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(UCI)

Topic:

Project Management Plan for the Implementation of an ICT Project

KYRON KEMUEL EKION DUNCAN

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Johan Aleman
TUTOR

REVIEWER No.1

REVIEWER No.2

KYRON DUNCAN
STUDENT

DEDICATION

I humbly dedicate this paper to the students and researchers in the field of Project Management. I trust that the information contained herein will provide meaningful and helpful guides in completing future work for you or your stakeholders.

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ABBREVIATIONS AND ACRONYMS

ECD	East Caribbean Dollars
EEZ	Exclusive Economic Zone
FGP	Final Graduation Project
GMDSS	Global Maritime Distress and Safety System
ICT	Information Communication Technologies
LRC	Learning Resource Center
NTRC	National Telecommunications Regulatory Commission
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
RFA	Request for Application
SVG	St. Vincent and the Grenadines
SWOT	Strengths, Weaknesses, Opportunities, and Threats
USF	Universal Service Fund
VHF	Very High Frequency
WBS	work breakdown structure

EXECUTIVE SUMMARY (ABSTRACT)

The Information Communication Technology (ICT) Sector is a sector, which has seen growth in its penetration and use of various technologies worldwide. In St. Vincent and the Grenadines (SVG), the National Telecommunications Regulatory Commission (NTRC) is the organization responsible for the regulation of the telecommunication sector and the implementation of the Universal Service Fund (USF). The USF is in charge of the implementing of projects in ICT in SVG. Within the last nine years, the NTRC has implemented five ICT related projects. However, these projects, though successful, needs additional institutional framework which will improve their efficiency and effectiveness. These inefficiencies caused aspects of the projects to be over scheduled and below quality. The NTRC did not employ the various PMI processes in their previous projects to ensure that they were implemented efficiently. In order for the successful implementation of the services and equipment at all of the schools in St Vincent and the Grenadines, a PMI framework must be adopted and the various plans developed and implemented.

The general objective of this FGP is to develop a project management plan for the implementation of an Information Communication Technology Project in St. Vincent and the Grenadines. The specific objectives are as follows:

- (i) to develop a time management plan which will outline the processes required to manage the timely completion of the project;
- (ii) to develop a scope management plan which will document how the project scope will be defined, validated, and controlled;
- (iii) to develop a communication management plan to ensure that effective communication takes place throughout the project;
- (iv) to develop a cost management plan to ensure that the project is adequately budgeted;
- (v) to develop a stakeholder management plan which will provides guidance on how the various stakeholders can be best involved in the project;
- (vi) To develop a procurement management plan to provide guidance on the procurement process for this project
- (vii) to develop a risk management plan which will provide guidance on how risk

management will be carried on the project;
(viii) to develop a quality management plan that will describes how the organization's
quality policies will be implemented.

The methodology for this research is analytical and statistical by nature. Where data is gathered and analysed for the development of this project, it is done with the specific objectives of this paper in mind.

INTRODUCTION

1.1. Background

The National Telecommunications Regulatory Commission (NTRC) was officially established in 2001. It was done to coordinate an effective telecommunications regulatory regime and to enhance the operation of telecommunications in the interest of the sustainable development of Saint Vincent and the Grenadines. This commission did not come into effect until 2009 by the passing of the Telecommunications Act (CAP 418) of the Revised Laws of St. Vincent and the Grenadines during that year.

The functions of the NTRC include the following:

- To regulate the telecommunication sector;
- To manage the Universal Service Fund;

What is the Universal Service Fund?

The USF is a fund that is available to the NTRC, to compensate any telecommunications provider who is required to provide or promote universal service.

Universal Service includes the provision of:

- Public voice telephony;
- Internet access;
- Telecommunications services to schools, hospitals, similar institutions and the physically challenged;

The Fund will encourage efficient access to and use of telecommunications networks and services throughout St. Vincent and the Grenadines. Special focus is on rural, under-served and maritime areas, with the goal to help promote social, educational and economic development.

The National Telecommunications Regulatory Commission, with the Universal Service Fund (USF) has implemented five (5) projects since being operational in 2009 with values of over E.C \$11,714,100.00 or U.S \$4,311,568.33.

These projects include the following:

Internet Project

The first project undertaken by the USF in St. Vincent and the Grenadines was called the Internet Project. It was signed with Cable and Wireless for a total of EC\$427,608.98. It saw twenty-eight (28) rural locations outfitted with wireless internal and external internet access points, with minimum speeds of 8mbps. These locations included 12 learning resource centres (lrcs). The project provides internet access in various communities 24 hours a day, 7 days a week. The learning resource centers act as a free internet access point in the various communities where persons can go and access the internet at any time.

Payphone Project

In the survey conducted in 2009, individuals complained about the fact that there is no public facility to make calls in the event that one does not have sufficient credit. In addition, someone may not have a cellular phone on them at the time and want to make a call. Furthermore, visitors to our shores may not have a cellular service and may need a call. As such, this project was developed and a contract was signed with telecommunications provider Cable and Wireless in 2011, for sum of EC\$1,400,575.45. This project has seen twenty-five (25) payphones installed at various locations including tourism sites, beaches, and at points along the main road. At twelve of the twenty-five sites, a payphone is installed and wireless internet access is available. Overt vandal proof cameras monitor the equipment to facilitate 24-hour video surveillance of this equipment.

Maritime Project

The third project, which is the VHF Maritime Project, saw the installation of a GMDSS system. This system provides access to both emergency and non-emergency communications in the Exclusive Economic Zone (EEZ) of St. Vincent and the Grenadines.

GMDSS stands for Global Maritime Distress and Safety System. It is a set of safety procedures, types of equipment and communication protocols used to increase safety and make it easier to rescue distressed ships, boats and even aircrafts. GMDSS provides for distress alerts, distress relays, search and rescue, on scene communication and location services. This system is mandatory for all ships subject to the Safety of Life At Sea (SOLAS) convention of 1974. The basic concept of this system is that the Coast Guard as well as vessels in the immediate area of a ship in distress will be rapidly alerted to the emergency. This can help with minimum delay time.

Under the VHF system, which was previously in place here in St Vincent, information from vessels in distress were manually relayed to the Coast Guard base at Calliaqua. This methodology was not an efficient way of communicating in an emergency. Additionally, the automated DSC (Digital Selective Calling) calls cannot be received by any station.

Digital Selective Calling is one of the most important aspects of this GMDSS system and is a standard for sending pre-defined digital message via the pressing of one button. Noting this fact, the NTRC identified and implemented this project to improve the VHF maritime coverage around the country.

This project was done jointly with the NTRC and ECTEL. The NTRC via ECTEL was able to secure part funding for the project via a grant made available by the World Bank in the amount of USD \$200,000.00. The contract for this project, as it relates to the capital cost, was signed on December 20, 2011 for a total of EC\$1,125,781.00. The funds from the World Bank were used to purchase the equipment for this project. Additionally, a separate contract was signed with Cable & Wireless for the maintenance of the equipment for this project, for a period of five years. The sum total of this contract is EC\$444,932.00.

Police and Health Centre Project

The fourth project is the Police and Health Centre Project, which provides wireless internet access at all twenty-nine (29) Police Stations and forty-two (42) Health Centers throughout St. Vincent and the Grenadines at a minimum speed of 8Mbps. The cost of this project is EC\$711,015.00 and was implemented by Karib Cable for a period of two years. A total of 31 computers were also installed at various clinics and 14 of them were installed at the Milton Cato Memorial Hospital.

Community Center Project

The fifth project implemented is the Community Centre Project and this provides wireless internet access at fourteen (14) Community Centers in various communities throughout St. Vincent and the Grenadines at a minimum speed of 8Mbps. The contract for this project was signed in 2012 with Karib Cable. The cost of this project is EC\$119,503.29 and has been implemented for a period of two years. Under this project, the newly established Salvation Army Children's Home was also outfitted with six (6) computers and internet access to assist in the development of ICT skills of the children who will be at the home. All residents from the various communities where these project sites are located have access to the wireless internet throughout the whole day.

The following are the Mission Statement and the Vision Statement of the NTRC;

NTRC Mission Statement

To monitor efficiently, the operations of Telecommunications Services under the laws of St. Vincent and the Grenadines whilst providing an open market to all Telecommunications Providers, ensuring fair treatment for consumers and providing Universal Service to all Vincentians.

NTRC Vision Statement

To ensure that the demand for existing and future Telecommunications Services is met, in order to support economic growth and diversification, by providing a suitable environment for the tourism, information and financial sectors through a liberalized and competitive telecommunications environment.

- Noting the fact that the National Telecommunications Regulatory Commission is the institution that manages the Universal Service Fund and has implemented similar ICT projects, this institution is best suited to have another ICT project implemented. This time, the project revolves around providing internet access to all of the schools located in St. Vincent and the Grenadines. As such, a project management plan will be developed for the installation of equipment and services at 20 schools in St. Vincent and the Grenadines where wireless internet access will be provided. This plan is based on the standards of the Project Management Institute.

1.2. Statement of the problem

The National Telecommunications Regulatory Commission (NTRC) has implemented projects in the past, which had cost and time overruns. These issues caused a rework of the projects leading to time and cost implications. The NTRC did not follow PMI standards in the implementation of past projects. Based on the training which I have received from my program, the implementation of a project management plan, for the implementation of the ICT project is necessary.

1.3. Purpose

The purpose of this FGP is to identify the necessary components for the construction of a project management plan. This plan will be used for the implementation of an ICT project in St Vincent and the Grenadines.

1.4. General objective

1. To develop a project management plan for the implementation of an ICT Project in St. Vincent and the Grenadines.

1.5. Specific objectives

1. To develop a scope management plan which will document how the project scope will be defined, validated, and controlled. The project management plan provides guidance and direction on how scope will be managed throughout the project;
2. To develop a time management plan which will outline the processes required to manage the timely completion of the project;
3. To develop a cost management plan to ensure that the project is adequately budgeted for. The cost management plan will outline how project cost will be managed and controlled. It includes the method used and the level of accuracy required to estimate activity cost;
4. To develop a quality management plan that will describe how the organization's quality policies will be implemented;
5. To develop a communication management plan to ensure that effective communication takes place throughout the project. The communication management plan will provide guidance and information on managing stakeholder expectation;
6. To develop a risk management plan which will provide guidance on how risk management will be carried out on the project;

7. To Develop a procurement management plan which will provide guidance on the procurement procedures for the project.
8. To develop a stakeholder management plan which will provide guidance on how the various stakeholders can be best involved in the project.

[6-JTG4]

THEORETICAL FRAMEWORK

1.1 Company/Enterprise framework

1.1.1 Company/Enterprise background

The National Telecommunications Regulatory Commission (NTRC) is a statutory body, which with the responsibility of regulating the telecommunication industry in St. Vincent and the Grenadines. The office of the NTRC is located on the second (2nd) floor of the National Insurance Services Building, Upper Bay street, Kingstown, St, Vincent and the Grenadines. The official website for the NTRC is www.ntrc.vc, and can be contacted at the telephone number:1-784-457-2279. The Director of the NTRC is a professional by the name of Mr. Apollo Knights. The NTRC was established in 2001 to carry out its functions as the regulator in St. Vincent and the Grenadines and to manage the Universal Service Fund (USF)

1.1.2 Mission and vision statements

NTRC Mission Statement

To monitor efficiently, the operations of Telecommunications Services under the laws of St. Vincent and the Grenadines whilst providing an open market to all Telecommunications Providers, ensuring fair treatment for consumers and providing Universal Service to all Vincentians.

NTRC Vision Statement

To ensure that the demand for existing and future Telecommunications Services is met, in order to support economic growth and diversification, by providing a suitable environment for the tourism, information and financial sectors through a liberalized and competitive telecommunications environment.

As outlined in the NTRC Mission and Vision statement, the NTRC ensures that the Universal Service is provided to the citizens of St. Vincent and the Grenadines. The provision of internet access to schools and similar institutions is termed Universal Service. This project will serve to achieve the vision and mission of the organization.

1.1.3 Organizational structure

The Telecommunication Act 2001 established the National Telecommunications Regulatory Commission (NTRC) in 2001. It was formed in partnership with Eastern Caribbean Telecommunications Authority (ECTEL). The NTRC along with the Minister responsible for Telecommunications appoint a statutory organization that is managed by five Commissioners (board members). The secretary is also the Director of the Organization and is responsible for managing the daily affairs. There are 13 staff members, which are spread across five departments as follows:

- Accounts
- Information Communication Technology
- Administrative
- Universal Service Fund
- Consumer and Public Relations

These departments will interact with the FCP.

Figure 1 is a graphical representation of the organizational structure within the NTRC; The chairman of the board (commissioners) will approve all necessary documents. The PMO is headed by the USF Administrator.

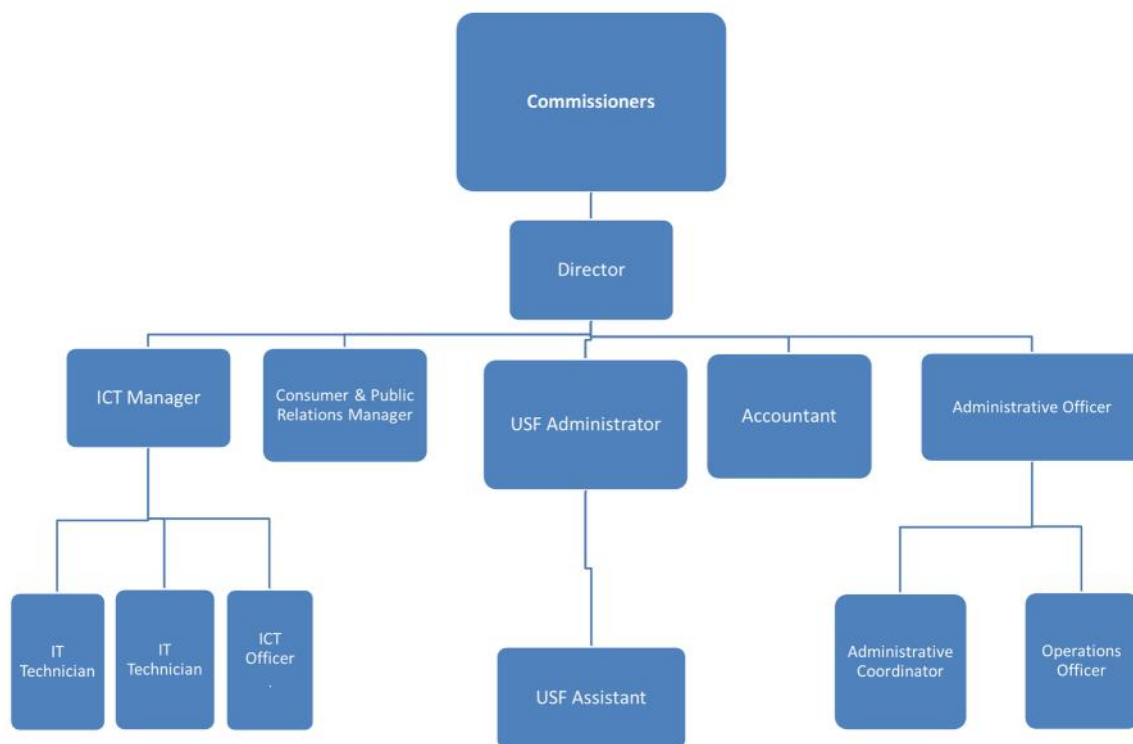


Figure1 Organizational Structure. NTRC Annual report 2015.

1.1.4 Products offered

Functions of the NTRC

The following are the functions of the NTRC and the products/services that it provides:

- a) Collects all licenses and frequency fees, which goes towards the further development of St. Vincent & the Grenadines;
- b) Managing the license process for obtaining new licenses to assist in the establishment of new providers and licenses for Ships, Aircrafts and Amateur Radio Operators;
- c) The assignment of Central Office Codes that are used by Telecom providers;
- d) Ensure fair, competitive practices in the telecommunications sector.

Must indicate the main company or enterprise products as well as their relationship with the FGP objectives.

1.2 Project Management concepts

1.2.1 Project

To the average individual, a project is an activity that is undertaken with a specified outcome in mind or an activity specifically designed to satisfy a particular deficiency. These definitions may have some merit when speaking informally; however, there are fundamental errors of perceptions when such interpretations are used in a formal context. According to the text, A Guide to the Project Management Body of Knowledge, 2003, a project is “a temporary endeavour undertaken to create a unique product, service, or result.” This book contains a set of standard terminologies and guidelines for those who embark on project management implementations. The fifth edition (2013) of this text resulted from work conducted by the Project Management Institute (PMI). This definition has several aspects to it that embodies the concept of a project. The fact that a project is defined as a temporary venture shows that it is indefinite and has to end. Additionally, the fact that the product is unique is significant since no two projects are the same. With this mind, the FGP can be appropriately termed as a project because it is temporary and unique to SVG. There has never been a project management in place for ICT projects in this country.

1.2.2 Project management

As outlined previously, elements in the definition of a project are that a project is a temporary endeavour, it produces a unique product and as such there are processes to be followed in the management of any project. When these processes are adhered to, project management is now seen as being practiced. Project management is “the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements” (Project Management Body of Knowledge 2003). Noting this, the necessary project management process will be applied to the FGP project. A project management plan is necessary for the implementation of projects in order to keep them within cost, scope, time, quality and acceptability. Within the NTRC, project management techniques are not followed. This is so since projects are implemented in an unstructured way. A project management plan will ensure that projects are executed with PMI standards, using the necessary tools and techniques.

1.2.3 Project life cycle

In order for the project management process to be standardized, it is broken down into a cycle. The elements of the cycle are as follows:

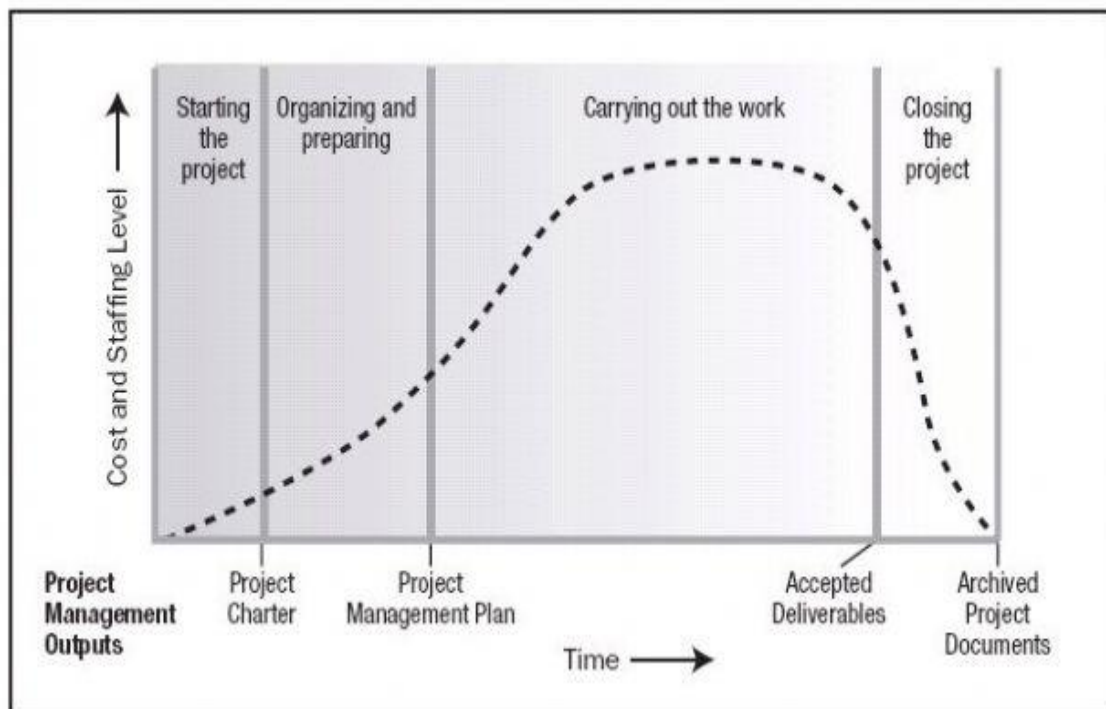
- **project initiation**- defines and operates the project;
- **planning stage**- outlines the project objectives and actors needed to execute these objectives;
- **execution phase**-involves the integration of all the resources to carry out the plan;
- **monitoring and control phase** relates to the tracking of the project and the making of changes and corrections to errors found;
- **closing phase**-relates to bringing the project to an end

This cycle is applicable to all projects that use the PMI standards and as such, all the elements of the FGP will be categorized in this project cycle. A pictorial representation of the project cycle is outlined below.

Figure 2 Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.



Figure 3 Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.



As indicated, the NTRC's technique of implementing projects is not structured using PMI standards. As such, their project cycle is an unofficial, unstructured one. Having a project management plan will ensure that the project meets PMI standards.

1.2.4 Project Management Processes

Figure 4 Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.



Figure 5 Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa:

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
Project Integration Management	• Develop Project Charter	• Develop Project Management Plan	• Direct and Manage Project Execution	• Monitor and Control Project Work • Perform Integrated Change Control	• Close Project or Phase
Project Scope Management		• Collect Requirements • Define Scope • Create WBS		• Verify Scope • Control Scope	
Project Time Management		• Define Activities • Sequence Activities • Estimate Activity Resource • Estimate Activity Duration • Develop Schedule		• Control Schedule	
Project Cost Management		• Estimate Cost • Determine Budget		• Control Costs	
Project Quality Management		• Plan Quality	• Perform Quality Assurance	• Perform Quality Control	
Project Human Resource Management		• Develop Human Resource Plan	• Acquire Project Team • Develop Project Team • Manage Project Team		
Project Communications Management	• Identify Stakeholders	• Plan Communications	• Distribute Information • Manage Stakeholder Expectations	• Report Performance	
Project Risk Management		• Plan Risk Management • Identify Risk • Perform Qualitative Risk Analysis • Perform Quantitative Risk Analysis		• Monitoring and Control Risks	
Project Procurement Management		• Plan Procurement	• Conduct Procurement	• Administer Procurements	• Close Procurements

1.2.5 Project Management Knowledge Areas

As outlined by the Project Management Body of Knowledge 2003, there are ten (10) knowledge areas in the study of project management. These are as follows:

- Project Integration Management;
- Project Scope Management;
- Project Time Management;
- Project Cost Management;
- Project Quality Management;
- Project Human Resource Management;
- Project Communications Management;
- Project Risk Management;

- Project Procurement Management;
- Project Stakeholder Management

Although the project management areas are used in the management of projects, not all of the areas identified are used in all projects.

