID	WBS	Task	Task Name	Duration	Start	Finish	Predecessors	Q3	Q1	Q3	Q1
1	1		Final Graduation Project	175 days	Mon 11/13/17	Fri 7/13/18					
2	1.1		FGP Start	0 days	Mon 11/13/17	Mon 11/13/17					
3	1.2		1,Graduation Seminar	25 days	Mon 11/13/17	Fri 12/15/17	2				
4	1.2.1		1.1,FGP Deliverables	20 days	Mon 11/13/17	Fri 12/8/17					
5	1.2.1.1		1.1.1,Charter	5 days	Mon 11/13/17	Fri 11/17/17					
6	1.2.1.2		1.1.2,WBS	5 days	Mon 11/13/17	Fri 11/17/17					
7	1.2.1.3		1.1.3,Chapter I. Introduction	5 days	Mon 11/20/17	Fri 11/24/17	5,6				
8	1.2.1.4		1.1.4,Chapter II. Theoretical	5 days	Mon 11/20/17	Fri 11/24/17	7,12				
9	1.2.1.5		1.1.5,Chapter III. Methodological	5 days	Mon 12/4/17	Fri 12/8/17	8				
10	1.2.1.6		1.1.6,Annexes	15 days	Mon 11/20/17	Fri 12/8/17					
11	1.2.1.6		1.1.6.1,Bibliography	5 days	Mon 12/4/17	Fri 12/8/17	8				
12	1.2.1.6		1.1.6.2,Schedule	5 days	Mon 11/20/17	Fri 11/24/17	6,5				
13	1.2.2		1.2,Graduation Seminar approval,	5 days	Mon 12/11/17	Fri 12/15/17	9,11				
14	1.3		2,Tutoring process	65 days	Mon 2/19/18	Fri 5/18/18					
15	1.3.1		2.1,Tutor	3 days	Mon 2/19/18	Wed 2/21/18					
16	1.3.1.1		2.1.1,Tutor assignment	1 day	Mon 2/19/18	Mon 2/19/18	13				
17	1.3.1.2		2.1.2,Communication	2 days	Tue 2/20/18	Wed 2/21/18	16				
18	1.3.2		2.2,Adjustments of previous	5 days	Thu 2/22/18	Wed 2/28/18	16,17				
19	1.3.3		2.3,Charter IV. Development	47 days	Thu 3/1/18	Fri 5/4/18	18				
20	1.3.4		2.4,Chapter V. Conclusions	5 days	Mon 5/7/18	Fri 5/11/18	19				
21	1.3.5		2.5,Chapter VI. Recommendations	5 days	Mon 5/14/18	Fri 5/18/18	20				
22	1.3.6		Tutor approval	0 days	Fri 5/18/18	Fri 5/18/18	21				
23	1.4		3,Reading by reviewers	15 days	Mon 5/21/18	Fri 6/8/18					
24	1.4.1		3.1,Reviewers assignment request	5 days	Mon 5/21/18	Fri 5/25/18					
25	1.4.1.1		3.1.1,Assignment of two reviewers	2 days	Mon 5/21/18	Tue 5/22/18	22				

Project: Lunce Dowdie-Campbell Date: Fri 11/24/17	Task		Inactive Task		Start-only	
	Split		Inactive Milestone		Finish-only	
	Milestone		Inactive Summary		Deadline	
	Summary		Manual Task		Critical	
	Project Summary		Duration-only		Critical Split	
	External Tasks		Manual Summary Rollup		Progress	
	External Milestone		Manual Summary			