Within the NTRC, none of the knowledge areas outlined was used in the implementation of past projects. This is the primary reason why the project management plan is necessary for the implementation of the ICT project in SVG.

3.METHODOLOGICAL FRAMEWORK

3.1 Information sources

Information sources are any type of media that you use to find information on a specified topic.

According to Singh G. (2013) Information, Services and Systems, New Deli, India: Asoke. K, the following are some of the main sources of information:

- Documentary sources- printed or electronic;
- Non Documentary Sources (formal)-radio, television, research;
- Non Documentary Sources (informal)- oral, telephone, discussion

Primary sources

Singh G. (2013) Information, Services and Systems, New Deli, India: Asoke. K states that “Primary sources are the first published records of original research and development activities. The research findings by the researchers are recorded and published first in the primary sources such as journals.”

The primary information sources which will be used for this FGP are as follows:

- Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.
- PMBOK Standards;
- Interviews

Secondary sources

Singh G. (2013) Information, Services and Systems, New Deli, India: Asoke K states, “Secondary sources are the resources which are compiled from primary sources. They analyse, interpret and discuss information about the primary sources. The information is not

original but it is analysed and interpreted.” The secondary information sources that will be used for this FGP include reference books such as dictionaries and sources of statistics.

Chart 1 Information sources (Source: Singh G, 2013)

Objectives	Information sources	
	Primary	Secondary
To develop a Project Management Plan within the standards of the Project Management Institute for the installation of ICT equipment and services at 25 schools in St. Vincent and the Grenadines for wireless internet access.	<p>- A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute (2013).</p> <p>-Interviews will also be used for the completion of the FGP</p> <p>-Meetings</p>	<p>-Data from the statistical department</p> <p>-Information from the NTRC</p>

3.2 Research methods

According to Research Methodologies: Methods and Techniques (Kothari.C.R), “Research methods refer to the behaviour and instruments used in the selection and construction of research.”

Examples of research methods are as follows:

- Analytical;
- Observation;
- Interview;
- Survey

Chart 2 Research methods (Source: the author)

Objectives	Research methods				
	Analytical	Inductive-deductive	Experimental	Statistical	Observation
To develop a scope management plan which will document how the project scope will be defined, validated, and controlled;	This type of research involves critical thinking skills. The relevant information using PMI standards will be identified and used to achieve this objective.				
To develop a time management plan which will outline the processes required to manage the timely completion of the project;	This type of research involves critical thinking skills. The relevant information using PMI standards will be identified			Statistical research is a very useful tool to get approximate solutions, when the actual process is highly complex or unknown in	

	and used to achieve this objective.			its true form. As such, this will be used to achieve the objective.	
To develop a cost management plan to ensure that the project is adequately budgeted;	This type of research involves critical thinking skills. The relevant information using PMI standards will be identified and used to achieve this objective.			Statistical research is a very useful tool to get approximate solutions, when the actual process is highly complex or unknown in its true form. As such, this will be used to achieve the objective.	
To develop a quality management plan that will describe how	This type of research involves critical thinking				

<p>the organization's quality policies will be implemented;</p>	<p>skills. The relevant information using PMI standards will be identified and used to achieve this objective.</p>				
<p>To develop a communication management plan to ensure that effective communication takes place throughout the project;</p>	<p>This type of research involves critical thinking skills. The relevant information using PMI standards will be identified and used to achieve the objective.</p>				
<p>To develop a risk management plan which will provide guidance</p>	<p>This type of research involves critical</p>				

<p>on how risk management will be carried out within the project.</p>	<p>thinking skills. The relevant information using PMI standards will be identified and used to achieve this objective.</p>				
<p>To develop a stakeholder management plan that will provides guidance on how the various stakeholders can be best involved in the project</p>	<p>This type of research involves critical thinking skills. The relevant information using PMI standards will be identified and used to achieve this objective.</p>				

3.3 Tools

According to the Project Management Institute (2013), A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute (2013), tools are “something tangible, such as a template or software program, used in performing an activity to produce a product or result.”

The tools that will be used for the FGP are as follows:

- Interview;
- Brainstorming;
- Expert judgement;
- Observation;
- Benchmarking;
- Document analysis;
- Meetings;
- Cost benefit analysis;
- Quality audits;
- Inspection;
- Analytical techniques;
- PM Software;
- Technology;
- Forecasting;
- SWOT analysis

Chart 3 Tools (Source: the author)

Objectives	Tools
To create a Scope Management Plan	Interview Observation Benchmarking Document analysis
To create a Time Management Plan	Analytical Techniques Estimating Expert Judgement PM Software
To create a Cost Management Plan	Expert Judgement Analytical Techniques Forecasting
To create a Risk Management Plan	Expert Judgement Meetings Analytical Techniques SWOT analysis
To create a Communications Management Plan	Expert Judgement Meetings Technology
To create a Quality Management Plan	Cost Benefit Analysis Benchmarking Quality Audits Inspection
To create a Stakeholder Management Plan	Meeting Expert Judgement

3.4 Assumptions and constraints

Assumptions

According to the Project Management Institute (2013), A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute (2013), an assumption is “a factor in the planning process that is considered true, real, or certain, without proof or demonstration.”

Constraints

According to the Project Management Institute (2013), A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute (2013), a constraint is “a limiting factor that affects the execution of a project, program, portfolio, or process.”

Chart 4 Assumptions and constraints (Source: the author)

Objectives	Assumptions	Constraints
To create a Scope Management Plan	The equipment to be procured are available and have passed the necessary standards.	All technical aspects of the project must be clearly identified. Various elements may be omitted which may cause rework.
To create a Time Management Plan	The necessary resources with the expert judgement are readily available in the creation of the plan.	There is the question of whether the necessary information is readily available, within the timeline.
To create a Cost Management Plan	The cost for all equipment estimated will remain constant and that currencies will not inflate or deflate in cost.	The availability of the necessary information from the company for the FGP
To create a Risk Management Plan	Risks have been adequately identified.	Due to the fact that this project is the first of its kind, the necessary mitigating procedures are outlined.

Objectives	Assumptions	Constraints
To create a Communications Management Plan	The expert judgement necessary is available for this task to be executed.	There is the uncertainty of whether the communication management plan will be able to identify all available technologies.
To create a Quality Management Plan	The necessary quality compliance has been identified and to which will be adhered.	There is the possibility of the local laws conflicting with standards that been established by ISO.
To create a Stakeholder Management Plan	All stakeholders will be identified.	The stakeholders will want to interact so that the FGP can be completed.

3.5 Deliverables

According to the Project Management Institute (2013), A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute (2013), a deliverable 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.”

For this FGP, the following will be the deliverables:

- A Scope Management Plan;
- A Time Management Plan;
- A Cost Management Plan;
- A Risk Management Plan;

- A Communication Management Plan;
- A Quality Management Plan;
- A Human Resource Management Plan
- A procurement Management plan
- A Stakeholder Management Plan;

Chart 5 Deliverables (Source: the author)

Objectives	Deliverables
To create a Scope Management Plan	A Scope Management Plan
To create a Time Management Plan	A Time Management plan
To create a Cost Management Plan	A cost management plan
To create a Risk Management Plan	A Risk Management
To create a Communications Management Plan	A communication Management Plan
To create a Quality Management Plan	A Quality Management Plan
To create a Human Resource Management Plan	A Human Resource Management Plan
To create a procurement Management Plan	A procurement Management Plan
To create a Stakeholder Management Plan	A Stakeholder Management Plan will ensure that there is a process to identify the people, groups or organizations that could impact or be impacted by the project.

RESULTS

4.0. Scope Management Plan

Schools' Project

4.1. Project Scope Management Plan

Project scope management includes the processes required to ensure that the project includes all and only the work required to complete the project successfully. Managing the project scope is primarily concerned with defining and controlling what is and is not included in the project (PMBOK Guide Fifth Edition).

The scope for the implementation of this ICT project will be developed using various tools such as interview, expert judgement, document analysis and observation. The NTRC will be the agency responsible for the development of the scope. Noting the fact that the NTRC has implemented ICT related projects in the past, the requisite staff members such as the IT department will be consulted, and meetings will be held to ascertain the requisite equipment necessary to execute the project.

PROJECT SPONSOR APPROVAL

Prepared by:	Reviewed by:	Approved by Project Sponsor
Kyron Duncan: USF Administrator NTRC	Apollo Knights Director of the NTRC	St.Clair Scott Chairman of the NTRC

Plan Scope Management is the process of creating a scope management plan that documents how the project scope will be defined, validated, and controlled. The key benefit of this process is that it provides guidance and direction on how scope will be managed.

The scope management process entails the following:

- the plan scope management;
- collect requirements;
- define scope;
- create WBS;
- validate scope;
- control scope;
- sub processes

Process	Input	Tools	Output	Person Responsible
Plan Scope Management	Project Management Plan -Project Charter	-Meetings -Expert Judgement	Scope Management Plan	-Project Team -Chairman of NTRC -Director
Collect Requirements	-Project Charter -Scope Management Plan -Stakeholder Management Plan	-Interviews -Workshops -Benchmarking -Surveys	-Requirements Documentation -Requirement traceability matrix	-Project Team -Chairman of NTRC -Director
Define Scope	-Project charter -Scope Management Plan -Requirements documentation	-Expert Judgement	-Project Scope statement	-Project Team -Chairman of NTRC -Director
Create WBS	-Scope Management Plan -Project Scope Statement	-Expert Judgement	-Scope baseline	-Project Team -Chairman of NTRC -Director
Validate Scope	-Project management plan -Requirements documentation	-Inspection	-Accepted deliveries	-Project Team -Chairman of NTRC -Director
Control Scope	-Project management plan	-Analysis	-Change requests -Project	-Project Team -Chairman of

	-Requirements documentation Work Performance data		management plan updates -Project documents updates	NTRC -Director
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4.1.1 The Plan Scope Management

Process

For this schools' project, the process is the responsibility of the project manager. In order for the project to be managed efficiently, the project team, which is led by the project manager, will manage the scope management process. The project manager along with his team will review the project charter along with the project management plan. This plan contains the inputs of this phase to devise the scope management plan. The Scope Management Plan details how the project scope will be defined, developed, and verified. It clearly defines who is responsible for managing the projects' scope and acts as a guide for managing and controlling the scope. The project team will use expert judgement because they have implemented projects of a similar kind before. They will be charged with developing the needed procedures to manage properly the scope for the project.

4.1.2 Roles

The project manager, sponsor and the project team will all play key roles in the scope management process of this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that work performed on the project is within the established scope, throughout the entire duration of the project. The table below defines the roles and responsibilities for the plan scope management of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approval of the scope management plan
Apollo Knights	Director of NTRC		Review of the scope management plan
Kyron Duncan	USF Administrator	Project Manager	Development of the scope management

			plan
Cyron Cyrus	USF Assistant	Project member	team Assist with the development of the scope management plan
Lizrene Charles	USF Assistant	Project member	team Assist with the development of the scope management plan
Andra Keizer	USF Assistant	Project member	team Assist with the development of the scope management plan.

4.1.3 Tools and techniques

The tools that will be used for the completion of the scope management plan are as follows:

- **Meetings** -The project manager along with his project team will convene meetings among themselves and other entities within in the industry. The purpose of these meetings is to get some feedback as to the best procedures to be used in the development of the scope management plan
- **Expert Judgement** – The project team will use expert judgement when utilizing the project management plan and the project charted in the development of the scope management plan. The project team will also utilize information received from the meetings held to ensure that the best practices are followed in the development of the scope management plan.

4.1.4 Output

The output for this process is the scope management plan. The scope management plan describes how the scope will be defined, developed, monitored, controlled, and verified, Project Management Institute (2013); a guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa. The chairperson of the NTRC approves this document and the project team will to manage successfully, the scope of the project.

Scope Management Plan

Project:
Project Sponsor:
Start date:
Completion Date :

Document Details

Version	Modifications	Author	Date

Approvals

This document requires the following approval:

Name	Role	Signature	Date	Version

Distribution

This document is distributed to:

Name	Role	Date of Issue	Version

Introduction

This section should include an introduction to the scope management plan and the project. Also, it must include the approach to managing the project scope and answer the following questions:

- Who is responsible for the scope?
- How will the scope be defined?
- How will the scope be measured and verified?
- Who will be responsible for accepting the final project deliverable and approving the acceptance of project scope?

Roles and Responsibilities

This section should include the roles and responsibilities for all involved in the project.

Name	Role	Position	Responsibility

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Scope definition

This section should explain the process followed to develop a detailed description of the project deliverable. It should also document tools, methods and techniques to define the scope.

Project scope statement

This section should include the project scope statement.

Project Constraints

This section will list any project constraints.

Project Assumptions

This section will list all project assumptions.

Work Breakdown Structure

This section should provide a Work Breakdown Structure (WBS).

Work breakdown structure dictionary

This section clearly defines the work needed for completion.

Level	WBS Code	Description	Deliverable	

Scope Verification

This section includes how the deliverables will be verified against the original scope.

Scope control

This section includes the process of monitoring the scope status throughout the project as well as the change process to the scope baseline.

4.1.5 The Collect Requirements

Collect requirements is the process of determining, documenting, and managing stakeholder's needs and requirements to meet project objectives (Project Management

Institute, 2013); A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.1.6 Process

This first step is the process by which The Project team will define and document the requirements needed to meet all of the school project objectives [6-JTG5][KD6]. The foundation of this process is the project charter, the scope management plan and stakeholder management plan. From these documents, the project team can identify the requirements needed as a team during meetings that will be held. The project team will also conduct interviews with the various stakeholders to ensure that all of their concerns have been suitably addressed. Workshops and surveys will also be executed in communities where the schools are located to get feedback from the public, on the various concerns of the project. The process of Benchmarking will also be used as a basis to define the requirements, when taking previous projects and equipment into consideration. This documentation also serves as an input to the next step in the process, which is to define scope.

4.1.7 Roles

The project manager, sponsor and the project team will all play key roles in the collect requirements process for this project. As such, these individuals must be aware of their responsibilities. They must ensure that the work performed on the project is within the collect requirements process, throughout the entire duration of the project. The table below defines the roles and responsibilities for the collect requirements of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approve Requirements Documentation
Apollo Knights	Director of NTRC		Review Requirements Documentation.
Kyron Duncan	USF Administrator	Project Manager	Prepare Requirements Documentation Interact with stakeholders Conduct interviews
Cyron Cyrus	USF Assistant	Project team	Assist with the development of the

		member		Requirements Documentation. Analysis of requirements Interact with stakeholders Conduct interviews
Lizrene Charles	USF Assistant	Project member	team	Assist with the development of the Requirements Documentation Analysis of requirements Conduct interviews Analysis of requirements Interact with stakeholders
Andra Keizer	USF Assistant	Project member	team	Assist with the development of the Requirements Documentation. Analysis of requirements Interact with stakeholders Conduct interviews

4.1.8 Tools and techniques

The tools that will be used for the completion of the collect requirements are as follows:

- **Interviews-** Interviews will be conducted with members of the communities where the schools are located to gain feedback from the public. Interviews will also be

held with the students, teachers and other end users of the services to be installed at the school.

- **Benchmarking-** This technique involves using best practices policies as a standard for the implementation of the schools' project. The type of equipment and service levels will be benchmarked to get the best performance of the service and equipment under this project.
- **Workshops-** Each location will have workshops under the project to get feedback from as many end users as possible. This is to ensure that the data collected will be instrumental in devising the requirements documentation.
- **Surveys-** The project team will develop surveys to get feedback from the children in the schools to ensure that the necessary equipment and services are identified.

4.1.9 Output

Requirements Traceability Matrix- The requirements traceability matrix is a grid that links product requirements from their origin to the deliverables that satisfy them (Project Management Guide, fifth edition). The project team will use this to ensure that each project deliverable adds value to the overall goal of the project.

Requirements documentation- This describes how individual requirements meet the need for the project (Project Management Institute, 2013); a guide to the project management body of knowledge (PMBOK guide); Newtown Square, Pa: Project Management Institute (2013). These requirements will be unambiguously traceable and consistent. The project team will ensure that this is done.

Requirement list

Requirements List				
1	Pole to access point to be mounted			A pole is needed to be mounted at the Access point. This is a requirement in the scope statement. This pole will meet the requirements set out in the scope.
2	Enclosure for the housing of cables			The enclosure is needed as outlined in the scope as a requirement. This enclosure will meet the

			requirement set out in the scope. This will facilitate the necessary protection of the power and service cords.
3	External Access Point		An external access point is needed to provide the wireless internet access which is needed as outlined in the scope.
4	100 Mbps Download and 20 Mbps Upload internet connection		The internet speed is a requirement for the services needed under the scope for this project.

Requirements Traceability Matrix

The requirements traceability matrix is a grid that links product requirements from their origin to the deliverables that satisfy the Project Management Institute. A guide to the project management body of knowledge (PMBOK guide), Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). See Appendix 5

4.1.10 Define Scope

Define scope is the process of developing a detailed description of the project and product. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide), Newtown Square, Pa: Project Management Institute.

4.1.11 Process

The design scope process is critical to the success of the project and can have various implications if not executed properly. The scope for this project will be developed through a very comprehensive collection requirement process. Since the NTRC has implemented ICT projects in the past, the project manager has a wealth of experience as he was instrumental in the success of previous projects. He will employ these skills in the development of the scope and the project team and use the approved project charter, the approved requirements documentation and the approved scope management plan to carefully develop the scope for this project, will assist the project manager. Expert judgement from the project manager and his project team were used to identify the most efficient way to complete define scope process while keeping in mind the deliverables and the available resources.

4.1.12 Roles

The Project Manager, Sponsor and the project team will all play key roles in the define scope process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that define scope process is executed throughout the entire duration of the project. The table below defines the roles and responsibilities for the defined scope phase of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approve Project Scope Statement
Apollo Knights	Director of NTRC		Review Project Scope statement.
Kyron Duncan	USF Administrator	Project Manager	Prepare Project scope statement
Cyron Cyrus	USF Assistant	Project team member	Assist with the development of the project scope statement.
Lizrene Charles	USF Assistant	Project team member	Assist with the development of the project scope statement.
Andra Keizer	USF Assistant	Project team member	Assist with the development of the project scope statement.

4.1.13 Tools and techniques

The tools that will be used for the completion of the define scope task are as follows:

- **Expert Judgement**- Expert judgment will be used by the project team to devise a scope that fulfils the requirements and falls within the available resources, for the

implementation of this project. The expert judgement will be used when using the project charter, the scope management plan and the requirements documentation in the development of the project scope statement.

4.1.14 Output

The output from this process is the project scope statement. The project scope statement documents the entire scope, including project and product scope. It describes in detail the project's deliverables and the work required to create those deliverables. Project Management Institute (2013). A guide to the project management body of knowledge (PMBOK guide) Newtown Square, Pa: Project Management Institute. The project team will devise a scope statement that will be approved by the chairman of the NTRC.

Statement of Work

Project Name	Schools' Project
Prepared By	National Telecommunications Regulatory Commission
Date (MM/DD/YYYY)	January 10 th 2017
Sponsor	National Telecommunications Regulatory Commission
Project Area:	Information Communication Technology (ICT) Development
Project Leader	Apollo Knights (Director NTRC)
Expected completion date:	April 24 th 2018

Version History		
Version	Date(MM/DD/YYYY)	Comments
1.0	January 10 th 2017	

Executive Summary

This project will provide wireless internet access to all 25 schools in St Vincent and the Grenadines over a period of five (5) years. The Government of St. Vincent and the Grenadines has decided to invest heavily in the area of ICT within various sectors of the country. With the introduction of the 'one laptop per child' project, which provided one laptop to all school children nationwide, the need now exists for the provision of internet access in each of the schools to fully integrate ICT within the educational system of St. Vincent and the Grenadines. This internet access will ensure that each student in each school nationwide has the ability to browse the internet.

Deliverables

The deliverables for this project are as follows:

Each of the 25 schools in St Vincent and the Grenadines will be outfitted with the following:

- One painted pole to mount an external access point;
- One external unidirectional internet access point;
- One 100 Mbps Download and 20 Mbps upload internet connection;
- One Metal enclosure to house all cables, modems, cords and adapters to facilitate the service at each location

Project Management Arrangements

The winning bidder will be responsible for implementing and maintaining the equipment and services under the contract for the contract period. The winning bidder may be able to subcontract works and or services under this contractor. However, the winning contractor is ultimately responsible for the management of all aspects of this project.

Constraints

A constraint is a limiting factor that affects the execution of a project, program, portfolio, or process (A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute, 2013).

The constraints for this scope are as follows:

- Availability of the infrastructure to provide the 100Mbps download and 20 Mbps Upload speed internet connection at each location;
- Availability of qualified contractors to carry out the work;
- Availability of the equipment with the minimum specification;
- Weather conditions for the installation of the equipment and services

Assumptions

An assumption is a factor in the planning process that is considered true, real, or certain, without proof or demonstration (A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute, 2013). For this project, the following are assumed:

- All technical specifications have been outlined to prevent rework.
- All the equipment to be installed are typed approved for importation into St. Vincent
- The estimated cost of the equipment will not fluctuate.
- The local laws does not conflict with standards which have been established by ISO.
- All stakeholders will provide the necessary feedback in a timely manner to efficiently execute the project.