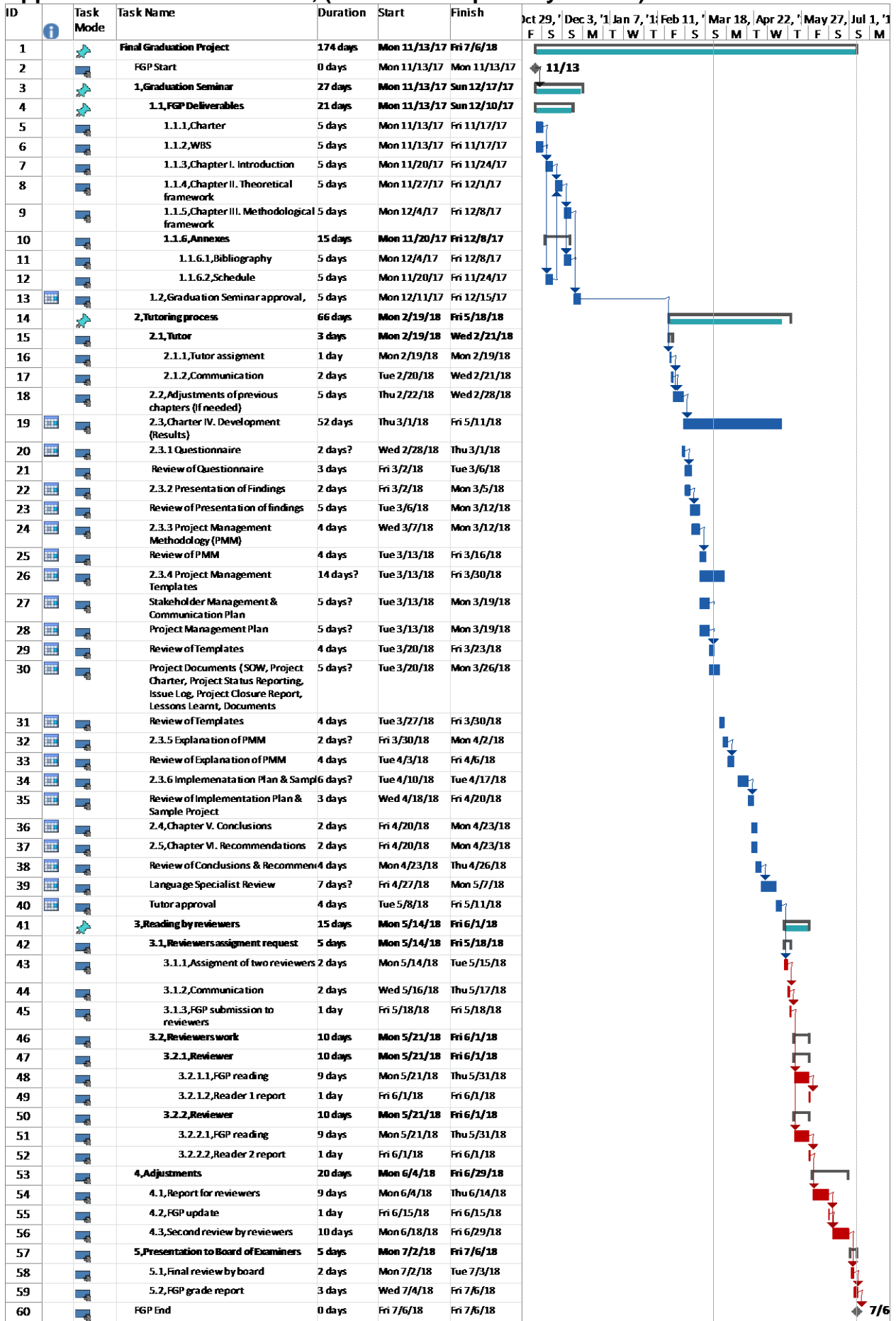
Page 1

FINAL GRADUATION PROJECT DEVELOPMENT SCHEDULE													
ID	WBS	Task	Task Name	Duration	Start	Finish	Predecessors	Q3	Q1	Q3	Q1	Q3	Q1
26	1.4.1.2		3.1.2,Communication	2 days	Wed 5/23/18	Thu 5/24/18	25						
27	1.4.1.3		3.1.3,FGP submission to	1 day	Fri 5/25/18	Fri 5/25/18	26						
28	1.4.2		3.2,Reviewers work	10 days	Mon 5/28/18	Fri 6/8/18							
29	1.4.2.1		3.2.1,Reviewer	10 days	Mon 5/28/18	Fri 6/8/18							
30	1.4.2.1		3.2.1.1,FGP reading	9 days	Mon 5/28/18	Thu 6/7/18	27						
31	1.4.2.1		3.2.1.2,Reader 1 report	1 day	Fri 6/8/18	Fri 6/8/18	30						
32	1.4.2.2		3.2.2,Reviewer	10 days	Mon 5/28/18	Fri 6/8/18							
33	1.4.2.2		3.2.2.1,FGP reading	9 days	Mon 5/28/18	Thu 6/7/18	27						
34	1.4.2.2		3.2.2.2,Reader 2 report	1 day	Fri 6/8/18	Fri 6/8/18	33						
35	1.5		4,Adjustments	20 days	Mon 6/11/18	Fri 7/6/18							
36	1.5.1		4.1,Report for reviewers	9 days	Mon 6/11/18	Thu 6/21/18	34						
37	1.5.2		4.2,FGP update	1 day	Fri 6/22/18	Fri 6/22/18	36						
38	1.5.3		4.3,Second review by reviewers	10 days	Mon 6/25/18	Fri 7/6/18	36,37						
39	1.6		5,Presentation to Board of Examiners	5 days	Mon 7/9/18	Fri 7/13/18							
40	1.6.1		5.1,Final review by board	2 days	Mon 7/9/18	Tue 7/10/18	38						
41	1.6.2		5.2,FGP grade report	3 days	Wed 7/11/18	Fri 7/13/18	40						
42	1.7		FGP End	0 days	Fri 7/13/18	Fri 7/13/18	41						7/13