The following Twenty Five (25) Schools, which are managed by the Ministry of Education of St Vincent and the Grenadines, will be outfitted with an outdoor internet access point. Also, they will have suitably located omni-directional antennas with high speed internet connection.

Locations

1. The Kingstown Government School
2. The Barrouallie Secondary School
3. The Georgetown Secondary School
4. The Belair Government School
5. The Girls High School
6. The Mountain View Academy
7. The St. Vincent Boys Grammar School
8. The Bishop College Kingstown
9. The St. Joseph Convent School Kingstown
10. The Layou Methodist School
11. The Chateaubelair Primary
12. The Fitz Hughes Primary School
13. The Spring Village Government School
14. The Buccament Bay Secondary
15. The Union Island Secondary School
16. The Bequia Anglican High School
17. The Dr. J. P Eustace Secondary School
18. The Intermediate Secondary School
19. The Emmanuel High School
20. The Belmont Government School
21. The Colonarie Government School
22. The Windsor Primary School
23. The St Martin's Secondary School

24. The Adelphi Secondary School
25. The Sion Hill Government School

As it relates to upload and download speeds, please note the following:

- All 25 locations listed above will have connections with a 100Mbps minimum download speed and a minimum upload speed of 20Mbps throughout the five-year duration of the project.

The following criteria listed, but not limited to, must be met for the installation of the outdoor Wi-Fi Access Points:

- Each access point must be erected on a pole in a suitable location on the grounds of the school, at a minimum height of twenty-five (25) feet from the ground. This will provide maximum coverage with sufficient signal strength to maintain a stable internet connection. Please note that anyone visiting any of the 25 schools listed above with a Wi-Fi enabled device must be able to connect to this access point at any point on or around the location.
- The pole that is to be erected must be placed in a location that does not impede any activity at each school. Also, it must be painted in a colour which is in line with the immediate surroundings.
- All power cords, modems and other equipment needed to provide the services at each location should be securely mounted on the pole and be enclosed in secured and lockable enclosure. This will prevent damage from the elements such as rain, wind, dust and vandalism.
- The access point, which will be placed on the pole to provide wireless internet service to the locations listed above, should have the minimum specifications.

Device Information
Meraki MR66 Outdoor Access Point
Radios
1 × 802.11b/g/n radio 1 × 802.11a/n radio Auto-selection of optimal 2.4 GHz or 5 GHz band Max radio rate of 300 Mbps per radio 2.4 GHz +26 dBm peak transmission power 5 GHz +24 dBm peak transmission power
802.11n Capabilities
2 x 2 multiple input, multiple output (MIMO) with two spatial streams Maximal ratio combining (MRC) Beamforming

Packet aggregation Cyclic shift diversity (CSD) support
Power
Power over Ethernet: 24 - 57 V (802.3af compatible) Power consumption: 10.5 W max
Mounting
Mounts to walls and horizontal, vertical, and angled poles Mounting hardware included
Physical Security
Security screw included
Kensington lock hard point Anti-tamper cable bay Concealed mount plate
Environment
Operating temperature: -4°F to 122°F (-20°C to 50°C) IP67 environmental rating (sealed against water and dust)
Interfaces
One 100/1000 Mbps auto-crossover Ethernet port Four external N-type connectors Signal strength LEDs
Security
Integrated policy firewall (Identity Policy Manager) Air Marshal: real-time WIPS with forensics Guest Isolation WEP, WPA WPA2-PSK WPA2-Enterprise with 802.1X TKIP and AES encryption VLAN tagging (802.1Q)
Quality of Service
Wireless Quality of Service (WMM/802.11e) DSCP (802.1p)
Mobility
PMK and OKC credential support for fast Layer 2 roaming L3 roaming
LED Indicators
4 signal strength 1 Ethernet connectivity
1 power/booting/firmware upgrade status
Regulatory

FCC (US)
IC (Canada)
CE (Europe) with DFS
C-Tick (Australia)
Certification
Wi-Fi Alliance

4.1.14 Create WBS

Create WBS is the process of subdividing project deliverables and project work into smaller, more manageable components (A guide to the project management body of knowledge (PMBOK guide); Newtown Square, Pa: Project Management Institute, 2013).

4.1.15 Process

In order to manage the work effectively that is required to complete this project, it will be subdivided into individual work packages, which will not exceed 40 hours of work. This will allow the project manager to manage more effectively the project's scope. This is necessary since the project team works on the tasks necessary for project completion. The project is broken down into five phases:

- the initiation;
- planning;
- execution;
- control;
- close out phases

4.1.15 Tools and techniques

The tools for the completion of the create WBS are as follows:

- **Expert Judgement**

Expert judgement will be used by the project team to breakdown the work packages into smaller, more manageable tasks. Each of the project team members will be responsible for breaking down the various work packages and using expert judgement in the development of the entire WBS.

4.1.16 Roles

The project manager, sponsor and the project team will all play key roles in the creation of the WBS for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the WBS is developed properly. The table below defines the roles and responsibilities for the creation of the WBS of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approve scope baseline
Apollo Knights	Director of NTRC		Review scope baseline.
Kyron Duncan	USF Administrator	Project Manager	Prepare scope baseline
Cyron Cyrus	USF Assistant	Project team member	Assist with the development of the scope baseline
Lizrene Charles	USF Assistant	Project team member	Assist with the development of the scope baseline
Andra Keizer	USF Assistant	Project team member	Assist with the development of the scope baseline. Creation

4.1.17 Outputs

The output of this phase is the scope baseline. The scope baseline is the approved version of a scope statement, work breakdown structure (WBS), and its associated WBS dictionary. This can be changed only through formal change control procedures and is used as a basis for comparison (A guide to the project management body of knowledge, Newtown Square, Pa: Project Management Institute, 2013). The WBS is located in Appendix 2 and the WBS dictionary is located on Appendix 4.

4.1.18 Validate Scope

Validate scope is the process of formalizing acceptance of the completed project deliverables (A guide to the project management body of knowledge, Newtown Square, Pa: Project Management Institute, 2013).

4.1.19 Process

This is where the project team will physically go out and inspect the completed work using the project management plan, verified deliverables and the requirements documentation. The purpose of this activity is to ensure that the work is completed. The outcome from this is the accepted deliverables. These deliverables will have to be officially accepted by the chairman of the NTRC.

A representative from the contracted company along with the NTRC will visit each site to verify that each deliverable has been installed at each location. Following the successful inspection of the services and equipment, the project manager will make his recommendations to the Director of the NTRC for official acceptance of the project. This will then be submitted to the chairman of the NTRC who will formally accept the deliverables.

4.1.20 Tools and techniques

The tools for the completion of the validate scope task are as follows;

- **Inspection**-The project manager along with his project team will go physically to each of the project sites under this project. The purpose of such a visit is to ensure that the work has been executed. The equipment will be inspected and tests will be carried out on the service to ensure that the quality of the service is as requested in the scope.

4.1.21 Roles

The project manager, sponsor and the project team will all play key roles in the validate scope for this project. As such, these persons must be aware of their responsibilities in order to ensure that the validate scope process is done efficiently. The table below defines the roles and responsibilities for the validate scope process of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approve the acceptance of deliverables.
Apollo Knights	Director of NTRC		Review scope baseline.
Kyron Duncan	USF Administrator	Project Manager	Inspection of project sites

			Sign off on deliverables
Cyron Cyrus	USF Assistant	Project member team	<p>Assist with the inspections of project sites.</p> <p>Verify the quality of the services at each site</p> <p>Verify the equipment installation at each site</p>
Lizrene Charles	USF Assistant	Project member team	<p>Assist with the inspections of project sites</p> <p>Verify the quality of the services at each site</p> <p>Verify the equipment installation at each site</p>
Andra Keizer	USF Assistant	Project member team	<p>Assist with the inspections of project sites</p> <p>Verify the quality of the services at each site</p> <p>Verify the equipment installation at each site</p>

4.1.22 Outputs

The outputs of this process are the accepted deliverables. This is where the chairman of the NTRC will officially accept the deliverables under the project following a comprehensive inspection process. This process involves visits from the project manager and his project team to each of the location. They will verify that the services and equipment have been installed. Please refer to Appendix 6.

Deliverables

A deliverable is any unique and verifiable product, result, or capability to perform a service that is required to be produced and to complete a process or phase (A guide to the project management body of knowledge; Newtown Square, Pa: Project Management Institute, 2013). Within this project, each of the 25 project sites will be outfitted with the following;

1. 1 Painted Pole of a minimum height of twenty five feet from the ground;
2. 1 external wireless access point;
3. 1 metal enclosure casing for all cords, cables and modem to provide the internet access at the site which is to be mounted on the pole;
4. A 100Mbps download and 20 Mbps Upload speed internet connection

The Delivery matrix is located in Appendix 18.

4.1.24 Control Scope

The last phase in the scope management process is the control scope. The control scope is the process of monitoring the status of the project, product scope and managing changes to the scope baseline (A guide to the project management body of knowledge; Newtown Square, Pa: Project Management Institute, 2013.)

4.1.25 Process

The project manager and the project team will work together to control of the scope of the project. The project team will leverage the WBS Dictionary by using it as a statement of work for each WBS element. The project team will ensure that they perform only the work described in the WBS dictionary and generate the defined deliverables for each WBS element.

The project manager will oversee the project team and the progression of the project to ensure that this scope control process is followed. If a change to the project scope is needed, the process for recommending changes to the scope of the project must be carried out. Any project team member or sponsor can request changes to the project scope. All change requests must be submitted to the project manager in the form of a project change request document. The project manager will then review the suggested change to the scope of the project. He or she will then either deny the change request if it does not apply to the

intent of the project or convene a change control meeting between the project team to review.

If the change request receives initial approval by the project manager then he or she will formally submit the change request to the Director of the NTRC. Once approved it will be submitted to the chairman for final approval and acceptance and will be signed by him. Upon acceptance of the scope change by the chairman, the project manager will update all project documents and communicate the scope change to all project team members and stakeholders.

4.1.26 Tools and techniques

The tools for the completion of the control scope task are as follows:

- **Analysis-** The project team will perform the needed analysis on the impact of any proposed change to the scope of the schools' project. In addition, it will make a recommendation to the Director of the NTRC as to whether the change should occur or not based on the analysis.

4.1.27 Roles

The project manager, sponsor and the project team will all play key roles in the control scope process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the control scope process is done efficiently and effectively. This is a very important process in all projects. The table below defines the roles and responsibilities for the control scope process of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approve/deny change request Sign Change Request Documentation Approve project management plan updates Approve work performance

			information
Apollo Knights	Director of NTRC		Review change requests.
Kyron Duncan	USF Administrator	Project Manager	Review change requests Perform analysis on change request Update project documents Update project management plan
Cyron Cyrus	USF Assistant	Project team member	Review change requests Perform analysis on change request Update project documents Update project management plan
Lizrene Charles	USF Assistant	Project team member	Assist in ensuring that the work to be performed is performed Update project documents Update project management plan
Andra Keizer	USF Assistant	Project team member	Review change requests Perform analysis on

			change request Update project documents Update project management plan
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4.1.28 Output

Change requests- Change requests may be approved during the control scope process. This will result in changes to the scope baseline. The project team must be on hand to ensure that this process is monitored efficiently. See Appendix 7 for the change request process. See appendix 7.

Project Management Plan Updates- Once change requests have been approved, the project management plan needs to be updated and the project team will be responsible for this.

Project Document updates- Due to the approved changes mentioned above, project documents such as the requirements documentation and the requirements traceability documents need to be updated. The project team will be responsible for this.

4.1.29 Change Control

Change Control System is a set of procedures that describes how modifications to the project deliverables and documentation are managed and controlled (A guide to the project management body of knowledge; Newtown Square, Pa: Project Management Institute. Project Management Institute, (2013). See Appendix 7

4.1.30 Process

Whenever a change request is received, suggested or identified by the contractor, it needs to be logged in the Change log of the project, regardless of the size or impact of the change. The project team, which is headed by the project manager, will be responsible for the analysis of the change and its impact on the overall project. The following form will be used by the contractor and submitted to the NTRC in the event of any change. All changes must be submitted by the project manager to the Director of the NTRC for approval.

The project team will do all of the analysis and this will be submitted within the form submitted by the contractor. The chairman of the NTRC will approve the changes. Once a

decision is made, it needs to be registered in the change log. If change request gets approved, the work related to change request becomes part of the project and all related project documents, plans and baselines will be updated. If change request gets rejected or postponed, the communication is sent to the requestor / stakeholder with the reasons of rejection or postponement. Record of change request in the change log needs to be updated for all details regarding change request. Such questions to consider include:

- What is the decision that has been taken?
- What are the reasons for the rejection or postponement?

4.1.31 Roles

The project manager, sponsor and the project team will all play key roles in the change control process for this project. As such, they must be aware of their responsibilities in order to ensure that the change control process is done efficiently and effectively. This is a very important process in all projects. The table below defines the roles and responsibilities for the control scope process of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approving/denying change control
Apollo Knights	Director of NTRC		Reviewing change control request
Kyron Duncan	USF Administrator	Project Manager	Reviewing change request Performing analysis and evaluation
Cyron Cyrus	USF Assistant	Project team member	Performing analysis and evaluation
Lizrene Charles	USF Assistant	Project team member	Performing analysis and evaluation
Andra Keizer	USF Assistant	Project team member	Performing analysis and evaluation

Schools' Project

4.2 Time Management Plan

4.2 Project Time Management

Project Time Management includes the processes required to manage the timely completion of the project (A guide to the project management body of knowledge, Newtown Square, Pa: Project Management Institute, 2013)

The time management plan will outline the methodology on how you are planning to establish the project schedule.

Revision	Release Date	Distributed to					
		Client	Consultant	Project Management Dept.	Sub Contractors	Suppliers	
Revision 0 (Draft)	Jan-05-17	NTRC					

Amendments

The time management plan for this project, from time to time, may require updates. The project management department of the NTRC will be informed of amendments by use of the change request form. The NTRC Board must approve this prior to distribution. Only revised parts of the plan will be distributed, along with the approval and will be accompanied by instructions on how to implement the changes.

Project Proposal Sponsor

Prepared by:	Reviewed By:	Approved By Project Sponsor:
Kyron Duncan USF Administrator NTRC	Apollo Knights: Director NTRC	Timothy Scott Chairman NTRC

Time Management Plan Approach

This project's time management plan consist of seven processes that are as follows:

- Plan schedule management;
- Define activities;
- Sequence activities;
- Estimate activity duration;
- Develop schedule;
- Control schedule

The measurement of the tasks will be in hours.

Process	Input	Tools	Output	Person Responsible
Plan Schedule Management	<ul style="list-style-type: none"> • Project Management Plan • Project Charter 	<ul style="list-style-type: none"> • Meetings • Expert Judgement 	<ul style="list-style-type: none"> • Schedule Management Plan 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Define Activities	<ul style="list-style-type: none"> • Schedule Management Plan • Scope baseline 	<ul style="list-style-type: none"> • Decomposition • Expert judgement 	<ul style="list-style-type: none"> • Activity list • Milestone list 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Sequence Activities	<ul style="list-style-type: none"> • Schedule Management Plan • Project Scope Statement • Milestone list • Activity list 	<ul style="list-style-type: none"> • Dependency determination • Leads and lags 	<ul style="list-style-type: none"> • Project schedule network diagram 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director

Estimate Activity resources	<ul style="list-style-type: none"> • Schedule Management Plan • Activity list • Risk Register • Activity list 	<ul style="list-style-type: none"> • Expert Judgement • Project Management software 	<ul style="list-style-type: none"> • Activity resource requirements • Project documents updates 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Estimate Activity Duration	<ul style="list-style-type: none"> • Schedule Management Plan • Activity list • Risk register • Project scope statement 	<ul style="list-style-type: none"> • Expert Judgement • Analogous estimating • Group decision making techniques 	<ul style="list-style-type: none"> • Activity duration estimates 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Develop Schedule	<ul style="list-style-type: none"> • Project management plan • Activity list • Risk Register • Project Scope statement • Project staff assignments 	<ul style="list-style-type: none"> • Critical path method • Schedule network analysis 	<ul style="list-style-type: none"> • Schedule baseline • Project schedule 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Control Schedule	<ul style="list-style-type: none"> • Project management plan • Project schedule • Work performance data 	<ul style="list-style-type: none"> • Project management software • Performance reviews • Lead and lags 	<ul style="list-style-type: none"> • Work performance information • Change request • Project management plan update 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director

4.2.1 Plan Schedule Management

The plan schedule management is the process of establishing the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.2.2 Process

The project management team, which is led by the project manager, will decide on how the project schedule will be managed and controlled throughout the project. The project team will utilize the project management plan and the project charter to develop the schedule management plan. This schedule management plan will be developed by the project team and then submitted to the Director of the NTRC for review and then to the Chairman of the NTRC for final approval.

4.2.3 Roles

The project manager, sponsor and the project team will all play key roles in the plan schedule management process of this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the schedule is executed effectively throughout the entire duration of the project.

The table below defines the roles and responsibilities for the plan schedule management of this project.

<u>Name</u>	<u>Position</u>	<u>Role</u>	<u>Responsibilities</u>
St. Clair Scott	Chairman of NTRC	Sponsor	Approval of the schedule management plan
Apollo Knights	Director of NTRC		Review of the schedule management plan
Kyron Duncan	USF Administrator	Project Manager	Development of the schedule management plan. Have project team meetings to assist in developing of the

			<p>schedule management plan</p> <p>Using expert judgement in identifying best methodologies in the schedule management process.</p>
Cyron Cyrus	USF Assistant	Project team member	<p>Assist in the Development of the schedule management plan.</p> <p>Have project team meetings to assist in developing of the schedule management plan</p> <p>Assist in using expert judgement in identifying best methodologies in the schedule management process.</p>
Lizrene Charles	USF Assistant	Project team member	<p>Assist in the Development of the schedule management plan.</p> <p>Have project team meetings to assist in developing of the schedule management plan</p> <p>Assist in using expert judgement in identifying best methodologies in the</p>

			schedule management process.
Andra Keizer	USF Assistant	Project team member	<p>Assist in the Development of the schedule management plan</p> <p>Have project team meetings to assist in developing of the schedule management plan</p> <p>Assist in using expert judgement in identifying best methodologies in the schedule management process</p>

4.2.4 Tools and Techniques

The tools of the planned schedule management process are as follows:

- **Meetings** -The project manager, along with his project team and the project sponsor will convene meetings, among themselves to develop the strategies to be used to develop the schedule management plan.
- **Expert Judgement** – The project team will use expert judgement which they have gained from previous projects to assist in the development of the schedule management plan.

4.2.5 Output

The output of this process is the schedule management plan. This component of the project management plan establishes the criteria and the activities for developing, monitoring, and controlling the schedule (A guide to the project management body of knowledge; Newtown Square, Pa: Project Management Institute. Project Management Institute, 2013). The document will be approved by the chairman of the NTRC.

Schedule Management Plan

Project:
Project Sponsor:
Start date:
Completion Date :

Define Activities

<u>Process</u>
<u>Tools and Techniques</u>
<u>Outputs</u>

Sequence Activities

<u>Process</u>
<u>Tools and Techniques</u>
<u>Outputs</u>

Estimate Activity Resources

<u>Process</u>

<u>Tools and Techniques</u>
<u>Outputs</u>

Estimate Activity Duration

<u>Process</u>
<u>Tools and Techniques</u>
<u>Outputs</u>

Control Schedule

<u>Process</u>
<u>Tools and Techniques</u>
<u>Outputs</u>

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Approvals

This document requires the following approvals:

Name	Role	Signature	Date	Version

Distribution

This document has been distributed to:

Name	Role	Date of Issue	Version

4.2.6 Define Activities

Define Activities is the process of identifying and documenting the specific actions to be performed in order to produce the project deliverables (A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute, 2013)

4.2.7 Process

The project management team, which the project manager leads, will use decomposition and expert judgement to decompose the various works needed to complete the project. The schedule management plan and the scope baseline are the documents that will be used to assist in the decomposing of works. The outputs from the process are the activity list and the milestone list. These must be approved by the chairman of the NTRC.

4.2.8 Roles and Responsibilities

The project manager, sponsor and the project team will all play key roles in the define activities process of this project. As such, these individuals must be aware of their responsibilities in order to ensure that the process is efficiently executed throughout the entire duration of the project.

The table below defines the roles and responsibilities for define activities of this project.

<u>Name</u>	<u>Position</u>	<u>Role</u>	<u>Responsibilities</u>
Timothy Scott	Chairman of NTRC	Sponsor	Approval of the activity list Approval of the milestone list
Apollo Knights	Director of NTRC		Review of the activity list Review of the milestone list
Kyron Duncan	USF Administrator	Project Manager	Development of the milestone list Development of the activity list. Using expert judgement in the decomposition of work packages
Cyron Cyrus	USF Assistant	Project team member	Assist in the Development of the milestone list Have project team meetings to assist in decomposing work packages. Assist in developing the activity list
Lizrene Charles	USF Assistant	Project team member	Assist in the Development of the milestone list

			<p>Have project team meetings to assist in decomposing work packages.</p> <p>Assist in developing the activity list</p>
Andra Keizer	USF Assistant	Project team member	<p>Assist in the Development of the milestone list</p> <p>Have project team meetings to assist in decomposing work packages.</p> <p>Assist in developing the activity list.</p>

4.2.9 Tools and Techniques

The tools of the define activities are as follows:

- **Decomposition** -The project manager along with his project team will break down the work needed to complete the project into smaller more manageable parts.
- **Expert Judgement** – The project team will use expert judgement which they have gained from previous projects to assist in the decomposition of tasks.