Project: Lunce Dowdie-Campbell Date: Fri 11/24/17	Task		Inactive Task		Start-only	
	Split		Inactive Milestone		Finish-only	
	Milestone		Inactive Summary		Deadline	
	Summary		Manual Task		Critical	
	Project Summary		Duration-only		Critical Split	
	External Tasks		Manual Summary Rollup		Progress	
	External Milestone		Manual Summary			

Appendix 3B: FGP Schedule, (Source: Compiled by Author)



Appendix 4: Questionnaire Guide

Questionnaire Guide

Dear PHI,

My name is Lunce Dowdie-Campbell. As a partial fulfillment for my Master's program, I will be conducting a final graduation project with the aim of developing a Project Management Methodology to be used by the Public Health Inspector Interns at the St. Ann Health Department, in order to improve project execution through standardization. Your participation in this short questionnaire is vital for the successful completion of this research and I am therefore taking the opportunity to thank you for your willingness to participate. All information received will be kept in utmost privacy.

From the researcher's personal experience and several complaints from many of her colleagues, the implementation of community environmental health projects by PHI Interns poses a challenge to many. There exists no formal project management methodology to guide the successful initiation, planning, execution, monitoring and controlling and closing of said projects. The lack of said methodology coupled with the students having little to no knowledge of project management propel students each year to develop their own strategies in an effort to aid in the successful completion of said projects. This often led to poor selection of project topics (ease of completion used to select priority problem to be solved), projects not being completed on time, poorly executed projects, budget overruns and in a few cases failure to execute the project.

It is believed that having some form of structured formal guidelines can significantly assist these students in the management of their projects. In light of this, the researcher seeks to develop a project management methodology within the standards of the Project Management Institute (PMI) to be utilized by PHI Interns in the parish. This methodology will provide guidelines for project execution by the PHI interns within the organization and it is hoped that this methodology will become the organization standard.

Interview #:

Gender Female Male

1. What is your current position?
 Public Health Inspector I-III
 Specialist PHI
 DCPI
 CPHI
2. On a scale of 0-5 with 5 being the highest, how knowledgeable are/were you with the discipline of project management?
 0 1 2 3 4 5
3. Are/Were you of the knowledge that a project have different phases which constitutes a project life cycle?
 Yes No
4. Are/Were you aware of the different project management processes?
 Yes No

5. Are/Were you aware of the project management knowledge areas?
 Yes No

6. Are/Were you familiar with the project management term “progressive elaboration”?
 Yes No

7. Do you believe that there should be a project management guideline to be followed by PHI Interns to said in successful project implementation?

 Yes No

8. If yes to question 8, how helpful do you think this will be to the Interns?
 rarely helpful Helpful Very helpful

9. Did you implement a community Environmental Health Project for your internship?
 Yes No

If yes, what year did you implement your internship project? _____

10. Did you develop a project charter for the project?
 Yes No

11. What section(s) of the internship project was most challenging for you?

INTERN SUPERVISORS ONLY

12. How long have you been an Intern Supervisor?
 0-1 years 2-5 years 5-10 years Over 10 years

13. What challenges do you face being an intern supervisor?

14. Does the department keep historical records of completed projects?

 Yes No

Appendix 5: Project Management Plan Template, (Source: Compiled by Author)

PROJECT MANAGEMENT PLAN				
Defines the approach that the project team will take to deliver the intended project management scope of the project.				
Instructions				
To compose a Project Management Plan using this template:				
<ul style="list-style-type: none"> • Replace the title on the cover page with the name of the project • Complete each section using the local guidelines/instructions • Delete all guidelines/instructions 				
Project Name		Version History		
Name of project being undertaken.	Version	Comments	Release date	Revised By
Document Owner		Document Purpose		
This document is produced by the project manager.		This document describes how the project will be executed, monitored and controlled and closed.		
Introduction				
Give a high level overview of the project and what is included in this Project Management Plan. Briefly describe the project, its deliverables and benefits. Use the project charter information as a guide.				
Integration Management				
Describe the project governance and project team. Describe the role and responsibilities of each project team (health committee) member using project team position and not just name.				
Change Request				
Describe how any changes to the project will be managed, include how changes should be requested, approval of changes and how approved changes will be implemented.				
Close Project or Phase				
Describe how a phase or project will be formally closed, include how lessons learnt will be archived.				
Scope Management				
State the scope of the project using the scope statement from the project charter as the starting point. A more detailed scope than the charter is needed, this detail should include:				
<ul style="list-style-type: none"> • what is within the scope of the project and how the scope will be managed • what requirements need to be collected. • responsibilities of each team member • Work Breakdown Structure showing project breakdown, use chart 8 as a guide, add/remove column/row as necessary • WBS dictionary, use the following chart as a guide and • how the acceptance of deliverables will be formalized. 				
Level 1- Project Title				
Level 2	Level 3			
1.2 Community Mobilization	1.1.1	Community Survey		
	1.1.2	Community Project Sensitization		
	1.1.3	Community Meeting		
	1.1.4	Formation of Health Committee		
1.3 Intersectoral Collaboration				
1.4 Project Management				

1.5 Fundraising	
1.6 Health Education	
1.7 Procurement	
1.8 Implementation	
1.9 Project Close	

WBS Dictionary

This contains all the details of the work packages necessary to successfully complete the project and also includes a definition for each work package which can be thought of as a mini scope statement.

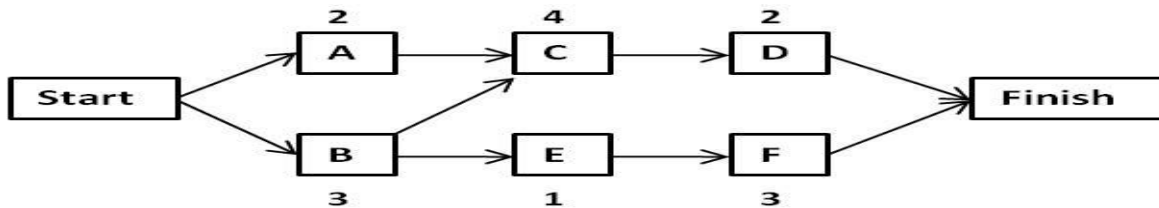
WBS dictionary, (Source: Compiled by Author)

WBS Code	WBS Name	Description/Definition	Resources	Duration	Sequence	Predecessor
1.1.1	Community Survey	Establishment of the demographics of the community for analysis and segmentation to select outreach strategy.	PHI Intern, Community Health Aid, Intern Supervisor	4 weeks	1	N/A

Time Management

Describe the general approach that will be taken to create the project schedule. Follow these steps:

- list the activities along with its sequence from the WBS that must be undertaken to complete the project
- estimate activities duration
- develop network diagram using the next figure as guide
- develop schedule using gantt chart provided



Gantt chart, (Source: Compiled by Author)

ID	WBS	Task Name	Duration	Start	Finish	Predecessor	Gantt Chart (Feb 11, '18 to Jul)													
1	1.1	Community survey	35 days	Mon 1/8/18	Fri 2/23/18		[Gantt bar for 1.1: Mon 1/8/18 to Fri 2/23/18]													
2	1.1.2	Community project sensitization	81 days	Mon 1/29/18	Mon 5/21/18	1	[Gantt bar for 1.1.2: Mon 1/29/18 to Mon 5/21/18]													
3	1.3.1.0	Current Situation	5 days	Mon 2/19/18	Fri 2/23/18	1	[Gantt bar for 1.3.1.0: Mon 2/19/18 to Fri 2/23/18]													
4	1.1.4																			
5	1.1.5																			
6	1.4																			
7	1.1.3	Community group formation	1 day	Wed 3/21/18	Wed 3/21/18	3,1	[Gantt bar for 1.1.3: Wed 3/21/18]													
8	1.5.2	Handing over Ceremony	0 days	Fri 6/29/18	Fri 6/29/18		[Gantt bar for 1.5.2: Fri 6/29/18]													

Cost Management

Describe all costs associated with the activities from the scope including how the cost was determined. Create a budget using chart below as a guide.