4.2.10 Output

The output for this process are as follows:

- **The Activity list-** The activity list is a comprehensive list that includes all schedule activities required on the project (A guide to the project management body of knowledge; Newtown Square, Pa: Project Management Institute. .Project Management Institute, 2013.) This list will be prepared by the project team and reviewed and approved by the chairman of the NTRC. See Appendix 8.
- **Milestone list-** A milestone list is a list identifying all project milestones. This list indicates whether the milestone is mandatory such as those required by contract, or optional, such as those based upon historical information (A guide to the project management body of knowledge, Newtown Square, Pa: Project Management Institute, 2013).

4.2.11 Sequence Activities

Sequence Activities is the process of identifying and documenting relationships among the project activities. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.2.12 Process

The project management team which is led by the project manager will be sequencing the activities in a logical manner. The project team will utilize dependency determination, leads and lags to properly sequence the various activities of this project. Such an action is necessary to ensure that it is properly executed. The schedule management plan, the activity list, milestone list and the project scope statement will be utilized in the sequencing of all activities under this project.

4.2.13 Roles and Responsibilities.

The project manager, sponsor and the project team will all play key roles in the sequence activities process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the process is efficiently executed throughout the entire duration of the project. The table below defines the roles and responsibilities for sequence activities of this project.

<u>Name</u>	<u>Position</u>	<u>Role</u>	<u>Responsibilities</u>
Timothy Scott	Chairman of NTRC	Sponsor	Approval of the project schedule network diagram Review of project document updates
Apollo Knights	Director of NTRC		Review of the project schedule network diagram Review of the project document updates
Kyron Duncan	USF Administrator	Project Manager	Development of the project schedule network diagram
Cyron Cyrus	USF Assistant	Project team member	Assist in the Development of the project schedule network diagram
Lizrene Charles	USF Assistant	Project team member	Assist in the Development of the project schedule network diagram
Andra Keizer	USF Assistant	Project team member	Assist in the Development of the project schedule network diagram

4.2.14 Tools and Techniques

The tools for the sequence activities process include:

- **Dependency Determination** – The project team will utilize the dependency determination and identify which tasks are mandatory, discretionary, external and internal dependencies.

- **Leads and lags** –

A lead is the amount of time whereby a successor activity can be advanced with respect to a predecessor activity. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

A lag is the amount of time whereby a successor activity will be delayed with respect to a predecessor activity. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. The project team will determine which work packages are to lead the other and which are to lag the other. The schedule management plan, the activity list, project scope statement and the milestone list will all be use to assist in the execution of the task using this tool.

4.2.15 Output

The output for this process is the project schedule network diagram. A project schedule network diagram is a graphical representation of the logical relationships, also referred to as dependencies, among the project schedule activities. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). This document will be approved by the chairman of the NTRC. See Appendix 9.

4.2.16 Estimate Activity Resources

Estimate activity resources is the process of estimating the type and quantities of material, human resources, equipment, or supplies required to perform each activity.

4.2.17 Process

The project team, which is led by the project manager, will utilize expert judgement gained from previous projects to identify the type, quantity and characteristic of resources required, for each of the work packages. Microsoft project, which is a project management software, will also be used to assist with this process. The project team will utilize the schedule management plan, the project scope statement, the risk register and the activity list to assist with this process. The outcome of this process is the Activity resource requirements and project documents updates which will be submitted to the chairman of the NTRC for review.

4.2.17 Roles and Responsibilities

The project manager, sponsor and the project team will all play key roles in the Estimate activity resources process of this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the process is executed efficiently throughout the entire duration of the project.

The table below defines the roles and responsibilities for the Estimate activity resources of this project.

<u>Name</u>	<u>Position</u>	<u>Role</u>	<u>Responsibilities</u>
Timothy Scott	Chairman of NTRC	Sponsor	Approval of the activity resource requirements Review of the project document update such as the activity list
Apollo Knights	Director of NTRC		Review of the activity resource requirements Review of the project document update such as the activity list
Kyron Duncan	USF Administrator	Project Manager	Development of the activity resource requirements Update the activity list Update the Microsoft project

Cyron Cyrus	USF Assistant	Project team member	<p>Assist in the Development of the activity resource requirements</p> <p>Assist in Updating the activity list</p> <p>Assist in Updating the Microsoft project</p>
Lizrene Charles	USF Assistant	Project team member	<p>Assist in the Development of the activity resource requirements</p> <p>Assist in Updating the activity list</p> <p>Assist in Updating the Microsoft project</p>
Andra Keizer	USF Assistant	Project team member	<p>Assist in the Development of the activity resource requirements</p> <p>Assist in Updating the activity list</p> <p>Assist in Updating the Microsoft project</p>

4.2.18 Tools and Techniques

The tools for the estimate activity resources process are as follows:

Expert Judgement- The project team which is led by the project manager will utilize this tool to assist with the identification of resources which will be needed. Due to their experience in similar projects, this tool will be an asset.

Project management software-The project team, which is led by the project manager, will utilize Microsoft project to assist with the planning and monitoring of resources over the period of the project.

4.2.19 Output

The outputs from the process are as follows:

Project Document Update- The project team, which is led by the project manager, will update the activity list based on any changes made during this process.

Activity Resource Requirement- Activity resource requirements identify the types and quantities of resources required for each activity in a work package. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. The project team will develop this and it will be submitted to the chairman of the NTRC for approval. See Appendix 19.

4.2.20 Estimate Activity Duration

Estimate Activity Durations is the process of estimating the number of work periods needed to complete individual activities with estimated resources. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.2.21 Process.

The project team, which is led by the project manager, will utilize the project management plan, activity list, risk register, project scope statement and project staff assignments to identify the time needed for each project element and work package and task under this project.

The project team will have to use the expert judgement gained from executing similar projects in the past to estimate the time it will take to execute the tasks under this project. The project team will use this expert judgement and use techniques such as group decision making and analogous estimating to come up with the activity duration estimates, the output of the estimate activity duration.

4.2.22 Roles and Responsibilities

The project manager, sponsor and the project team will all play key roles in the estimate activity duration process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the process is executed effectively throughout the entire duration of the project.

The table below defines the roles and responsibilities for estimate activity duration for this project.

<u>Name</u>	<u>Position</u>	<u>Role</u>	<u>Responsibilities</u>
Timothy Scott	Chairman of NTRC	Sponsor	Approval of activity duration estimates
Apollo Knights	Director of NTRC		Review of the activity duration estimates
Kyron Duncan	USF Administrator	Project Manager	<p>Develop the activity duration estimates</p> <p>Participate in group decision making techniques.</p> <p>Utilize the expert judgement from previous projects executed and perform analogous estimating</p> <p>Estimate the time needed to execute each task under this project.</p>
Cyron Cyrus	USF Assistant	Project team member	<p>Assist in the Development the activity duration estimates</p> <p>Participate in group decision making techniques.</p> <p>Assist in Utilizing</p>

			<p>the expert judgement from previous projects executed and perform analogous estimating</p> <p>Assist in Estimating the time needed to execute each task under this project.</p>
Lizrene Charles	USF Assistant	Project team member	<p>Assist in the Development the activity duration estimates</p> <p>Participate in group decision making techniques.</p> <p>Assist in Utilizing the expert judgement from previous projects executed and perform analogous estimating</p> <p>Assist in Estimating the time needed to execute each task under this project.</p>
Andra Keizer	USF Assistant	Project team member	<p>Assist in the Development the activity duration estimates</p> <p>Participate in group decision making techniques.</p>

			<p>Assist in Utilizing the expert judgement from previous projects executed and perform analogous estimating</p> <p>Assist in Estimating the time needed to execute each task under this project</p>
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4.2.23 Tools and Techniques

The tools for the estimate activity duration process are as follows:

- **Expert Judgement-** The project team which is led by the project manager will use expert judgement gained from working on previous projects to complete the task of estimating the duration relating to tasks under the schools' project.
- **Group Decision Making Techniques-** A group decision-making technique is an assessment process having multiple alternatives with an expected outcome in the form of future actions. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. The project team will utilize this technique in making decision to arrive at the activity duration estimates.
- **Analogous Estimating-** Analogous estimating is a technique for estimating the duration or cost of an activity or a project using historical data from a similar activity or project. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Due to the expert judgement gained by the project team, analogous estimating will also be utilized for estimating durations.

4.2.23 Output

The output of this process is as follows:

- **Activity Duration estimate** – Activity duration estimates are quantitative assessments of the likely number of periods that are required to complete an activity. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. This will be prepared by the project team and submitted to the Director of the NTRC for review and approved by the chairman of the NTRC.
- **Project Schedule** - The project schedule is an output of a schedule model that presents linked activities with planned dates, durations, milestones, and resources. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. This will be approved by the chairman of the NTRC. The activity list and duration is located on Appendix 11

4.2.24 Develop Schedule

Develop Schedule is the process of analysing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule model. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. .Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK)Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. .Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK)

4.2.25 Process

The project team which is led by the project manager will use the project management software, Microsoft project, to enter and schedule tasks for the execution of this project. These need to be entered in a logical manner so that the project is executed as efficiently as possible. The project management plan, the activity list, the risk register, the project scope statement and project staff assignments will all be used to assist in the decision making process for this task. The output of the process is the schedule baseline and project schedule which will be submitted to the Director for review and then submitted to the Chairman of the NTRC for approval.

4.2.26 Roles and Responsibilities.

The Project Manager, Sponsor and the project team will all play key roles in the develop schedule process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the process is efficiently executed throughout the entire duration of the project. The table below defines the roles and responsibilities for develop schedule for this project.

<u>Name</u>	<u>Position</u>	<u>Role</u>	<u>Responsibilities</u>
Timothy Scott	Chairman of NTRC	Sponsor	Approval of the Schedule baseline Approval of the Project schedule
Apollo Knights	Director of NTRC		Review of the Schedule baseline Review of the Project schedule
Kyron Duncan	USF Administrator	Project Manager	Develop the Schedule baseline Develop the project schedule Enter tasks into Microsoft Project in a logical manner
Cyron Cyrus	USF Assistant	Project member team	Enter tasks into Microsoft Project in a logical manner
Lizrene Charles	USF Assistant	Project member team	Enter tasks into Microsoft Project in a logical manner
Andra Keizer	USF Assistant	Project member team	Enter tasks into Microsoft Project in

			a logical manner
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4.2.27 Tools and Techniques

The tools which will be used are as follows for the develop schedule process;

- **Critical Method Path-** The critical path method, which is a method used to estimate the minimum project duration and determine the amount of scheduling flexibility on the logical network paths within the schedule model Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. .Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK) Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. .Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK gu. The project team which is led by the project manager will use this method to assist in developing the schedule baseline and the project schedule.
- **Schedule network Analysis-**Schedule network analysis is a technique that generates the project schedule model. It employs various analytical techniques, such as critical path method, critical chain method, what-if analysis, and resource optimization techniques to calculate the early and late start and finish dates for the uncompleted portions of project activities. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK)Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. .Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK). The project team which is led by the project manager will use this method to assist in developing the schedule baseline and the project schedule.

4.2.28 Output

The outputs for this process are as follows.

- **Schedule Baseline** – A schedule baseline is the approved version of a schedule model that can be changed only through formal change control procedures and is used as a basis for comparison to actual results. Project Management Institute.

(2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013).

- **Project Schedule** - The project schedule is an output of a schedule model that presents linked activities with planned dates, durations, milestones, and resources. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide).. This will be approved by the chairman of the NTRC. The project schedule is located in Appendix 3.

4.2.29 Control Schedule

Control is the process of monitoring the status of project activities to update project progress and manage changes to the schedule baseline to achieve the plan. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.2.30 Process

The project team which is led by the project manager will utilize the project management plan, the project schedule and work performance data in conjunction with the Microsoft project, leads and lags procedure and performance reviews on the project to control the schedule for this project. The project team will ensure that the project schedule is as outlined and this process is geared to ensuring that the project is executed on the time agree to. The output of this process are the work performance information, change request and project management plan updates. Change request must follow the procedures established and must be approved by the Chairman of the NTRC. The work performance information and the updating of the project management plan will be also reviewed by the Chairman and the Director of the NTRC.

4.2.31 Roles and Responsibilities.

The Project Manager, Sponsor and the project team will all play key roles in the control schedule process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the process is efficiently executed throughout the entire duration of the project. The table below defines the roles and responsibilities for control schedule of this project.

<u>Name</u>	<u>Position</u>	<u>Role</u>	<u>Responsibilities</u>
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Timothy Scott	Chairman of NTRC	Sponsor	Approval/ denial of change requests Review of project management plan updates Review of work performance information.
Apollo Knights	Director of NTRC		Review of change requests Review of project management plan updates Review of work performance information.
Kyron Duncan	USF Administrator	Project Manager	Analysis of the change request Updating of the project management plan Preparation of the work performance information Identify deviations from the schedule and identify activities to put schedule back in place
Cyron Cyrus	USF Assistant	Project team member	Assist in the Analysis of the change request Assist in the Updating of the

			<p>project management plan</p> <p>Assist in the Preparation of the work performance information</p> <p>Assist in Identifying deviations from the schedule and identify activities to put schedule back in place</p>
Lizrene Charles	USF Assistant	Project team member	<p>Analysis of the change request</p> <p>Updating of the project management plan</p> <p>Preparation of the work performance information</p> <p>Identify deviations from the schedule and identify activities to put schedule back in place</p>
Andra Keizer	USF Assistant	Project team member	<p>Analysis of the change request</p> <p>Updating of the project management</p>

			<p>plan</p> <p>Preparation of the work performance information</p> <p>Identify deviations from the schedule and identify activities to put schedule back in place</p>
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4.2.32 Tools and Techniques

The tools which will be used are as follows for the control schedule process;

- **Project Management Software** – the project team will utilize the Microsoft project to assist in the control schedule for the schools project.
- **Leads and lags** -A lead is the amount of time whereby a successor activity can be advanced with respect to a predecessor activity. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. A lag is the amount of time whereby a successor activity will be delayed with respect to a predecessor activity. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. .Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK gu. The project team will determine which work packages are to lead the other and which are to lag the other and ensure that the schedule is executed as planned.
- **Performance reviews**- the project team which is led by the project manager will analyse the project performance as compared to the schedule and the remaining time for the project. Techniques such as critical path method and trend analysis will be used.

4.2.33 Output

The outputs for this process are as follows.

Change Request- During the execution of this process, the schedule may need to be adjusted and as such a change request may be needed. Additional work may be required, rework etc. this change request will have to be approved by the Chairman of the NTRC. The change request is located in Appendix 7.

Work Performance Information- information on the performance of the project based on the established schedule is document and sent to the various stakeholders for their review.

Project Management Plan update- the project management plan will need to be updated to outline any changes in scope or time which is incurred throughout the process.

School Project

4.3 Project Cost Management Plan

4.3 Project Cost Management Plan

A component of a project or program management plan that describes how costs will be planned, structured, and controlled PM BOK Fifth Edition. The currency outlined for the budget for this project is Eastern Caribbean (E.C) dollars which is the currency of St. Vincent and the Grenadines. The NTRC currently has the funds which has been estimated for the implementation of this project. These funds have been made available through the Universal Service Fund.

Revisions and Distribution

Revision	Release Date	Distributed to					
		Client	Consultant	All Project Management Department	Sub-contractors	Suppliers	
Rev 0 (draft)	March 1 2017						

Amendments

The Project Cost Management Plan from time to time may require updates. Any amendment to this plan shall be informed to the change control board by use of the change request form and approved by the project change control board prior to distribution. However in this case, the project is a fixed cost project as the contractor will be responsible for any additional cost for the execution of the project.

Prepared by:	Reviewed by:	Approved by Project Sponsor
Place,		
Kyron Duncan:	Apollo Knights	Nigel Scott

USF Administrator NTRC	Director of the NTRC	Chairman of the NTRC
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4.3.1 Cost Management Approach

Project Cost Management includes the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be completed within the approved budget. (PM BOK Fifth Edition)

Process	Input	Tools	Output	Person Responsible
Plan cost Management	<ul style="list-style-type: none"> • Project Management Plan • Project Charter 	<ul style="list-style-type: none"> • Meetings • Expert Judgement 	<ul style="list-style-type: none"> • Cost Management Plan 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Estimate Cost	<ul style="list-style-type: none"> • Cost Management Plan • Scope baseline • Risk Register 	<ul style="list-style-type: none"> • Expert judgement • Analogous estimating • Vendor Bid analysis 	<ul style="list-style-type: none"> • Activity cost estimates 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Determine Budget	<ul style="list-style-type: none"> • Cost Management Plan • Project Scope Statement 	<ul style="list-style-type: none"> • Expert Judgement • Historical relationships • Cost aggregation 	<ul style="list-style-type: none"> • Cost baseline 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director

Control Cost	<ul style="list-style-type: none"> • Project Management Plan • Work Performance data 	<ul style="list-style-type: none"> • Forecasting • Project management software 	<ul style="list-style-type: none"> • Cost Forecast • Project document updates • Change request • Work performance information 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
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4.3.2 Plan Cost Management

Plan cost management is the process that establishes the policies, procedures, and documentation for planning, managing, expending, and controlling project costs Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.3.3 Process

The project team which is managed by the project manager will develop policies and strategies which will provide guidance and direction on how the project costs will be managed throughout the project. The project team will utilize meetings and expert judgement from project team members in collaboration with the project management plan and the project charter to come up with these policies. These policies will form the cost management plan which will be sent to the Director of the NTRC to review and finally submitted to the chairman of the NTRC for final approval.

4.3.4 Roles

The Project Manager, Sponsor and the project team will all play key roles in the plan cost management process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the plan cost management plan is efficiently executed throughout the entire duration of the project. The table below defines the roles and responsibilities for plan cost management of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approval of the cost management plan

Apollo Knights	Director of NTRC		Review of the cost management plan
Kyron Duncan	USF Administrator	Project Manager	<p>Development of the cost management plan</p> <p>Have project team meetings to assist in developing methods in cost management for the project.</p> <p>Using expert judgement in identifying best methodologies in cost management</p>
Cyron Cyrus	USF Assistant	Project team member	<p>Assist with the development of the cost management plan.</p> <p>Have project team meetings to assist in developing methods in cost management for the project</p>
Lizrene Charles	USF Assistant	Project team member	<p>Assist with the development of the cost management plan.</p> <p>Have project team meetings to assist in developing methods in the project</p>
Andra Keizer	USF Assistant	Project team member	Assist with the development of the cost management

			<p>plan.</p> <p>Have project team meetings to assist in developing methods in cost management for the project.</p>
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4.3.5 Tools and techniques

The tools which will be used are as follows for the plan cost management process;

- **Meetings** -The Project manager along with his project team and the project sponsor will convene meetings with among themselves to develop the strategies which will be used to develop the cost management plan.
- **Expert Judgement** – the project team will use expert judgement which they have gained from previous projects to assist in the development of the cost management plan.

4.3.6 Output

The output for this process is that cost management plan. The cost management plan is a component of the project management plan and describes how the project costs will be planned, structured, and controlled. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. . This document will be approved by the chairman of the NTRC.

The below outlines the cost management plan template to be used;

Cost Management Plan

Project:
Project Sponsor:
Start date:
Completion Date :

Estimate Cost

<u>Process</u>

<u>Tools and Techniques</u>
<u>Outputs</u>

Determine Budget

<u>Process</u>
<u>Tools and Techniques</u>
<u>Outputs</u>

Control Cost

<u>Process</u>
<u>Tools and Techniques</u>
<u>Outputs</u>

Approvals

This document requires the following approvals

Name	Role	Signature	Date	Version

Distribution

This document has been distributed to:

Name	Role	Date of Issue	Version

4.3.7 Estimate Cost

Estimate Costs is the process of developing an approximation of the monetary resources needed to complete project activities. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.3.8 Process

The project team which is managed by the project manager will identify the various elements of the project and the costs associated with these element for the successful implementation of this project. The project team will use expert judgement which they would have gained from previous projects to help with this task. Analogous estimating along with vendor bid analysis will be also be utilized in the execution of this task. The output of this is the activity cost estimates which after being prepared by the project team will be submitted to the Director of the NTRC and finally to the chairman of the NTRC for approval.

4.3.9 Roles

The Project Manager, Sponsor and the project team will all play key roles in the estimate cost process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the estimate cost is efficiently executed throughout the entire duration of the project. The table below defines the roles and responsibilities for the estimate cost process of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approval of the Activity cost estimate
Apollo Knights	Director of NTRC		Review of the Activity cost estimate
Kyron Duncan	USF Administrator	Project Manager	Development of the Activity cost estimate Using expert judgement in identifying the various elements of the project and their cost.
Cyron Cyrus	USF Assistant	Project team member	Assist with the development of the Activity cost estimate Assist in the vendor bid analysis.
Lizrene Charles	USF Assistant	Project team member	Assist with the development of the Activity cost estimate Assist in the vendor bid analysis.
Andra Keizer	USF Assistant	Project team	Assist with the

		member	development of the Activity cost estimate Assist in the vendor bid analysis.
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4.3.10 Tools and techniques

The tools which will be used are as follows for the estimate cost process;

- **Expert Judgement** – the project team will use expert judgement which they have gained from previous projects to assist in the development of the cost baseline.
- **Analogous estimating-** Due to the fact that the project team has the requisite expert judgement from previous similar projects, analogous estimating will be used to assist in the development of the cost baseline.

4.3.11 Output

The output for this process is the activity cost estimates. The project team will identify the various elements of the project and the cost associated with each element. This document will be approved by the chairman of the NTRC. See appendix 12.

4.3.12 Determine Budget

Determine Budget is the process of aggregating the estimated costs of individual activities or work packages to establish an authorized cost baseline. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.3.13 Process

The project team which is managed by the project manager will aggregate the various elements of the project costs to come up with the project cost baseline. The project team will use aggregation and expert judgement which they would have gained from previous projects to help with this task. In addition to these tools, historical relationships with past projects will be used to assist in the development of the cost baseline. The output of this is the cost baseline which after being prepared by the project team will be submitted to the Director of the NTRC and finally to the chairman of the NTRC for approval.