		Cost Total(\$)	Cost Actual (\$)
WBS Code	Activity		
1.1	Community survey	5,000	
1.1.2	Community project sensitization	10,000	
1.5.2	Handing over Ceremony	25,000	
Total		40,000	

Quality Management

Describe the acceptability criteria for each major item to be procured using chart 13 as a guide.

WBS	Activity	Item	Acceptability Criteria	Comment
1.1.3	Community Meeting	Venue	Should be a covered area, have seating available, rest room available, be able accommodate minimum of 30 persons, electricity available, space for projection	Community Primary School chosen

Human Resource Management

Describe all required resources for each activity in the project scope using the following chart as a guide.

WBS	Activity	Resources	Date Needed	Confirmation/Remarks
1.1.3	Community Meeting	Project team, Intern Supervisor, representative from NSWMA	20.5.18	Intern supervisor unable to attend, will send representative.

Communications Management

Describe how internal and external communication will take place, include medium/channel, frequency of communication and owner. The stakeholder management plan contain information on communication with the various stakeholders. Use the communication log (chart 16) to track communications for the project.

Information	Channel/Medium	Stakeholder	Sender/Owner	Date	Delivery Confirmation
Health Education Plan	Email	School Supervisor (tutor)	Project Manager	23.4.18	Yes

Risk Management

Identify all risks associated with the project using chart 14 as a guide. Include their impacts, likelihood of and preventative and or corrective measures.

WBS	Activity	Risk	Impact	Occurrence	Preventative/Corrective Measure
1.1.3	Community Meeting	Power Outage	High	Medium	Make hard copies of presentation, generate pamphlets with highlights of the presentation.

Procurement Management

Appendix 6: Stakeholder Management Plan Template, (Source: Compiled by

STAKEHOLDERS MANAGEMENT PLAN																																	
Formal document outlining how stakeholders will be engaged in the project.																																	
Author:			Issue Date:																														
Project Name			Version History																														
Name of project being undertaken.			Version	Comments	Release Date	Revised by																											
Stakeholder Identification and Approach																																	
<p>Instructions</p> <ul style="list-style-type: none"> Describe how stakeholders will be identified Determine stakeholders expectations Determine stakeholders power (ability to influence) and interest (how much is being influenced) using the power/interest grid below. For each selection (keep satisfied, monitor, manage closely, keep informed) describe how to actively engage stakeholder during the project. Complete the stakeholder register in chart below 																																	
<table border="1"> <tr> <td rowspan="2">Power</td> <td>High</td> <td>Keep Satisfied</td> <td>Manage Closely</td> <td colspan="3"></td> </tr> <tr> <td>Low</td> <td>Monitor</td> <td>Keep Informed</td> <td colspan="3"></td> </tr> <tr> <td colspan="2"></td> <td>Low</td> <td>High</td> <td colspan="3"></td> </tr> <tr> <td colspan="4"></td> <td colspan="3">Interest</td> </tr> </table>							Power	High	Keep Satisfied	Manage Closely				Low	Monitor	Keep Informed						Low	High								Interest		
Power	High	Keep Satisfied	Manage Closely																														
	Low	Monitor	Keep Informed																														
		Low	High																														
				Interest																													
<table border="1"> <thead> <tr> <th>No.</th> <th>Stakeholder Name</th> <th>Stakeholder Position</th> <th>Contact Information</th> <th>Power</th> <th>Interest</th> <th>stakeholder Engagement</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>St. Ann Health Department</td> <td>Sponsor</td> <td>876-972-2215</td> <td>High</td> <td>High</td> <td>Provide frequent project status information.</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>							No.	Stakeholder Name	Stakeholder Position	Contact Information	Power	Interest	stakeholder Engagement	1	St. Ann Health Department	Sponsor	876-972-2215	High	High	Provide frequent project status information.													
No.	Stakeholder Name	Stakeholder Position	Contact Information	Power	Interest	stakeholder Engagement																											
1	St. Ann Health Department	Sponsor	876-972-2215	High	High	Provide frequent project status information.																											
Stakeholder Communication Strategy																																	
Fill out the following chart to show the communication strategy based on communication plan (see PMP template).																																	
<table border="1"> <thead> <tr> <th>Stakeholder</th> <th>Owner</th> <th>Information Needs</th> <th>Channel/Medium</th> <th>Frequency</th> <td colspan="2"></td> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td colspan="2"></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td colspan="2"></td> </tr> </tbody> </table>							Stakeholder	Owner	Information Needs	Channel/Medium	Frequency																						
Stakeholder	Owner	Information Needs	Channel/Medium	Frequency																													