4.3.14 Roles

The Project Manager, Sponsor and the project team will all play key roles in the determine budget process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the determine budget is efficiently executed throughout the entire duration of the project. The

table below defines the roles and responsibilities for the determine budget process of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approval of cost baseline
Apollo Knights	Director of NTRC		Review of the cost baseline
Kyron Duncan	USF Administrator	Project Manager	Development of the cost baseline
Cyron Cyrus	USF Assistant	Project member team	Assist with the development of the cost baseline
Lizrene Charles	USF Assistant	Project member team	Assist with the development of cost baseline
Andra Keizer	USF Assistant	Project member team	Assist with the development of cost baseline

4.3.15 Tools and techniques

The tools which will be used are as follows for the determine budget process;

- **Expert Judgement** – the project team will use expert judgement which they have gained from previous projects to assist in the development of the cost baseline.
- **Cost Aggregation-** Due to the fact that the project team has the requisite expert judgement from previous similar projects, analogous estimating will be used to assist in the development of the cost baseline.
- **Historical relationships-** historical information will be used by the project team to determine prices and elements for the various aspects of the project.

4.3.16 Output

The output for this process is the cost baseline. The project team will identify the various elements of the project and the cost associated with each element. This document will be approved by the chairman of the NTRC. The budget is located on Appendix 13.

4.3.17 Control Cost

Control Costs is the process of monitoring the status of the project to update the project costs and managing changes to the cost baseline. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.3.18 Process

The project team which is managed by the project manager will oversee the entire project and monitor the utilization of the monetary resources under the project. The project manager and the project team will use the tools such as Microsoft excel and forecasting to ensure that the resources are being utilized correctly. The project team will ensure that the actual and budgeted cost are the same. From this process, project documents updates will be the output and these will be submitted to the Director and the Chairman of the NTRC for review. Change requests are also an output from this process as elements of the project may need to change due to various factors and as such, these will have to be submitted to the Chairman of the NTRC for final approval.

4.3.19 Roles

The Project Manager, Sponsor and the project team will all play key roles in the control budget process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the costs is controlled efficiently throughout the entire duration of the project. The table below defines the roles and responsibilities for the control cost process of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approval of change request Approval of activity cost estimates Review of work performance information

Apollo Knights	Director of NTRC		<p>Review of the change requests</p> <p>Review of work performance information</p> <p>Review of activity cost estimates</p>
Kyron Duncan	USF Administrator	Project Manager	<p>Submission of change requests</p> <p>Updating of activity cost estimates</p>
Cyron Cyrus	USF Assistant	Project member team	<p>Assist with the analysis of change request</p> <p>Assist with the preparation of the updating of activity cost estimates</p> <p>Updating of work performance information.</p>
Lizrene Charles	USF Assistant	Project member team	<p>Assist with the analysis of change request</p> <p>Assist with the preparation of the updating of activity cost estimates</p> <p>Updating of work performance information.</p>

Andra Keizer	USF Assistant	Project team member	Assist with the analysis of change request Assist with the preparation of the updating of activity cost estimates Updating of work performance information.
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4.3.20 Tools and techniques

The tools which will be used are as follows for the control cost process;

- **Change Requests** – the project team will use expert judgement which they have gained from previous projects to assist in the development of the cost baseline.
- **Analogous estimating-** Due to the fact that the project team has the requisite expert judgement from previous similar projects, analogous estimating will be used to assist in the development of the cost baseline.

4.3.21 Output

The output for this process as follows.

- **Cost Forecasts-**cost forecast may be affected due to any approved change requests, as such the project team will have to forecast the variances in costs for the changes approved.
- **Project Document updates-** project documents which may be updated are the activity cost estimates. This is the case as elements of the projects may be changed and or costs may have variance.
- **Change Requests-**Analysis of the work performance information may result in change request causing an impact on the cost baseline. The project team will manage this process and all changes will be submitted to the Chairman of the NTRC for approval. See appendix 7.

- **Work Performance information-** the project team will be consistently monitoring the project to ensure that actual cost and budgeted cost are equal.

4.3.22 Change Control

Due to the fixed price for the contract to be awarded under this project for its execution, any changes will have to be absorbed by the contractor for this project .in the event that a cost is too significant to be absorbed, some rework may be done but this must be submitted by the contractor to the NTRC for approval.

Schools Project

4.4 Quality Management Plan

The Quality Management plan is a component of the project or program management plan that describes how an organization's quality policies will be implemented Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. .

Prepared by:	Reviewed by:	Approved by Project Sponsor
Place,		
Kyron Duncan: USF Administrator NTRC	Apollo Knights Director of the NTRC	Nigel Scott Chairman of the NTRC

The Quality Management plan consists of three phases which are the plan, perform and control quality management.

Process	Input	Tools	Output	Person Responsible
Plan quality Management	<ul style="list-style-type: none"> • Project Management Plan • Risk Register 	<ul style="list-style-type: none"> • Meetings • Expert Judgement • Benchmarking 	<ul style="list-style-type: none"> • Quality Management Plan 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Perform Quality Assurance	<ul style="list-style-type: none"> • Quality Management Plan • Quality Matrix 	<ul style="list-style-type: none"> • Quality Audits 	<ul style="list-style-type: none"> • Change Requests • Project Document updates 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Control Quality	<ul style="list-style-type: none"> • Project Management Plan • Quality Checks • Deliverables • Approved change requests 	<ul style="list-style-type: none"> • Inspection • Statistical sampling 	<ul style="list-style-type: none"> • Validated changes • Verified deliverables • Work Performance information • Change request 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director

4.4.1 Plan quality management

Plan Quality management is the process of identifying quality requirements and/or standards for the project and its deliverables and documenting how the project will demonstrate compliance with quality requirements and/or standards. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. .Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK) Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. .Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK)

4.4.2 Process

The project team which is led by the project manager will be holding meetings to come up with the quality requirements for the various equipment and services under this project. The project team will be using expert judgement and benchmarking in determining how the quality will be managed throughout the project. These tools and techniques will be used with the risk register and the project management plan to ensure that this process is executed properly. The various methods and requirements will then be put together and this will form the quality management plan. The plan will be devised by the project team and will then be submitted to the Director of the NTRC who will then submit it to the chairman of the NTRC for final approval.

4.4.3Roles

The Project Manager, Sponsor and the project team will all play key roles in the plan quality management process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the plan is efficiently executed throughout the entire duration of the project. The table below defines the roles and responsibilities for plan quality management of this project.

<u>Name</u>	<u>Position</u>	<u>Role</u>	<u>Responsibilities</u>
Timothy Scott	Chairman of NTRC	Sponsor	Approval of the quality management plan
Apollo Knights	Director of NTRC		Review of the quality management plan
Kyron Duncan	USF Administrator	Project Manager	<p>Development of the quality management plan.</p> <p>Have project team meetings to assist in developing methods in quality management for the project.</p> <p>Using expert judgement in identifying best methodologies in the quality management process.</p>
Cyron Cyrus	USF Assistant	Project team member	<p>Assist with the development of the quality management plan.</p> <p>Have project team</p>

			<p>meetings to assist in developing methods in quality management for the project.</p> <p>Assist in using expert judgement in identifying best methodologies in the quality management process.</p>
Lizrene Charles	USF Assistant	Project team member	<p>Assist with the development of the quality management plan.</p> <p>Have project team meetings to assist in developing methods in quality management for the project.</p> <p>Assist in using expert judgement in identifying best methodologies in the quality management process.</p>
Andra Keizer	USF Assistant	Project team	Assist with the

		member	<p>development of the quality management plan.</p> <p>Have project team meetings to assist in developing methods in quality management for the project.</p> <p>Assist in using expert judgement in identifying best methodologies in the quality management process.</p>
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4.4.4 Tools and techniques

The tools which will be used are as follows for the plan quality management process;

- **Meetings** -The Project manager along with his project team will convene meetings with among themselves to compile the quality management plan
- **Expert Judgement** – the project team will use expert judgement when utilizing the project management plan and the risk register in the development of the quality management plan.

- **Benchmarking-** the project team which is managed by the project manager will compare actual practices to those of comparable projects which have been implemented in the past to identify best practices to generate ideas for improvement.

4.4.5 Output

The output for this process is that quality management plan. The quality management plan is a component of the project management plan that describes how the organization's quality policies will be implemented. It describes how the project management team plans to meet the quality requirements set for the project. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). This document will be approved by the chairman of the NTRC and will be used by the project team to successfully manage the quality with the project.

Quality Management Plan

Project:
Project Sponsor:
Start date:
Completion Date :

Perform Quality Assurance

<u>Process</u>
<u>Tools and Techniques</u>
<u>Outputs</u>

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Control Quality

Process

--

Tools and Techniques

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Outputs

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Approvals

This document requires the following approvals

Name	Role	Signature	Date	Version

Distribution

This document has been distributed to:

Name	Role	Date of Issue	Version

4.4.6 Perform Quality Assurance

Perform Quality Assurance is the process of auditing the quality requirements and the results from quality control measurements to ensure that appropriate quality standards and operational definitions are used. Project Management Institute. (2013). A guide to the

project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.4.7 Process

The project team which is managed by the project manager will ensure that the planned and identified processes are followed so that the project is completed in the manner and at a quality level expected by the sponsor and stakeholders. The project team will utilize quality audits to ensure that quality specifications are being adhered to in tangent with the quality management plan and the quality matrix to execute this task. From this process, change requests may be requested and approved or denied. In addition to this project documents will also be updated. The project team will review any change requests and these will be submitted to the Director of the NTRC for review and finally submitted to the chairman of the NTRC for approval. The project documents also will be prepared by the project steam and reviewed and approved by the Chairman of the NTRC.

4.4.8 Roles

The Project Manager, Sponsor and the project team will all play key roles in the perform quality management process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the perform quality assurance is executed throughout the entire duration of the project. The table below defines the roles and responsibilities for perform quality assurance process of this project.

<u>Name</u>	<u>Position</u>	<u>Role</u>	<u>Responsibilities</u>
Timothy Scott	Chairman of NTRC	Sponsor	Approval/ denial of change requests. Review and approval of project document updates

Apollo Knights	Director of NTRC		Review of change requests Review of project document updates
Kyron Duncan	USF Administrator	Project Manager	Perform analysis of change requests. Perform quality audits. Update project documents.
Cyron Cyrus	USF Assistant	Project team member	Assist in Performing analysis of change requests. Assist in Performing quality audits. Assist in Updating project documents.
Lizrene Charles	USF Assistant	Project team member	Assist in Performing analysis of change requests. Assist in Performing

			quality audits. Assist in Updating project documents.
Andra Keizer	USF Assistant	Project team member	Assist in Performing analysis of change requests. Assist in Performing quality audits. Assist in Updating project documents.

4.4.9 Tools and techniques

The tools which will be used are as follows for the perform quality assurance process;

- **Quality Audits** -The project team who is managed by the Project manager will ensure that the best practices are being followed. For those practices which are not being followed, steps will be taken to improve these. Good practices which are implemented will be shared with other organizations conducting other projects.

4.4.10Output

The output for this process are as follows;

- **Change Requests**- the project team will monitor the project and in the monitoring of the quality measures which have been put into place, changed may be requested and these changes will have to be reviewed and analysed and submitted to the Chairman of the NTRC for approval or denial. See Appendix 7.

- **Project Document updates** – the project team will update the quality audit reports based on the progress of the quality measures in place and their effectiveness throughout the project.

4.4.11 Control Quality

Control Quality is the process of monitoring and recording results of executing the quality activities to assess performance and recommend necessary changes Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. .

4.4.12 Process

The project team which is led by the project manager will physically go out and ensure that the quality assurance methods which have been identified are being implemented. The project management plan, Approved change requests, quality checks and deliverables will all be used by the project team via inspection and statistical sampling to ensure that this process is properly executed. From this process validated changes, changes request, verified deliverables and work performance information are all outputs which are to be reviewed and approved by the Chairman of the NTRC.

4.4.13 Roles

The Project Manager, Sponsor and the project team will all play key roles in the control quality management process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the control quality is executed throughout the entire duration of the project. The table below defines the roles and responsibilities for control quality process of this project.

<u>Name</u>	<u>Position</u>	<u>Role</u>	<u>Responsibilities</u>
Timothy Scott	Chairman of NTRC	Sponsor	Approval/ denial of change requests. Review and approval of project document updates. Review of validated changes
Apollo Knights	Director of NTRC		Review of change requests Review of project document updates Review of validated changes
Kyron Duncan	USF Administrator	Project Manager	Perform analysis of change requests. Verify the deliverables Update project documents. Update work performance

			information.
Cyron Cyrus	USF Assistant	Project team member	<p>Assist in Performing analysis of change requests.</p> <p>Assist in verifying deliverables.</p> <p>Assist in Updating project documents.</p> <p>Update work performance information</p>
Lizrene Charles	USF Assistant	Project team member	<p>Assist in Performing analysis of change requests.</p> <p>Assist in verifying deliverables.</p> <p>Assist in Updating project documents.</p> <p>Update work performance information</p>

Andra Keizer	USF Assistant	Project team member	Assist in Performing analysis of change requests. Assist in verifying deliverables. Assist in Updating project documents. Update work performance information
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4.4.14 Tools and techniques

The tools which will be used are as follows for the control quality process;

- **Inspection** -The project team who is managed by the Project manager will inspect all equipment and services to ensure that they confirm to the quality standards.
- **Statistical sampling**-Due to the nature of the schools project and the number of equipment and services necessary, all of the equipment will not be able to be inspected and as such the method of statistical sampling will be used to inspect the equipment and ensure that they confirm to the quality standards outlined.

4.4.15 Output

The output for this process are as follows;

- **Change Requests-** change requests may occur to ensure that preventative or corrective actions are taken to maintain or improve the quality standards identified. These change request must be approved by the chairman of the NTRC. See appendix 7.
- **Validated changes-** via the method of inspection, the project team will ensure that the changes approved are properly executed to maintain or improve the quality standards identified.
- **Verified Deliverables-** the deliverables under this process will be inspected to insure that they have been delivered. The project team is responsible for this process.
- **Work Performance information-** the project team will collect data from work being executed throughout the duration of the project.

The below table will be used to record the relevant data during the control quality phase.

ID	Component/Deliverable name	WBS code	Testing Type	Test Date	Test Status	Attachment

Deliverable	Typed Approved	Conform to requirement Yes/No	Test Result	Comments
NTRC Representative:				
Date:				

Schools Project**4.5 Human Resource Management Plan**

Project Human Resource Management includes the processes that organize, manage, and lead the project team. The project team is comprised of the people with assigned roles and responsibilities for completing the project. (PM BOK 5th Edition.)

Prepared by:

Reviewed By:

Approved By Project Sponsor:

Kyron Duncan

Apollo Knights:

Timothy Scott

USF Administrator

Director NTRC

Chairman

NTRC

NTRC

The four phases of the communication management plan are to identify, plan, manage and control the stakeholder process.

Process	Input	Tools	Output	Person Responsible
Plan Human Resource Management	<ul style="list-style-type: none"> • Project Management Plan • Activity Resource 	<ul style="list-style-type: none"> • Organizational Charts • Meetings • Expert Judgement 	<ul style="list-style-type: none"> • Human Resource Management Plan 	<ul style="list-style-type: none"> • Project Manager • Chairman of NTRC • Director
Acquire Project Team	<ul style="list-style-type: none"> • Human Resource Management Plan 	<ul style="list-style-type: none"> • Negotiation • Acquisition • Pre Assignment 	<ul style="list-style-type: none"> • Project Staff Assignments • Project Management Plan updates 	<ul style="list-style-type: none"> • Project Manager • Chairman of NTRC • Director
Develop Project Team	<ul style="list-style-type: none"> • Human Resource Management Plan • Project Staff Assignments 	<ul style="list-style-type: none"> • Interpersonal Skills • Training • Team Building Activities • Recognition and awards 	<ul style="list-style-type: none"> • Team Performance Assessments 	<ul style="list-style-type: none"> • Project Manager • Chairman of NTRC • Director
Manage Project Team	<ul style="list-style-type: none"> • Human Resource Management Plan • Project Staff Assignments 	<ul style="list-style-type: none"> • Observation and conversation • Interpersonal skills 	<ul style="list-style-type: none"> • Change requests • Project Management plan update • Project 	<ul style="list-style-type: none"> • Project Manager • Chairman of NTRC • Director

	<ul style="list-style-type: none"> s • Issue Log 	<ul style="list-style-type: none"> • Conflict Management 	<ul style="list-style-type: none"> documents updates 	
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4.5.1 Plan Human Resource Management

This is the process of identifying and documenting project roles, responsibilities, required skills, reporting relationships, and creating a staffing management plan. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa:

4.5.2 Process

The Project manager along with prospective project team members will utilize the project management plan and the activity resource requirements while utilizing expert judgement and organizational charts during meetings to derive the human resource management plan. This document will be reviewed by the Director of the NTRC and finally approved by the Chairman of the NTRC.

4.5.3 Roles

The Project Manager and Sponsor will play key roles in the plan human resource management process for this project. As such, they must be aware of their responsibilities in order to ensure that the human resource management plan is properly developed. The table below defines the roles and responsibilities for the identify stakeholder process of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approval of the Human Resource Management Plan.
Apollo Knights	Director of NTRC		Review of the Human Resource Management Plan
Kyron Duncan	USF Administrator	Project Manager	Development of the Human Resource Management Plan Have meetings with prospective project team members.
Cyron Cyrus	USF Assistant	Project team member	Assist with the development of the Human Resource Management Plan.
Lizrene Charles	USF Assistant	Project team member	Assist with the development of the Human Resource Management Plan.
Andra Keizer	USF Assistant	Project team	Assist with the development of the

		member	Human Resource Management Plan.
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4.5.4 Tools and Techniques

The tools which will be used are as follows for the completion of the identify stakeholder process;

- **Meetings** -The Project manager along with his prospective project team will convene meetings with among themselves to identify the best practices to be followed in the Human Resource Management Plan.
- **Expert Judgement** – the project team will use expert judgement when deciding the policies to implement and the manner in which they should be implemented for the Human Resource Management Plan.
- **Organizational Chart**-during the meetings held by the project team, the traditional organization chart structure will be used to show positions and relationships in a graphical, top-down format. See Appendix23

4.5.5 Output

The output of this process is the approved Human resource management plan which identifies provides guidance on how project human resources should be defined, staffed, managed, and eventually released. See Appendix 24-project team directory.

4.5.6 Acquire Project Team.

This is the process of confirming human resource availability and obtaining the team necessary to complete project activities. A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute .Project Management Institute. (2013).

4.5.7 Process

The Project manager along with the project team will utilize the human resource management plan while using the techniques such as negotiation, acquisition and pre assignment to come up with the team necessary for the implementation of this project. It will then be submitted to the Director and finally to the chairman for final approval.

4.5.8 Roles

The Project Manager, Sponsor and the project team will all play key roles in the acquire project team process. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the acquire project team is conducted properly. The table below defines the roles and responsibilities for the acquire project team process of this project.

Name	Position	Role	Responsibilities
St Clair Scott	Chairman of NTRC	Sponsor	Approval of Staff Assignments
Apollo Knights	Director of NTRC		Review of the staff assignments
Kyron Duncan	USF Administrator	Project Manager	Development of the staff assignments. Engage in negotiation Update Project management Plan

Cyron Cyrus	USF Assistant	Project team member	Assist with the development of the staff assignments Assist in project documents updates
Lizrene Charles	USF Assistant	Project team member	Assist with the development of the staff assignments Assist in project documents updates
Andra Keizer	USF Assistant	Project team member	Assist with the development of the staff assignments Assist in project documents updates

4.5.9 Tools and Techniques

The tools which will be used are as follows for the completion of the Acquire project team process;

- **Negotiation** -The Project manager along with his project team will convene meetings and meet with the necessary stakeholders to outline the importance of timely approvals of various documents.
- **Acquisition** – the project team will source the relevant human resources which will be able to execute the project. See Appendix 24
- **Pre Assignments**- the project team which is led by the project manager will ensure the necessary staff are pre assigned.

4.5.10 Output

The output of this process is project staff assignments which outlined the project team members assigned to the project. This will be submitted to the Director of the NTRC and then to the Chairman for final approval. See Appendix 23

4.5.11 Develop Project Team

This is the process of improving competencies, team member interaction, and overall team environment to enhance project performance. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.5.12 Process

For this process, the project team which is led by the project manager will utilize the human resource management plan and project staff assignments while using tools such as interpersonal skills, training, team building activities to increase the overall project performance. These tools such as training and team building activities will be used based on the needs identified.

4.5.13 Roles

The Project Manager, Sponsor and the project team will all play key roles in the develop project team process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the develop project team process is properly executed. The table below defines the roles and responsibilities.

Name	Position	Role	Responsibilities
St Clair Scott	Chairman of NTRC	Sponsor	<ul style="list-style-type: none"> • Approving training/team building activities/recognition and awards request • Approve team

			performance assessments
Apollo Knights	Director of NTRC		Review training/team building activities/recognition and awards request Review team performance assessments
Kyron Duncan	USF Administrator	Project Manager	Prepare training/team building activities/recognition and awards recommendations Prepare team performance assessments
Cyron Cyrus	USF Assistant	Project team member	Partake in team performance assessments Partake in training/team building activities
Lizrene Charles	USF Assistant	Project team member	Partake in team performance assessments Partake in training/team building activities
Andra Keizer	USF Assistant	Project team	Partake in team performance

		member	assessments Partake in training/team building activities
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4.5.14 Tools and Techniques

The tools which will be used are as follows for the completion of the develop team process

- **Interpersonal Skills-** The project management team which is led by the project manager will use “soft skills” when dealing with issues which will occur during the project.
- **Training-**the project manager along with his project team may undergo training to improve to gain the skills necessary for the successful implementation of this project.
- **Team Building Activities-** The project team which is led by the project manager will utilize team building activities such as a social off site where the relationship of the team can be strengthen.
- **Recognition and Rewards-** Part of the team development process involves recognizing and rewarding desirable behaviour among the team members. Noting this, stand out project team members will be rewarded.