Author)

Appendix 7: Project Roles & Responsibilities Template, (Source: Compiled by Author)

Project Roles and Responsibilities Template			
Project Name:			
Purpose			
This template is used to determine the various roles and responsibilities within the project and consists of project team contact information and a RACI chart.			
Project Team Information			
Fill out the chart below with the requested information.			
Name	Position	Telephone	Email
RACI Chart			
The following key was used to complete the RACI chart below.			
(R) Responsible- person assigned to get the work done.			
(A) Accountable- person who makes the final decision and has the ultimate ownership of the activity.			
(C) Consulted- person who must be consulted before a decision or action is taken.			
(I) Informed- person who must be informed that a decision or action is taken .			
Wbs Code	Activity	Responsible	Accountable
1.1.3	Develop Health Education Plan for community meeting		

Appendix 8: Project Charter Template, (Source: Adopted from UCI's Graduation Seminar Course)

PROJECT CHARTER	
<p>Formalizes the project start and confers the project manager with the authority to assign company resources to the project activities. Benefits: it provides a clear start and well defined project boundaries.</p>	
Date	Project Name:
Issue date	Directly related to the project main product and thus to its general objective
Knowledge Areas / Processes	Application Area (Sector / Activity)
Should indicate the knowledge areas and process groups which are related to the project Knowledge areas: Process groups:	Should indicate the application area or sector related to the project. For example: construction, finance, information technology, CSR, etc.
Start date	Finish date
Is the same as the issue date	Corresponds to the date when the project is scheduled to be finished
Project Objectives (general and specific)	
<p>All objectives, general and specific, must start with an action verb in infinitive form, that allows to assess its completion, should have complete sentences and must have a "what?" and a "for what?". For example:</p> <ul style="list-style-type: none"> • What? To create a project management methodology • For what? To better organize projects on a give company <p>It is recommended that objectives are not long or complex sentences (two line extension is advisable).</p> <p>Specific objectives must be part of the general objective since by achieving the specific objectives is how the general objective is achieved. Specific objectives should be associated to FGP deliverables, which later on will be reflected on the WBS.</p> <p>General objective:</p> <p>Specific objectives:</p> <ol style="list-style-type: none"> 1 2 3 	
Project purpose or justification (merit and expected results)	
<p>Limit the description to three paragraphs. Should indicate what originates the project, describe why the project is to be done and which are the expected benefits.</p> <p>Care must be taken to avoid repetition of the objectives already set.</p>	

Description of Product or Service to be generated by the Project – Project final deliverables		
<p>Specific and measurable description of the products, services, results that the project is expected to deliver.</p> <p>Each one of the deliverables should be related to the specific objectives.</p> <p>Remember that a deliverable is a product or service. Thus it might be a document, report, plan or design.</p>		
Assumptions		
<p>Facts assumed to be true for planning purposes. Its validity must be confirmed as the project advances.</p> <p>Might be related to time, cost, scope, quality, resources, etc.</p>		
Constraints		
<p>A limiting factor that affects the execution of a project. Might be related to time, cost, scope, quality, resources or other.</p>		
Preliminary risks		
<p>List the main risks identified at current stage.</p> <p>Write as follows: If (cause), might (effect), impacting (scope, time, cost, quality, etc.)</p>		
Budget		
<p>General cost estimate of main items/deliverables for project budget.</p>		
Milestones and dates		
Milestone	Start date	End date
Relevant historical information		
<p>Brief basic company information.</p> <p>Documentation of previous works or similar efforts related to the project.</p>		
Stakeholders		
<p>Direct stakeholders: List them</p> <p>Indirect stakeholders: List them</p>		
Project Manager:		Signature:
Authorized by:		Signature:

Appendix 9: Project Status Reporting Template, (Source: Compiled by Author)

PROJECT STATUS REPORT TEMPLATE					
Project Name:					
Project Areas Status Breakdown					
Complete the following charts to give the overall project status					
Overall Status					
Project Area	On Track	On Track with Minor Errors	Off Track		
Scope					
Schedule					
Cost					
Resources					
Quality					
<Other>					
Project Activities Breakdown					
Fill out the chart below to give an overall breakdown of activities.					
Activities Status					
ACTIVITIES COMPLETED					
	Projected		Actual		Notes
Activity Name	Start Date	End Date	Start Date	End Date	
ACTIVITIES IN PROGRESS					
MISSED DEADLINES					
UPCOMING ACTIVITIES					

Appendix 10: Minutes of Meeting Template , (Source: Compiled by Author)

MINUTES OF MEETING TEMPLATE		
Date:	Start Time:	
Project Manager	Meeting Chairman:	Minute Secretary
Attendees		
1.		
2.		
Apologies		
Agenda		
Meeting Notes		
Resolutions		
No.	Description	Action
1.		
2.		
3.	Next meeting date (date, time, location)	

Appendix 11: Issue Log Template, (Source: Compiled by Author)

ISSUE LOG TEMPLATE								
Project Name:								
Project Manager:								
Descrp								
Record all issues in chart below and use the following colours to represent issue level:								
<table border="1"> <tr> <td>High</td> </tr> <tr> <td>Medium</td> </tr> <tr> <td>Low</td> </tr> </table>						High	Medium	Low
High								
Medium								
Low								
Issue Title	Date Created	Issue Type	Issue Owner	Issue Status	Date Resolved			

Appendix 12: Project Closure Report Template, (Source: Compiled by Author)

PROJECT CLOSURE REPORT TEMPLATE						
Project Name:			Project Manager			
Document Approval			Version History			
Author	Reviewed by	Authorized by	Version	Comments	Release Date	Revised by
Project Performance Breakdown						
Complete table to show project performance						
	Planned	Actual	Variance			
Start Date						
End Date						
Budget						
Project Summary						
<ul style="list-style-type: none"> -Describe how the project was implemented -Describe any significant occurrences during the project's implementation and how they were handled -Describe how the project success has benefited the organization and community. 						

Appendix 13: Lessons Learnt Template, (Source: Compiled by Author)

LESSONS LEARNT TEMPLATE			
Project Name:		Project Manager	
Description			
Describe any incidents or other significant occurrences that have happened during the project and how they were addressed..			
Lesson Learnt Log			
Summarize events described above in the following table.			
No.	Occurrence that required intervention or needed to be addressed	Impact of the occurrence	Preventative Measure

Appendix 14: Document Distribution and Archive Template, (Source: Compiled by Author)

DOCUMENTS DISTRIBUTION & ARCHIVE TEMPLATE	
Project Name:	Project Manager:
Description	
Summarize how the generated documents of the project are distributed and where these are archived. Complete the following table to give location of archived documents.	
Item	Location
Appendix	
Attach appendix if applicable.	

Appendix 15: Philologist Qualification- Degree



THE UNIVERSITY OF THE WEST INDIES

Andrea Caroline Bennett

having completed the Course of Study approved
by the University and having satisfied the
Examiners, has this day been admitted by the
Senate to the Degree of

BACHELOR OF EDUCATION

in

English/Literature

with

Second Class Honours (Lower Division)

SEPTEMBER 1, 2006

DATE

Con H Harris

VICE-CHANCELLOR

A Bennett-Solers

UNIVERSITY REGISTRAR

This Document is not valid unless it bears the University's seal

Appendix 16: Philologist Approval Letter

May 9, 2018

To Whom It May Concern


Re: Philological Review of Final Graduation Project submitted by Lunce Dowdie-Campbell in partial fulfillment of the Masters in Project Management (MPM) Degree.

Dear Sirs:

I Mrs. Andrea Bennett- Wright acknowledges that the thesis” **Project Management Methodology for Public Health Inspector Interns at the St. Ann Health Department**” submitted by Lunce Dowdie-Campbell was reviewed and corrected thoroughly. In my opinion, it now meets requirements corresponding to the literacy and linguistic of a Masters level dissertation.

I am an English Language and English Literature teacher at Belmont Academy, Westmoreland, Jamaica. My qualification is attached.

Yours Sincerely,


Andrea Bennett- Wright (Mrs.)