4.5.15 Outputs

Team Performance assessment- the project management team makes formal or informal assessments of the project team’s effectiveness. Effective team development strategies

and activities are expected to increase the team's performance, which increases the likelihood of meeting project objectives. See appendix 27

4.5.16 Manage Project Team

This is the process of tracking team member performance, providing feedback, resolving issues, and managing team changes to optimize project performance. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.5.17 Process

The project manager will use the human resource management plan, project staff assignments and the issue log along with the tool of observation and conversation, conflict management and interpersonal skills to influence team behaviour, manages conflict, resolves issues, and appraises team member performance. The output from this process is change requests, project management plan updates and project document updates.

4.5.18 Roles

The Project Manager and Sponsor will all play key roles in the manage project team process for this project. As such, the project sponsor and project manager must be aware of their responsibilities in order to ensure that the manage project team process is effectively carried out. The table below defines the roles and responsibilities.

Name	Position	Role	Responsibilities
St. Clair Scott	Chairman of NTRC	Sponsor	Approve change

			<p>requests</p> <p>Review Project management plan update</p> <p>Review project documents updates</p>
Apollo Knights	Director of NTRC		<p>Review change request</p> <p>Review Project management plan update</p> <p>Review project documents updates</p>
Kyron Duncan	USF Administrator	Project Manager	<p>Analyse change request</p> <p>Utilize interpersonal skills</p> <p>Utilize Observation and conversation skills</p>
Cyron Cyrus	USF Assistant	Project team member	<p>Update project documents</p> <p>Update project management plan</p>
Lizrene Charles	USF Assistant	Project team member	<p>Update project documents</p> <p>Update project management plan</p>
Andra Keizer	USF Assistant	Project team member	<p>Update project documents</p> <p>Update project management plan</p>

			Update project documents
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4.5.19 Tools and Techniques

The tools which will be used for the completion of the manage project team process are as follows:

- **Observation and conversation** -The project manager will use this tool to stay in touch with the work and attitudes of project team members.
- **Interpersonal skills** – Project managers use a combination of technical, personal, and conceptual skills to analyse situations and interact appropriately with team members.
- **Conflict Management** - Conflict is inevitable in a project and the project manager will utilize this tool to minimise and eradicate conflict from this project.

4.5.20 Outputs

- **Change requests** -Change requests may be approved during the manage project team process which will result in changes to the project management plan or Human resource management plan. See Appendix 7.
- **Project documents updates**- Change requests may be approved during the manage project team process which will result in changes to the project staff assignments.
- **Project management plan updates**- Change requests may be approved during the manage project team process which will result in changes to the human resource management plan.

Schools Project

4.6 Communication Management Plan

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 Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa:

Prepared by:	Reviewed By:	Approved By Project Sponsor:
Kyron Duncan USF Administrator NTRC	Apollo Knights: Director NTRC	Timothy Scott Chairman NTRC

The three phases of the communication management plan are to plan, manage and control the communication process.

Process	Input	Tools	Output	Person Responsible
Plan communication Management	<ul style="list-style-type: none"> • Project Management Plan • Stakeholder register 	<ul style="list-style-type: none"> • Communication technologies • Meetings • Communication methods 	<ul style="list-style-type: none"> • Communication Management Plan 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Manage Communication	<ul style="list-style-type: none"> • Schedule Management Plan 	<ul style="list-style-type: none"> • Communication technology • Communication methods 	<ul style="list-style-type: none"> • Project communication • Project document 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC

	<ul style="list-style-type: none"> • Work Performance reports 		updates	<ul style="list-style-type: none"> • Director
Control communications	<ul style="list-style-type: none"> • Project Management Plan • Project communication • Work Performance data • Issue log 	<ul style="list-style-type: none"> • Expert Judgement • Meetings • Information management systems 	<ul style="list-style-type: none"> • Work performance information • Change requests 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director

4.6.1 Plan communication management

This is the process of developing an appropriate approach and plan for project communications based on stakeholder's information needs and requirements, and available organizational assets Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide).

4.6.2 Process

The project team which is led by the project manager will be developing the necessary procedure and approach to communicate with the various stakeholders for this project. This will be used to develop the communication management plan will be submitted to the Director of the NTRC and then submitted to the Chairman of the NTRC for final approval. The project management plan and the stakeholder register will be used in the development of the communication management plan.

4.6.3 Roles

The Project Manager, Sponsor and the project team will all play key roles in the plan communication management process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the communication management plan is efficiently executed throughout the entire duration of the project. The table below defines the roles and responsibilities for plan communication management of this project.

Name	Position	Role	Responsibilities
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Timothy Scott	Chairman of NTRC	Sponsor	Approval of the communication management plan
Apollo Knights	Director of NTRC		Review of the communication management plan
Kyron Duncan	USF Administrator	Project Manager	Development of the communication management plan Have project team meetings to assist in developing methods in identifying the various technologies and communication methods to be used to communicate with the various stakeholders.
Cyron Cyrus	USF Assistant	Project team member	Have project team meetings to assist in developing methods in identifying the various technologies and communication methods to be used to communicate with the various stakeholders. Assist in the Development of the communication management plan
Lizrene Charles	USF Assistant	Project team member	Have project team meetings to assist in developing methods

			<p>in identifying the various technologies and communication methods to be used to communicate with the various stakeholders.</p> <p>Assist in the Development of the communication management plan</p>
Andra Keizer	USF Assistant	Project team member	<p>Have project team meetings to assist in developing methods in identifying the various technologies and communication methods to be used to communicate with the various stakeholders.</p> <p>Assist in the Development of the communication management plan</p>

4.6.4 Tools and techniques

The tools which will be used are as follows for the plan communication management process;

- **Meetings** -The Project manager along with his project team will convene meetings to identify the most appropriate way to update and communicate information on the project to the various stakeholders.
- **Communication Technologies** – the project team which is managed by the project manager will decide on the necessary technologies to be used when communicating

to the various stakeholders. Properties such as ease of use, availability, sensitivity and confidentiality of the information, urgency of the information and the environment in which the project is will all be analysed in determining which technology is to be used.

- **Communication methods-** the project team which is led by the project manager will decide on the communications methods which will be utilized for this project. The project team will decide if the methodology will be push, pull or interactive communication.

4.6.5 Output

The output for this process is that communication management plan. The communications management plan is a component of the project management plan that describes how project communications will be planned, structured, monitored, and controlled. The plan contains the following information. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square. This document will be submitted to the Director of the NTRC and later to the chairman of the NTRC.

Quality Management Plan

Project:
Project Sponsor:
Start date:
Completion Date :

Perform Quality Assurance

<u>Process</u>
<u>Tools and Techniques</u>
<u>Outputs</u>

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Control Quality

Process

Tools and Techniques

Outputs

Approvals

This document requires the following approvals

Name	Role	Signature	Date	Version

Distribution

This document has been distributed to:

Name	Role	Date of Issue	Version

4.6.6 Manage Communications

This is the process of creating, collecting, distributing, storing, retrieving, and the ultimate disposition of project information in accordance to the communications management plan. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Communications technologies Project Management Institute. (2013). A guide to the project management

body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.6.7 Process

The project team which is led by the project manager will ensure that the correct information to be communicated is properly communicated. This will involve ensuring that the correct information is sent to the correct recipient and it is clearly send and understood. The information which is sent out will be copied to the Director and the chairman of the NTRC who will review the information and be aware of the various issues which are communicated to the stakeholders.

4.6.8 Roles

The Project Manager, Sponsor and the project team will all play key roles in the manage communication process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the manage communication process is efficiently executed throughout the entire duration of the project. The table below defines the roles and responsibilities for manage communication process of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Review communications Review project document updates and approve
Apollo Knights	Director of NTRC		Review communications Review project document updates and approve
Kyron Duncan	USF Administrator	Project Manager	Disseminate information to the various stakeholders in a clear manner. Ensure that the issue log and project

			<p>schedule are updated.</p> <p>Ensure that the information disseminated is properly received.</p>
Cyron Cyrus	USF Assistant	Project member team	<p>Assist with the Dissemination of information to the various stakeholders in a clear manner.</p> <p>Assist and ensure that the issue log and project schedule are updated.</p> <p>Assist to ensure that the information disseminated is properly received.</p>
Lizrene Charles	USF Assistant	Project member team	<p>Assist with the Dissemination of information to the various stakeholders in a clear manner.</p> <p>Assist and ensure that the issue log and project schedule are updated.</p> <p>Assist to ensure that the information disseminated is properly received.</p>
Andra Keizer	USF Assistant	Project member team	<p>Assist with the Dissemination of information to the various stakeholders</p>

			<p>in a clear manner.</p> <p>Assist and ensure that the issue log and project schedule are updated.</p> <p>Assist to ensure that the information disseminated is properly received.</p>
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4.6.9 Tools and techniques

The tools which will be used are as follows for the manage communication process;

- **Communication Technologies** – the project team which is managed by the project manager will decide on the necessary technologies to be used when communicating to the various stakeholders.
- **Communication methods-** the project team which is led by the project manager will decide on the communications methods which will be utilized for this project. The project team will decide which methodology is suited to ensure that the information is received.

4.6.10 Output

The output for this process are project communication and project document updates. The project management team will ensure that the communicating process takes place efficiently and that information is sent, received and understood. In addition to the process of communication taking place, project documents such as the issue log and schedule logs will be updated.

4.6.11 Control Communications

This is the process of monitoring and controlling communications throughout the entire project life cycle to ensure the information needs of the project stakeholders are met. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.6.12 Process

The project team which is led by the project manager will ensure an optimal information flow among all communication participants through the life of the project. The project team will utilize the project management plan, the issue log, issue log and project communication to ensure that the communication process is done as planned. From this process, work performance information is generated which is reviewed by the Director and the Chairman. Change requests can also be requested and the chairman is responsible for approving or denying these requests.

4.6.13 Roles

The Project Manager, Sponsor and the project team will all play key roles in the control communication process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the control communication process is efficiently executed throughout the entire duration of the project. The table below defines the roles and responsibilities for control communication process of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Review work performance information Approval or rejection of change requests
Apollo Knights	Director of NTRC		Review of work performance information Review of change requests
Kyron Duncan	USF Administrator	Project Manager	preparation of work performance information preparation of change requests analysis of change requests

Cyron Cyrus	USF Assistant	Project team member	<p>Assist with the preparation of work performance information</p> <p>Assist in the preparation of change requests</p> <p>Assist in the analysis of change requests</p>
Lizrene Charles	USF Assistant	Project team member	<p>Assist with the preparation of work performance information</p> <p>Assist in the preparation of change requests</p> <p>Assist in the analysis of change requests</p>
Andra Keizer	USF Assistant	Project team member	<p>Assist with the preparation of work performance information</p> <p>Assist in the preparation of change requests</p> <p>Assist in the analysis of change requests</p>

4.6.14 Tools and techniques

The tools which will be used are as follows for the Control communication process;

- **Expert Judgement** – the project team which is managed by the project manager will use expert judgement to judge the effectiveness of the communication management plan. The project team will analyse.

- **Meetings-** the project team which is led by the project manager will have regular schedules meetings to determine the best methodology in updating and communicating the project performance.
- **Information management system-** the project management team which is led by the project manager will use standard tools to capture, store and distribute information on the project to various stakeholders throughout the project. Software such as Microsoft project and Microsoft office will be used for this process.

4.6.15 Output

The output for this process are work performance information and change requests. The change requests will be approved by the chairman of the NTRC, reviewed by the Director of the NTRC and prepared by the project team. The work performance information will be prepared by the project team and reviewed by the Director and the Chairman. See appendix

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School Project

4.7 Project Risk Management Plan

A component of the project, program, or portfolio management plan that describes how risk management activities will be structured and performed PM BOK 5th Edition.

Prepared by:	Reviewed by:	Approved by Project Sponsor
Place,		
Kyron Duncan: USF Administrator NTRC	Apollo Knights Director of the NTRC	St. Clair Scott Chairman of the NTRC

The risk management process involves the plan risk management, identify risk, perform qualitative risk analysis, perform quantitative risk analysis, plan risk response and control risk processes.

Process	Input	Tools	Output	Person Responsible
Plan Risk Management	<ul style="list-style-type: none"> • Project Management Plan • Project Charter • Stake Holder Register 	<ul style="list-style-type: none"> • Meetings • Expert Judgement 	<ul style="list-style-type: none"> • Risk Management Plan 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director

Identify Risk	<ul style="list-style-type: none"> • Risk Management Plan • Scope baseline • Stake Holder Register • Quality Management plan • Schedule management plan 	<ul style="list-style-type: none"> • Expert judgement • SWOT analysis • Information gathering techniques 	<ul style="list-style-type: none"> • Risk Register 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Perform Qualitative risk Analysis	<ul style="list-style-type: none"> • Risk Management Plan • Scope baseline • Risk register 	<ul style="list-style-type: none"> • Expert Judgement • Risk Categorization 	<ul style="list-style-type: none"> • Project documents updates 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Plan Risk Responses	<ul style="list-style-type: none"> • Risk Management Plan • Risk Register 	<ul style="list-style-type: none"> • Expert Judgement • Strategies for negative risks • Strategies for positive risk 	<ul style="list-style-type: none"> • Project management plan update • Project documents update 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
	<ul style="list-style-type: none"> • Project 	<ul style="list-style-type: none"> • Meetings 	<ul style="list-style-type: none"> • Change 	<ul style="list-style-type: none"> • Project

Control Risk	Managem ent Plan <ul style="list-style-type: none"> • Risk Register 	<ul style="list-style-type: none"> • Risk audits • Variance and trend analysis 	Requests <ul style="list-style-type: none"> • Work performance information • Project document updates 	Team <ul style="list-style-type: none"> • Chairman of NTRC • Director
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4.7.1 Risk Management process

Plan Risk Management—The process of defining how to conduct risk management activities for a project. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.7.2 Process

The project team will be holding meetings to come up with a plan on how risks will be identified for this schools project. The risk management plan will be devised by the project team and will then be submitted to the Director of the NTRC who will then submit it to the chairman of the NTRC for final approval.

4.7.3 Roles

The Project Manager, Sponsor and the project team will all play key roles in the plan risk management process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the risk management plan is efficiently executed throughout the entire duration of the project. The table below defines the roles and responsibilities for plan risk management of this project.

Name	Position	Role	Responsibilities

Timothy Scott	Chairman of NTRC	Sponsor	Approval of the risk management plan
Apollo Knights	Director of NTRC		Review of the risk management plan
Kyron Duncan	USF Administrator	Project Manager	<p>Development of the risk management plan</p> <p>Have project team meetings to assist in developing methods in risk management for the project.</p> <p>Using expert judgement in identifying best methodologies in managing the risk managing process.</p>
Cyron Cyrus	USF Assistant	Project team member	<p>Assist with the development of the risk management plan.</p> <p>Have project team meetings to assist in developing methods in risk management for the project</p>
Lizrene Charles	USF Assistant	Project team member	<p>Assist with the development of the risk management plan.</p> <p>Have project team meetings to assist in developing methods in risk management</p>

			for the project
Andra Keizer	USF Assistant	Project member	team Assist with the development of the risk management plan. Have project team meetings to assist in developing methods in risk management for the project

4.7.4 Tools and techniques

The tools which will be used are as follows for the plan risk management process;

- **Meetings** -The Project manager along with his project team will convene meetings with among themselves and other entities within in the industry to get some feedback as to the best procedures to be used in the development of the risk management plan
- **Expert Judgement** – the project team will use expert judgement when utilizing the project management plan and the project charter and the stakeholder register in the development of the risk management plan. The project team will also utilize information received from the meetings held to ensure that the best practices are put into place in the development of the risk management plan.

4.7.5 Output

The output for this process is that risk management plan. The risk management plan is a component of the project management plan and describes how risk management activities will be structured and performed. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. . This document will be approved by the chairman of the NTRC and will be used by the project team to successfully manage the risks associated with the project.

Risk Management Plan

Project:
Project Sponsor:
Start date:

Completion Date :

Plan Risk Management

<u>Process</u>

<u>Tools and Techniques</u>

<u>Outputs</u>

Identify Risk

<u>Process</u>

<u>Tools and Techniques</u>

<u>Outputs</u>

Perform Qualitative risk Analysis

<u>Process</u>

<u>Tools and Techniques</u>

<u>Outputs</u>

Perform Quantitative Risk Analysis

<u>Process</u>
<u>Tools and Techniques</u>
<u>Outputs</u>

Plan Risk Responses

<u>Process</u>
<u>Tools and Techniques</u>
<u>Outputs</u>

Control Risk**Process****Tools and Techniques****Outputs****Approvals**

This document requires the following approvals

Name	Role	Signature	Date	Version

Distribution

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Name	Role	Date of Issue	Version

4.7.6 Identify Risks

Identify risk is the process of determining which risks may affect the project and documenting their characteristics. The key benefit of this process is the documentation of existing risks and the knowledge and ability it provides to the project team to anticipate events.(PMBK Fifth Edition)

4.7.7 Process.

The project management team headed by the project manager will hold meetings in an effort to devise the risk register. The project team members will use tools such as expert judgement in identifying which risks will impact the project and their characteristics will be identified. These risks will be gathered and grouped together and will then be submitted to the Director and then to the chairman for final approval.

4.7.8 Roles

The Project Manager, Sponsor and the project team will all play key roles in the risk management process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that risks are identified at all stages of the project and that the necessary procedures are in place to mitigate against the risks. The table below defines the roles and responsibilities for the risk management of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approval of the risk register
Apollo Knights	Director of NTRC		Review of the risk register Perform SWOT analysis
Kyron Duncan	USF Administrator	Project Manager	Development of the risk register Perform expert judgement. Perform SWOT analysis
Cyron Cyrus	USF Assistant	Project team member	Assist with the development of the risk register Perform SWOT analysis
Lizrene Charles	USF Assistant	Project team member	Assist with the development of the risk register Perform SWOT

			analysis
Andra Keizer	USF Assistant	Project team member	Assist with the development of the risk register. Perform SWOT analysis

4.7.9 Tools and techniques

The tools which will be used are as follows for the identify risks process;

- **SWOT Analysis** -The Project manager along with his project team will convene meetings with among themselves and other entities within in the industry to identify the strengths, weakness, opportunities and threats as it relates to the project and the organization. These will be documented and will assist in the development of the risk register.
- **Expert Judgement** – the project team will use expert judgement when utilizing the risk management plan, the scope baseline, quality management plan, schedule management plan and the stakeholder register in the development of the risk register. The project team will also utilize information received from the meetings held to ensure that the best practices are followed in the development of the risk register.
- **Information Gathering Techniques**- the project team which is led by the project manager will use information gathering techniques such as brainstorming to identify various risks which may impact the project. Interviews will also be conducted by the project team with other stakeholders to identify risks.

4.7.10 Output

The output for this process is that risk register. The risk register is a document in which the results of risk analysis and risk response planning are recorded. It contains the outcomes of the other risk management processes as they are conducted, resulting in an increase in the level and type of information contained in the risk register over time. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. . This document will be approved by the chairman of the NTRC and will be used by the project team to successfully manage the scope of the project. See appendix 6.

4.7.11 Perform Qualitative Risk Analysis

Perform Qualitative Risk Analysis is the process of prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide).

4.7.12 Process

The Project team which is managed by the project manager will decide on what risks are to be prioritized based primarily on expert judgement. The risk management plan, the scope baseline and the risk register will be utilized by the project team to identify and prioritize risks. From this the risk register will be updated and reviewed by the director of the NTRC and also reviewed by the Chairman of the NTRC.

4.7.13 Roles

The Project Manager, Sponsor and the project team will all play key roles in the perform qualitative risk assessment process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities. The table below defines the roles and responsibilities for the perform qualitative risk analysis of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Review of project document updates
Apollo Knights	Director of NTRC		Review of project document updates
Kyron Duncan	USF Administrator	Project Manager	Identifying and prioritizing risks Updating risk register
Cyron Cyrus	USF Assistant	Project team	Assist with the Identifying and

		member	prioritizing risks Updating risk register
Lizrene Charles	USF Assistant	Project team member	Assist with the Identifying and prioritizing risks Updating risk register
Andra Keizer	USF Assistant	Project team member	Assist with the Identifying and prioritizing risks Updating risk register

4.7.14 Tools and techniques

The tools which will be used are as follows for the completion of the perform qualitative risk analysis process;

- **Expert Judgement** – the project team will use expert judgement when utilizing the risk management plan, scope baseline and the risk register to prioritize risks throughout the duration of the project.
- **Risk Categorization-** the project team, with the use of the risk register will identify various risks to be grouped together which may cause similar impacts or are a part of the same process hence grouping the risk will ensure that better risk mitigating methods are identified as some risks may cause chain reaction.

4.7.15 Output

The output for this process is the updating of project documents. As the risks are categorized as stated in the tools and techniques section, the risk register may need to be updated as some risks are made redundant or additional risks are identified.

The probability impact scale is located in Annex 22.

4.7.16 Plan Risk Response

Plan Risk Responses is the process of developing options and actions to enhance opportunities and to reduce threats to project objectives. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.7.17 Process

The project management team which is led by the project manager will be reviewing the prioritized risks which have been identified and inserting activities and budget items to mitigate against the identified risks. These items will be submitted to the director of the NTRC and then to the chairman of the NTRC for final approval.

4.7.18 Roles

The Project Manager, Sponsor and the project team will all play key roles in the plan risk response process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities. The table below defines the roles and responsibilities for the plan risk response of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approve the risk mitigation methods
Apollo Knights	Director of NTRC		Review of risk mitigation methods
Kyron Duncan	USF Administrator	Project Manager	Identifying the risk mitigation methods Update project management plan

Cyron Cyrus	USF Assistant	Project team member	Identifying the risk mitigation methods Update project management plan
Lizrene Charles	USF Assistant	Project team member	Identifying the risk mitigation methods Update project management plan
Andra Keizer	USF Assistant	Project team member	Identifying the risk mitigation methods Update project management plan

4.7.19 Tools and techniques

The tools which will be used are as follows for the completion of the plan risk response process;

- **Expert Judgement** – the project team will use expert judgement to decide of the course of action for the opportunities or threats identified based on historical information.
- **Strategies for negative risks-** the project team which is headed by the project manager will devise strategies for negative risks or threats. These are either to mitigate, transfer, accept or reject the risk. The project management team will make a decision on each threat and decide on the requisite course of action.
- **Strategies for positive risk-** the project team which is headed by the project manager will devise strategies for negative risks or opportunities. These strategies are either to enhance, share, accept or to exploit the opportunity. The project management team will decide on the appropriate course of action for the various opportunities identified.

4.7.20 Output

The output for this process is the updating of project documents. As the risks are categorized as stated in the tools and techniques section, the risk register may need to be updated as some risks are made redundant or additional risks are identified.

4.7.21 Control Risk

Control Risks is the process of implementing risk response plans, tracking identified risks, monitoring residual risks, identifying new risks, and evaluating risk process effectiveness throughout the project. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.7.22 Process

This is where the actual work of all the risk planning comes into play. The project team which is managed by the project manager will execute the planned risk responses for the risks which have been identified and which occurs. Once done properly, all risks will be identified, categorized and measures to deal with the risks have already been identified and will have measures to be followed when they occur.

4.7.23 Roles

The Project Manager, Sponsor and the project team will all play key roles in the control risk process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities. The table below defines the roles and responsibilities for the control risk for this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approve change request Review work performance information

Apollo Knights	Director of NTRC		Review change request Review work performance information
Kyron Duncan	USF Administrator	Project Manager	Prepare change request analysis Prepare work performance information Update project documents
Cyron Cyrus	USF Assistant	Project team member	Assist in preparing the work performance information Assist in the analysis of change requests Assist in the updating of project documents
Lizrene Charles	USF Assistant	Project team member	Assist in preparing the work performance information Assist in the analysis of change requests Assist in the updating of project documents
Andra Keizer	USF Assistant	Project team member	Assist in preparing the work performance information

			Assist in the analysis of change requests Assist in the updating of project documents
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4.7.24 Tools and techniques

The tools which will be used are as follows for the completion of the plan risk response process;

- **Risk Audits** – the project team which is led by the project manager will analyse the effectiveness of the risk response and these will be documented.
- **Meetings-** the project team which is headed by the project manager will have regular schedule meetings to discuss the various risks which were identified and the effectiveness of the response
- **Variance and trend analysis-** the project team which is headed by the project manager will evaluate the planned results vs the actual results.

4.7.25 Output

The output for this process are the approved change requests based on the evaluation of the risks, the work performance information and project document updates. All of which will be sent to the director for review and to the chairman of the NTRC for final approval. See appendix 7.

4.7 Project Procurement Management Plan

4.8.1 Project Procurement Management Plan

Project Procurement Management includes the processes necessary to purchase or acquire products, services, or results needed from outside the project team. The organization can be either the buyer or seller of the products, services, or results of a project PM BOK Fifth Edition.

Revisions and Distribution

Revision	Release Date	Distributed to					
		Client	Consultant	All Project Management Department	Sub-contractors	Suppliers	
Rev 0 (draft)	March 1 2017						

Prepared by:	Reviewed by:	Approved by Project Sponsor
Place,		
Kyron Duncan: USF Administrator NTRC	Apollo Knights Director of the NTRC	Timothy Scott Chairman of the NTRC

4.8.2 Project Procurement Management Plan Approach

Project Procurement Management includes the processes necessary to purchase or acquire products, services, or results needed from outside the project team. The organization can be either the buyer or seller of the products, services, or results of a project PM BOK Fifth Edition.

Process	Input	Tools	Output	Person Responsible
Plan Procurement Management	<ul style="list-style-type: none"> • Project Management Plan • Risk Register • Project Schedule • Activity Cost Estimates • Stakeholder Register 	<ul style="list-style-type: none"> • Expert Judgement • Meetings • Market Research 	<ul style="list-style-type: none"> • Procurement Management Plan • Procurement Documents • Change Requests • Procurement Documents Updates 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Conduct Procurements	<ul style="list-style-type: none"> • Procurement Management Plan • Procurement Documents • Sellers proposals • Project Documents 	<ul style="list-style-type: none"> • Expert judgement • Proposal Evaluation Techniques • Bidder Conference • Advertising • Analytical Techniques • Procurement negotiations 	<ul style="list-style-type: none"> • Select Sellers • Agreements • Change Requests • Procurement Management plan updates • Project Documents updates 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director

		•		
Control Procurements	<ul style="list-style-type: none"> • Project Management Plan • Procurement Documents • Agreements • Approved Change requests 	<ul style="list-style-type: none"> • Contract Change Control System • Inspections and Audits • Payment Systems • Records Management System • Procurement performance reviews 	<ul style="list-style-type: none"> • Work Performance Information • Change Requests • Project Management plan updates • Project Document updates 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Close Procurements	<ul style="list-style-type: none"> • Project Management Plan • Procurement Document 	<ul style="list-style-type: none"> • Procurement Audits • Procurement negotiation 	<ul style="list-style-type: none"> • Closed Procurement 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director

4.8.3 Plan Procurement Management

Plan Procurement Management is the process of documenting project procurement decisions, specifying the approach, and identifying potential sellers. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.8.4 Process

The project team which is managed by the project manager will develop policies and strategies which will provide guidance and direction on how the procurement will be managed throughout the project. The project team will utilize meetings, market research and expert judgement in collaboration with the project management plan, the risk register, the project schedule, the activity cost estimates and the stakeholder register to come up with these policies. These policies will form the procurement management plan which will be sent to the Director of the NTRC to review and finally submitted to the chairman of the NTRC for final approval.

4.8.5 Roles

The Project Manager, Sponsor and the project team will all play key roles in the plan cost management process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the plan procurement management plan is efficiently executed throughout the entire duration of the project. The table below defines the roles and responsibilities for plan cost management of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approval of the Procurement management plan Approval Of Change Requests
Apollo Knights	Director of NTRC		Review of the Procurement management plan
Kyron Duncan	USF Administrator	Project Manager	Development of the Procurement management plan. Have project team meetings to assist in developing methods in Procurement management for the project. Using expert judgement in identifying best methodologies in procurement management. Assessing change requests.
Cyron Cyrus	USF Assistant	Project team	Assist with the

		member	<p>development of the Procurement management plan.</p> <p>Have project team meetings to assist in developing methods in procurement management for the project.</p> <p>Assist with the analysis of change request.</p> <p>Perform market research.</p> <p>Update procurement documents</p>
Lizrene Charles	USF Assistant	Project team member	<p>Assist with the development of the Procurement management plan.</p> <p>Have project team meetings to assist in developing methods in procurement management for the project.</p> <p>Assist with the analysis of change request.</p> <p>Perform market research.</p> <p>Update procurement documents.</p>
Andra Keizer	USF Assistant	Project team member	<p>Assist with the development of the Procurement management plan.</p>

			<p>Have project team meetings to assist in developing methods in procurement management for the project.</p> <p>Assist with the analysis of change request.</p> <p>Perform market research.</p> <p>Update procurement documents</p>
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4.8.6 Tools and techniques

The tools which will be used are as follows for the plan cost management process;

- **Meetings** -The Project manager along with his project team and the project sponsor will convene meetings with among themselves to develop the strategies which will be used to develop the procurement management plan.
- **Expert Judgement** – the project team will use expert judgement which they have gained from previous projects to assist in the development of the procurement management plan.
- **Market Research**- The Project manager along with his project team will conduct market research which will identify various vendors who may be able to provide the service and equipment necessary for this project. This information with the knowledge of existing and potential capabilities will be use to assist in the procurement plan.

4.8.7 Output

The output for this process are as follows;

- **That Procurement management plan.** The procurement management plan is a component of the project management plan that describes how a project team will acquire goods and services from outside the performing organization. It describes how the procurement processes will be managed from developing procurement documents through contract closure. A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). This document will be prepared by the project team, reviewed by the Director of the NTRC and approved by the Chairman of the NTRC once approved.

- **Procurement Documents-** Procurement documents are used to solicit proposals from prospective sellers. Terms such as bid, tender, or quotation are generally used when the seller selection decision will be based on price (as when buying commercial or standard items), while a term such as proposal is generally used when other considerations, such as technical capability or technical approach are paramount. A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. Project Management Institute. (2013). See Appendix 20 and 21
- **Change Request-** Change requests may be approved during the control scope process. This will result in changes to the scope baseline. The project team must be on hand to ensure that this process is monitored efficiently. See Appendix 7 for the change request process. See appendix 7.
- **Project Documents Updates-**the project documents which will be updated are the risk register and the requirements documentation.

4.8.8 Conduct Procurement

Conduct Procurements is the process of obtaining seller responses, selecting a seller, and awarding a contract. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.8.9 Process

The project team which is managed by the project manager will ensure that that the alignment of the internal and external stakeholder expectations through established agreements are done for the successful implementation of this project. The project team will use expert judgement, evaluation proposal techniques, bidder conference, advertising, analytical techniques and procurement negotiations. All of these tools will be utilized to ensure that a proposal is received, evaluated and a winner is selected to procure the services and equipment under this project. The output of this are the agreements, approved change requests, selected sellers, procurement management plan updates and project documents updates.

4.8.10 Roles

The Project Manager, Sponsor and the project team will all play key roles in the conduct procurements process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the conduct procurements process is efficiently executed throughout the entire duration of the project. The table below defines the roles and responsibilities for the conduct procurement process of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approval of agreements Approval of sellers Signing of agreements Approval or denying of change requests
Apollo Knights	Director of NTRC		Review of agreements Review of change requests
Kyron Duncan	USF Administrator	Project Manager	Development of the agreements Analysis of the change requests Conduct bidder conference Conduct proposal evaluation Procurement negotiation
Cyron Cyrus	USF Assistant	Project team member	Assist with the development of the agreements Assist in the analysis of change requests Assist in conducting of bidder conference Assist in conducting proposal evaluation Assist in the negotiation
Lizrene Charles	USF Assistant	Project team member	Assist with the development of the agreements.

			<p>Assist in the analysis of change requests Assist in conducting of bidder conference.</p> <p>Assist in conducting proposal evaluation.</p> <p>Assist in the negotiation.</p>
Andra Keizer	USF Assistant	Project team member	<p>Assist with the development of the agreements Assist in the analysis of change requests Assist in conducting of bidder conference Assist in conducting proposal evaluation Assist in the negotiation</p>

4.8.11 Tools and techniques

The tools which will be used are as follows for the estimate cost process;

- **Expert Judgement** – the project team will use expert judgement which they have gained from previous projects to assist in the development of the agreements and selection of the seller.
- **Proposal Evaluation Techniques-** The project team which is led by the project manager will utilize this tool in analysing the proposals which were submitted. This committee meeting will be held to select the winning proposal. Following this, the Project manager will submit a report which will be reviewed by the Director of the NTRC and finally approved by the Chairman of the NTRC.
- **Bidder Conference-** The project team which is managed by the project manager will meet with potential vendors who may be able to provide the services and equipment for this project. This meeting will ensure that all prospective bidders have a clear and common understanding of the procurement requirements.
- **Advertising-** the project team which is led by the project manager will advertise the request for proposals for this project in various Medias such as the newspapers and various websites.

- **Analytical Techniques-** the project team which is led by the project manager will examine and analyse the proposals submitted and determine a winner based on various criteria.
- **Procurement negotiations-** the project team which is led by the project manager will negotiate with the potential winning bidder on the terms of the contract agreement.

4.8.12 Output

The output for this process are as follows;

Select sellers- The selected sellers are those who have been judged to be in a competitive range based upon the outcome of the proposal or bid evaluation, and who have negotiated a draft contract that will become the actual contract when an award is made.

Agreements- A procurement agreement includes terms and conditions, and may incorporate other items that the buyer specifies regarding what the seller is to perform or provide. It is the project management team's responsibility to make certain that all agreements meet the specific needs of the project while adhering to organizational procurement policies. The Chairman will approve all agreements before any contract is signed. See appendix 21 for the draft agreement document.

Change Request- Change requests may be approved during the control scope process. This will result in changes to the scope baseline. The project team must be on hand to ensure that this process is monitored efficiently. See Appendix 7 for the change request process. See appendix 7.

Procurement Management Plan Update- The project team which is ran by the project manager will update the procurement management plan based on various agreed changes over the process of the entire project procurement phase. The cost baseline, the scope baseline, the schedule baseline and the communication management plan may be all updated.

Project Document updates- the project team which is led by the project manager will update the following documents. The requirements documentation, risk register and the stakeholder register.

4.8.13 Control Procurements

Control Procurements is the process of managing procurement relationships, monitoring contract performance, and making changes and corrections to contracts as appropriate. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.8.14 Process

The project team which is managed by the project manager will utilize tools such as contract change control system, inspections and audits, payment systems, records management systems and procurement performance reviews to ensure that both the buyer and seller meet their contractual obligation. The output of this process are as follows; Work Performance information, change requests and project management plan and project documents updates.

4.8.15 Roles

The Project Manager, Sponsor and the project team will all play key roles in the control procurement process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the control procurement process is efficiently executed throughout the entire duration of the project. The table below defines the roles and responsibilities for the control procurement process of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approval/Denial of change request. Review of project document updates. Approve payments.
Apollo Knights	Director of NTRC		Review of change request. Review of project documents updates.
Kyron Duncan	USF Administrator	Project Manager	Analyse change requests. Update project

			<p>documents.</p> <p>Perform inspection.</p> <p>Prepare payments which are contractually due.</p>
Cyron Cyrus	USF Assistant	Project team member	<p>Assist with the analysis of the change request.</p> <p>Assist with the updating of documents.</p> <p>Assist in performing inspections.</p> <p>Assist with the preparation of payments to contracted parties.</p>
Lizrene Charles	USF Assistant	Project team member	<p>Assist with the analysis of the change request.</p> <p>Assist with the updating of documents.</p> <p>Assist in performing inspections.</p> <p>Assist with the preparation of payments to contracted parties.</p>
Andra Keizer	USF Assistant	Project team member	<p>Assist with the analysis of the change request.</p> <p>Assist with the updating of documents.</p> <p>Assist in performing</p>

			inspections. Assist with the preparation of payments to contracted parties.
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4.8.16 Tools and techniques

The tools which will be used are as follows for the control procurement process;

- **Contract Change Control process**– the project team which is managed by the project manager will employ this system to execute a change in the contract.
- **Inspection and Audits**- the Project team which is led by the project manager will conduct inspections and audits during the execution of the project to verify compliance in the seller’s work processes or deliverables.
- **Payment Systems**- the project team which is led by the project manager will ensure that the payments to the seller for work done. The payment dates will be outlined in the contract and these dates will be met based on the work completed.
- **Records Management System**- A records management system is used by the project manager to manage contract and procurement documentation and records. Microsoft office, QuickBooks and a server where documents can be placed will be used to store and retrieve these information.
- **Procurement Performance Reviews**- the project team which is led by the project manager will ensure that there is a structured review of the seller’s progress to deliver project scope and quality, within cost and on schedule, as compared to the contract.

4.8.17 Output

The output for this process are as follows;

Work Performance Information- Work performance information provides a basis for identification of current or potential problems to support later claims or new procurements. By reporting on the performance of a vendor, the organization increases knowledge of the performance of the procurement, which supports improved forecasting, risk management, and decision making. Performance reports also assist in the event there is a dispute with the vendor.

Change Requests- Change requests may be approved during the control scope process. This will result in changes to the scope baseline. The project team must be on hand to ensure that this process is monitored efficiently. See Appendix 7 for the change request process. See appendix 7.

Project Management plan updates- The project team which is led by the project manager will ensure that the procurement management plan is updated which elements include the schedule baseline is updated and the cost baseline is updated throughout the duration of the project.

Project Document updates- The project team which is led by the project manager will ensure that the Project documents are updated which include, but are not limited to, procurement documentation.

4.8.18 Close Procurements

Close Procurements is the process of completing each procurement. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.8.19 Process

The project team which is managed by the project manager will oversee the entire project and ensure that the close procurements process is successfully conducted. The project team will utilize the project management plan and the procurement documents with the use of procurement audits, procurement negotiation and record management system to close out this project. The outputs from this process are closed procurements.

4.8.20 Roles

The Project Manager, Sponsor and the project team will all play key roles in the close procurement process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the close procurement process is efficiently throughout the entire duration of the project. The table below defines the roles and responsibilities for the close procurement process of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approval of contract negotiation
Apollo Knights	Director of NTRC		Review of the procurement negotiation
Kyron Duncan	USF Administrator	Project Manager	Perform procurement audits Perform

			procurement negotiation
Cyron Cyrus	USF Assistant	Project team member	Assist with the performing of procurement audits Assist with performing procurement negotiation.
Lizrene Charles	USF Assistant	Project team member	Assist with the performing of procurement audits Assist with performing procurement negotiation.
Andra Keizer	USF Assistant	Project team member	Assist with the performing of procurement audits Assist with performing procurement negotiation.

4.8.21 Tools and techniques

The tools which will be used are as follows for the control cost process;

- **Procurement Audits** – the project team which is managed by the project manager will identify success and failures that warrant recognition in the preparation or administration of other procurement contracts on the project or on other projects in the future.
- **Procurement negotiation-** the project team which is led by the project manager will ensure that all issues are settled by negotiation throughout the period of this project.

4.8.22 Output

The output for this process as follows.

- **Close Procurements-** The buyer, usually through its authorized procurement administrator, provides the seller with formal written notice that the contract has been completed. The project team which is led by the project manager will ensure that this is successfully completed.

Schools Project
4.9 Stakeholder Management Plan

The stakeholder management plan is a subsidiary plan of the project management plan that defines the processes, procedures, tools, and techniques to effectively engage stakeholders in project decisions and execution based on the analysis of their needs, interests, and potential impact (PM BOK 5th Edition.)

Prepared by:	Reviewed By:	Approved By Project Sponsor:
Kyron Duncan USF Administrator NTRC	Apollo Knights: Director NTRC	Timothy Scott Chairman NTRC

The four phases of the communication management plan are to identify, plan, manage and control the stakeholder process.

Process	Input	Tools	Output	Person Responsible
Identify Stakeholder Management	<ul style="list-style-type: none"> • Project charter • Procurement document 	<ul style="list-style-type: none"> • Stakeholder Analysis • Meetings • Expert Judgement 	<ul style="list-style-type: none"> • Stakeholder register 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director

Plan Stakeholder Management	<ul style="list-style-type: none"> • Project Management Plan • Stakeholder Register 	<ul style="list-style-type: none"> • Meetings • Expert Judgement • Analytical techniques 	<ul style="list-style-type: none"> • Stakeholder management plan 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Manage Stakeholder Engagement	<ul style="list-style-type: none"> • Stakeholder Management Plan • Communication Management Plan • Change Log 	<ul style="list-style-type: none"> • Communication methods • Interpersonal Skills 	<ul style="list-style-type: none"> • Issue Log • Change Request • Project Document updates 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director
Control Stakeholder engagement	<ul style="list-style-type: none"> • Project Management Plan • Issue log • Work performance data 	<ul style="list-style-type: none"> • Expert Judgement • Meetings • Information management systems 	<ul style="list-style-type: none"> • Change requests • Work performance information • Project documents updates 	<ul style="list-style-type: none"> • Project Team • Chairman of NTRC • Director

4.9.1 Identify Stakeholder

This is the process of identifying the people, groups, or organizations that could impact or be impacted by a decision, activity, or outcome of the project. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa:

4.9.2 Process

The Project manager along with the project team will utilize the project charter and other project documents to identify the stakeholders for the project. Meetings will be held by the project manager with his project team to execute this task and expert judgement and stakeholder analysis will be used to complete the stakeholder register. It will then be submitted to the Director for review and finally to the chairman for final approval.

4.9.3 Roles

The Project Manager, Sponsor and the project team will all play key roles in the identify stakeholder process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the requisite stakeholders are identified. The table below defines the roles and responsibilities for the identify stakeholder process of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approval of the stakeholder register
Apollo Knights	Director of NTRC		Review of the stakeholder register
Kyron Duncan	USF Administrator	Project Manager	Development of the stakeholder register Have meetings with project team to analyze project documents.
Cyron Cyrus	USF Assistant	Project team member	Assist with the development of the stakeholder register. Have meetings with project team to analyse project documents.
Lizrene Charles	USF Assistant	Project team member	Assist with the development of the stakeholder register. Have meetings with project team to analyse project documents.
Andra Keizer	USF Assistant	Project team member	Assist with the development of the stakeholder register. Have meetings with project team to

			analyse project documents.
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4.9.4 Tools and Techniques

The tools which will be used are as follows for the completion of the identify stakeholder process;

- **Meetings** -The Project manager along with his project team will convene meetings with among themselves to identify the various stakeholders under this project
- **Expert Judgement** – the project team will use expert judgement when utilizing the project charter in the development of the stakeholder register. The project team will also utilize information received from the meetings held to ensure that the best stakeholder register is developed.
- **Stakeholder analysis**-during the meetings held by the project team, they will identify the various needs and expectations of the various stakeholders under this project. See Appendix 26

4.9.5 Output

The output of this process is the approved stakeholder register which identifies all details related to the identified stakeholders. See appendix 17.

4.9.6 Plan Stakeholder Management.

This is the process of developing appropriate management strategies to effectively engage stakeholders throughout the project life cycle, based on the analysis of their needs, interests, and potential impact on project success Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute. .Project Management Institute. (2013).

4.9.7 Process

The Project manager along with the project team will utilize the project management plan and the stakeholder register to come up with strategies in efficiently and effectively managing the stakeholders under this project. These strategies will form the stakeholder management plan which will be devised by the project team using expert judgement, meetings and analysis to derive the information. Meetings will be held with the project team to execute this task and expert judgement and analytical techniques will be used to complete the stakeholder management plan. It will then be submitted to the Director and finally to the chairman for final approval.

4.9.8 Roles

The Project Manager, Sponsor and the project team will all play key roles in the development of the stakeholder management plan. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the stakeholders are properly managed. The table below defines the roles and responsibilities for the identify stakeholder process of this project.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approval of the stakeholder management plan
Apollo Knights	Director of NTRC		Review of the stakeholder management plan
Kyron Duncan	USF Administrator	Project Manager	Development of the stakeholder management plan. Have meetings with project team to analyse project documents.
Cyron Cyrus	USF Assistant	Project team member	Assist with the development of the stakeholder management plan. Have meetings with project team to analyse project documents.
Lizrene Charles	USF Assistant	Project team member	Assist with the development of the stakeholder management plan. Have meetings with project team to analyse project documents.
Andra Keizer	USF Assistant	Project team member	Assist with the development of the stakeholder management plan. Have meetings with

			project team to analyze project documents.
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4.9.9 Tools and Techniques

The tools which will be used are as follows for the completion of the identify stakeholder process;

- **Meetings** -The Project manager along with his project team will convene meetings with among themselves to identify how the stakeholders will be engaged.
- **Expert Judgement** – the project team will use expert judgement when utilizing the project management plan and the stakeholder register in coming up with the stakeholder management plan.
- **Analytical techniques**-the project team will analyze the engagement level of the stakeholders compared to the planed engagement. The project team will analyze and see if the planned interaction with the various stakeholders is what was planned and steps to improve the interaction if needed will be put in place to bring the stakeholder management up to what was planned.

4.9.10 Output

The output of this process is the stakeholder management plan. This plan identifies the management strategies which will be implemented to effectively engage stakeholders. The stakeholder management plan can be formal detailed document to ensure that the processes are clear to all the various stakeholders. This will be submitted to the Director of the NTRC and then to the Chairman for final approval.

Stakeholder management plan

Project:
Project Sponsor:
Start date:
Completion Date :

Identify Stakeholder management

<u>Process</u>

<u>Tools and Techniques</u>
<u>Outputs</u>

Plan Stakeholder management

<u>Process</u>
<u>Tools and Techniques</u>
<u>Outputs</u>

Manage Stakeholder Engagement

<u>Process</u>
<u>Tools and Techniques</u>
<u>Outputs</u>

Control Stakeholder engagement

<u>Process</u>
<u>Tools and Techniques</u>
<u>Outputs</u>

Approvals

This document requires the following approvals

Name	Role	Signature	Date	Version

Distribution

This document has been distributed to:

Name	Role	Date of Issue	Version

See appendix 17 for the stakeholder engagement

4.9.11 Manage Stakeholder Engagement

This is the process of communicating and working with stakeholders to meet their needs/expectations, address issues as they occur, and foster appropriate stakeholder engagement in project activities throughout the project life cycle. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.9.12 Process

For this process, the project team will be responsible for using various communications methods and interpersonal skills to manage the various stakeholders. This is where the project management team will ensure that all of the stakeholders are engaged.

4.9.13 Roles

The Project Manager, Sponsor and the project team will all play key roles in the manage stakeholder process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the manage stakeholder. The table below defines the roles and responsibilities.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	<ul style="list-style-type: none"> • Approving change requests • Review and approve issue logs
Apollo Knights	Director of NTRC		Review issue logs Review project documents updates Review change requests
Kyron Duncan	USF Administrator	Project Manager	Updating stakeholder register Communicating with stakeholders Updating issue log Analyzing changes requests
Cyron Cyrus	USF Assistant	Project team member	Updating stakeholder register

			Communicating with stakeholders Updating issue log Analyzing changes requests
Lizrene Charles	USF Assistant	Project member team	Updating stakeholder register Communicating with stakeholders Updating issue log Analyzing changes requests
Andra Keizer	USF Assistant	Project member team	Updating stakeholder register Communicating with stakeholders Updating issue log Analyzing changes requests

4.9.14 Tools and Techniques

The tools which will be used are as follows for the completion of the manage stakeholder process

- **Communication methods-** The project management team will be using various communication skills during this process. Based on the particular stakeholder, the project team will decide how, how frequent and where to interact with the various stakeholders.
- **Interpersonal Skills-**the project manager along with his project team will use interpersonal skills such as building trust, negotiation,

4.9.15 Outputs

Change requests- Change requests may be approved during the manage stakeholder process which will result in changes to the scope baseline and the project team must be on hand to ensure that this process is monitored efficiently and the requisite documents are updated. See appendix 7

Issue Log- issues which occur during the project will be formally documented in this document and will be communicated with the various stakeholders. See appendix 15

Project Document updates- project documents such as the stakeholder register will have to be updated from time to time during the course of the project.

4.9.16 Control Stakeholder Engagement

This is the process of monitoring overall project stakeholder relationships and adjusting strategies and plans for engaging stakeholders. Project Management Institute. (2013). A guide to the project management body of knowledge (PMBOK guide). Newtown Square, Pa: Project Management Institute.

4.9.17 Process

The project team will convene the necessary meetings and use expert judgement and information management systems to control stakeholder engagements. The project management plan, issue log and work performance data will be used so as to get the outputs of this process which are change requests, work performance information and project documents updates.

4.9.18 Roles

The Project Manager, Sponsor and the project team will all play key roles in the control stakeholder engagement process for this project. As such, the project sponsor, manager, the project manager and team members must be aware of their responsibilities in order to ensure that the control stakeholder engagement process is effectively carried out. The table below defines the roles and responsibilities.

Name	Position	Role	Responsibilities
Timothy Scott	Chairman of NTRC	Sponsor	Approve change requests Approve work performance reports
Apollo Knights	Director of NTRC		Review change request Review work

			performance reports
Kyron Duncan	USF Administrator	Project Manager	Analyze change request Prepare work performance reports Update project documents
Cyron Cyrus	USF Assistant	Project team member	Analyze change request Analyze change request Update project documents
Lizrene Charles	USF Assistant	Project team member	Analyze change request Analyze change request Update project documents
Andra Keizer	USF Assistant	Project team member	Analyze change request Analyze change request Update project documents

4.9.19 Tools and Techniques

The tools which will be used for the completion of the control stakeholder engagement process are as follows:

- **Meetings** -The project manager along with his project team will convene meetings with among themselves to ensure that the process is being carried out efficiently.
- **Expert Judgement** – the project team will use expert judgement when identifying new stakeholders and how they should be engaged. In addition to the identification of new stakeholders, old stakeholders also needs to be analysed to ensure that they are still relevant to the project.
- **Information Management system** -An information management system provides a standard tool for the project manager to capture, store, and distribute information to stakeholders. This will be in the form of programs such as Microsoft project, Microsoft office suite where information about the project cost, schedule progress, and performance will be stored. It also allows the project manager to consolidate reports from several systems and facilitate report distribution to the project stakeholders

4.9.20 Outputs

- **Change requests** -Change requests may be approved during the manage stakeholder process which will result in changes to the scope baseline and the project team must be on hand to ensure that this process is monitored efficiently. See Appendix 7.

- Work performance information-this information is prepared by the project team throughout the project and the information is communicated via various means to the various stakeholders to inform them of the status of the project.

- **Project documents updates**- Change requests may be approved during the control stakeholder engagement process which will result in changes to the scope baseline and the project team must be on hand to ensure that this process is monitored efficiently.

The communication plan template is located in Appendix 14;
Stakeholder engagement strategy is located in Appendix 26

CONCLUSIONS

The very first thing I must say is that anyone doing project management needs to have the necessary formal training in project management. As the Universal Service Fund Administrator at my organization, I am responsible for the implementation of projects of which I have successfully implemented seven over the past few years. I have done these projects with the necessary resources; however, this training has enlightened me on various aspects of project management which I was oblivious too. I have learnt the value of proper planning for every aspect of every project as outlined;

- **Scope Management.** The proper planning of the scope can affect every single aspect of the project. If this is not planned properly, issues of cost, time, quality, stakeholders and all of the other process groups will be affected. As such, the scope is very vital to the project success.
- **Time Management.** I have learnt that project time management is not as simple as just outlining the estimated time that a task will be completed by but plans to deal with all change request. Time management is critical and some of the theories outlined were not used by me in executing some of my previous projects. Planning every detail for this phase is very important.
- **Cost Management.** The techniques outlined in the cost management process were not new to me, however, they provide a detailed and concise way of developing a budget and controlling the budget under any project.
- **Quality management plan-** Before exploring this topic, I have never paid much attention to the issue of quality outside of the services and equipment to be installed. Quality management goes way beyond ensuring equipment and service are up to requirements. This topic has instilled in me the importance of I.S.O 's and the necessity for the proper quality planning.
- **Communication Management Plan.** The communication management process is a process, which we at the NTRC execute with all of our projects in the past. However, the issue of planning for this process and the issue of

distribution list and frequency of communication etc. was never fully done. As indicated previously, planning is necessary for projects to be managed properly.

- Risk Management- The NTRC normally tender out our projects and we don't do the work under our projects. This process was also used for this project and much of the risks are not ours. However, it was a very interesting topic as the tools and techniques outlined can be applied in everyday life when analysing risk and the methodologies to mitigate risks. It was one of my better courses as it forces you to think outside the box and to rely on historical data and information.
- Stakeholder Management- Stakeholder management, just like all of the knowledge areas, I never planned to the extent which was outlined in the topics. The planning from the task to the approval and execution and control of this knowledge area was never done in detail

In closing, I have a greater appreciation for project management professions with the extent of planning which goes into a project. I am glad for the opportunity to have this training, as it will assist in the implementation of projects in my country on a more efficient and effective schedule.

RECOMMENDATIONS

In the execution of projects, the knowledge areas specific to the project needs to be used for the successful completion of the project.

The project scope management process needs to be followed in order to develop the scope and other mechanisms to ensure that the scope is developed and the necessary planning is done.

The project time management process needs to be followed in order to properly schedule each event under the project and thus ensuring that the completion date for the project is not overshoot. Overshooting project deadlines may cause cost overrun and other harmful effects of projects.

Project cost management plan is needed in every project as there will always be cost for the implementation of anything. This is critical, as resources especially in these economic times are scarce. So the efficient use of funds is vital for sustainability but also in maximizing output.

Project Quality management is also another knowledge area which must be implemented as no matter the product, quality needs to be planned for and managed through out the project.

Project communication plan is needed to ensure that the communication process is effectively carried out .

Risk Management plan is needed to be executed to ensure that the risks for the project are identified and measures are identified to mitigate these risks.

Stakeholder management plan is needed to identify all stakeholders and identify how the stakeholder management will be undertaken.

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Project Management Institute. (2013). A Guide to the Project Management Body of Knowledge, (*PMBOK® Guide*) - Fifth Edition, Project Management Institute, Inc., 2013.

According to Singh G. (2013) .Information, Services and Systems, New Deli,India:Asoke.k

Research Methodologies: Methods and Techniques (Kothari.C.R) “Research methods refer to the behavior and instruments used in the selection and construction of research of research”

APPENDICES

Appendix 1: FGP Charter

PROJECT CHARTER	
Date	Project Name:
22 nd August 2016	Project Management Plan for the Implementation of an ICT Project
Knowledge Areas / Processes	Applicacion Area (Sector / Activity)
<p>Knowledge areas:</p> <ol style="list-style-type: none"> 1. Scope management 2. Time Management 3. Costs management 4. Quality management 5. Human Resource Management 6. Communications management 7. Risks management 8. Procurement Management Plan 9. Stakeholder Management <p>Process groups:</p> <ol style="list-style-type: none"> 1. Initiation 2. Planning 3. Monitoring and control 	Information Technology
Start date	Finish date
22 nd August 2016	October 25 th 2017
Project Objectives (general and specific)	
<p>General objective:</p> <ul style="list-style-type: none"> • To develop a Project Management Plan within the standards of the Project Management Institute for the installation of equipment and services at 25 schools in St. Vincent and the Grenadines to provide Wireless internet access. <p>Specific objectives:</p> <ul style="list-style-type: none"> • To develop a scope management plan which will document how the project scope will be defined, validated, and controlled. The Project management plan provides guidance and direction on how scope will be managed throughout the project. • To develop a time management plan which will outline the processes required to manage the timely completion of the project. • To develop cost management plan to ensure that the project is adequately budgeted for. The cost management plan will outline how project cost will be managed and 	

controlled. Includes the method used and the level of accuracy required to estimate activity cost

- To develop a quality management plan that will describes how the organization's quality policies will be implemented.
- To Develop a Human resource management Plan to manage the human resources of the project.
- To develop a communication management plan to ensure that effective communication takes place through out the project. The Communication management plan will provide guidance and information on managing stakeholder expectation; the information used includes.
- To develop a risk management plan which will provide guidance on how risk management will be carried on the project.
- To develop a procurement management plan to manage the procurement under this project
- To develop a stakeholder management plan which will provides guidance on how the various stakeholders can be best involved in the project.

There will not be a need for a procurement plan or resource management plan as the NTRC will not be implementing the ICT project directly. An external company will assume all of the risk of implementing the project as this aspect of the project will be tendered out. So there will be no need for the NTRC to have a resource nor procurement management plan.

Project purpose or justification (merit and expected results)

Projects which have been implemented previously were not implemented using the PMI regulations and as such suffered the following consequences;

1. Over Budget
2. Time over run
3. Poor quality
4. Poorly defined scope
5. Poor communication
6. Poor risk identification and mitigation
7. Poor stakeholder management

The expected results from the plan is that the project will be implemented in a professional manner using the tools, techniques and formal Project Management Institute procedures in executing projects.

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

deliverables

A project Management plan which will outline all of the necessary Project Management procedures in ensuring that an Information Communication Technology project implemented in St. Vincent and the Grenadines;

Assumptions

- All the information will be available from the organization being researched
- The seven knowledge areas identified are the only knowledge areas applicable to this project.
- Available communication with the tutor and the university and the students will be sufficient to complete the task of developing this plan.
- All of the software and templates are available for the FGP

Constraints

- Availability of time to develop the project management plan
- The integration of the various knowledge areas in the project management plan
- Non availability of previous project management plan for this program in English to follow to ensure that we are executing the project correctly

Preliminary risks

- Not including all of the process groups
- Not evaluating the process groups thoroughly and identifying all of the tools and techniques

Budget

No financial resources needed

Milestones and dates

Milestone	Start date	End date
Prepare a FGP Project Charter	August 21 st 2016	August 28 th 2016
Prepare the FGP WBS	August 21 st 2016	August 28 th 2016
Introduction to FGP	August 29 th 2016	September 4 th 2016

Relevant historical information		

The National Telecommunications Regulatory Commission (NTRC) was officially established in 2001 to coordinate an effective telecommunications regulatory regime to enhance the operation of telecommunications in the interest of the sustainable development of Saint Vincent and the Grenadines but came into effect by the passing of the Telecommunications Act (CAP 418) of the Revised Laws of St. Vincent and the Grenadines of 2009. Saint Vincent and the Grenadines is also a signatory to the Treaty establishing the Eastern Caribbean Telecommunications Authority (ECTEL) which was signed in St. George's, Grenada on May 4, 2000 to promote open competition in telecommunications, to harmonize policies on a regional level for telecommunications, and to provide for a universal service, fair pricing and the use of cost-based pricing methods by telecommunications providers.

The functions of the NTRC include the following;

- To be responsible for technical regulation and the setting of technical standards of telecommunications and ensure compatibility with standards of the International Telecommunications Union (ITU);
- To plan, supervise, regulate and manage the use of the radio frequency spectrum in conjunction with ECTEL including the assignment and registration of radio frequencies to be used by all stations operating in SVG or on any ship, aircraft, vessel, or other floating or airborne contrivance or spacecraft registered in SVG;
- To collect all fees prescribed and any other charges levied under the Telecommunications Act or regulations;
- To receive and review applications for licences under the telecommunications act;
- To monitor and ensure that licencees comply with the conditions attached to their licences and to any written law;
- To investigate and resolve any dispute relating to interconnections or sharing of infrastructure between telecommunications providers;
- To monitor anti-competitive practices in the telecommunications sector;
- To regulate prices for telecommunications services.
- To Manage the Universal Service Fund

What is the Universal Service Fund?

The USF is a fund to be used by the NTRC, to compensate any telecommunications provider

who is required to provide or promote Universal Service.

Universal Service includes the provision of:

- Public voice telephony
- Internet access
- Telecommunications services to schools, hospitals, similar institutions and the physically challenged
- Other services by which people access efficient, affordable and modern telecommunications

The Fund will encourage efficient access to and use of telecommunications networks and services throughout St. Vincent and the Grenadines; with special focus on rural, under-served and maritime areas, and with the goal to help promote social, educational and economic development.

The Fund will also ensure the reasonable availability and affordability of basic and advanced telecommunications services, where the commercial telecommunications market is unable to deliver such services in a financially viable manner independently; and also to the physically challenged, elderly and indigent communities.

The Fund will also provide support for the introduction and expansion of telecommunications services to schools, health facilities and other organizations serving public needs.

The National Telecommunications Regulatory Commission, through the use of the Universal Service Fund (USF) has implemented a total of five (5) projects since being operational in 2009 values at over E.C \$11,714,100.00 or U.S \$4,311,568.33.

These projects include the following:

Internet Project

The first project undertaken by the USF in St. Vincent and the Grenadines was called the Internet Project and was signed with LIME for a total of Four Hundred and Twenty Seven Thousand, Six Hundred and Eight Dollars and Ninety Eight Cents (\$427,608.98). It saw twenty-eight (28) rural locations outfitted with wireless internal and external internet access points with minimum speeds of 8Mbps. These locations included twelve (12) Learning Resource Centers (LRCs), The project provides internet access in various communities 24 hours a day 7 days a week. The learning resource centers acts as a free internet access point in the various communities which persons can go and access the internet at any time.

Payphone Project

In the survey conducted in 2009, individuals complained about the fact that there is not public facility to make calls in the event that one does not have sufficient credit or because of the fact that someone may not have a cellular phone on them at the time and want to make a call. Additionally visitors to our shores may not have a cellular service and may need a call. As such. This project was developed and a contract was signed with telecommunications provider LIME in 2011 for a total of One Million, Four Hundred Thousand, Five Hundred and Seventy

Five Dollars and Forty Five Cents (\$1,400,575.45). This project has seen twenty-five (25) payphones installed at various locations including tourism sites, beaches, and at points along the main road. At twelve of the twenty five sites a payphone was installed and wireless internet access is available and the equipment is being monitored with overt vandal proof cameras to facilitate 24 hour video surveillance for the equipment. Additionally, four frequented beaches in St. Vincent beaches were outfitted with a payphone. Finally, nine rural areas along the country's highway were outfitted with a payphone only. This was done to ensure that persons who need to make a call can do so at any time.

Maritime Project

The third project which is the VHF Maritime Project saw the installation of a GMDSS system which provides access to both emergency and non-emergency communications in the Exclusive Economic Zone (EEZ) of St. Vincent and the Grenadines.

GMDSS stands for Global Maritime Distress and Safety System and it is a set of safety procedures, types of equipment and communication protocols used to increase safety and make it easier to rescue distressed ships, boats and even aircrafts. GMDSS provides for distress alerts, distress relays, search and rescue, on scene communication and location services. This system is mandatory for all ships subject to the Safety of Life At Sea (SOLAS) convention of 1974. The basic concept of this system is that the Coast Guard as well as vessels in the immediate area of a ship in distress will be rapidly alerted to the emergency so that they can assist with minimum delay time.

Under the VHF system which was previously in place here in St Vincent, information from vessels in distress were manually relayed to the Coast Guard Base at Calliaqua and this methodology was not the most efficient way of communicating in an emergency situation. Additionally, the automated DSC (Digital Selective Calling) calls cannot be received by any station.

Digital Selective Calling is one of the most important aspects of this GMDSS system and is a standard for sending pre-defined digital message via the pressing of one button. Noting this fact, the NTRC identified and implemented this project to improve the VHF maritime coverage around the country.

This project was done jointly with the NTRC and ECTEL. The Commission via ECTEL was able to secure part funding for the project via a grant made available by the World Bank in the amount of Two Hundred Thousand United States Dollars (USD \$200,000.00). The contract for this project, as it relates to the capital cost, was signed on December 20, 2011 for a total of One Million, One Hundred and Twenty Five Thousand, and Seven Hundred and Eighty One Dollars (\$1,125,781.00). The funds from the World Bank were used to purchase the equipment under this project. Additionally, a separate contract for the maintenance of the equipment for this project, for a period of five years, was signed with Cable & Wireless (SVG) Ltd. for a total of Four Hundred and Forty Four Thousand Nine Hundred and Thirty Two Dollars (\$444,932.00). The implementation of this GMDSS system has enabled St Vincent and the Grenadines to be called a Sea Area A1 which is a first for this region and this must be applauded. The International Maritime Organization whose primary purpose is to develop and

maintain a comprehensive regulatory framework for shipping and maritime security outlined that Jamaica is the only country in the region that plans to implement such a system. This A 1 area generally has a coverage area of up to 30 nautical miles from the coast station and during the commissioning of this project, the necessary tests were done to ensure the requisite coverage is present. With this project, Under the GMDSS, all distress and safety communication will be automated and at the press of a button, a ship can send its identity, GPS position and nature of distress by either satellite or terrestrial communication.

Police and Health Centre Project

The fourth project is the Police and Health Centre Project which provides wireless internet access at all twenty-nine (29) Police Stations and forty-two (42) Health Centers throughout St. Vincent and the Grenadines at a minimum speed of 8Mbps. The cost for this project is Seven Hundred and Eleven Thousand and Fifteen Dollars (\$711,015.00) and was implemented by Karib Cable for a period of two years. Thirty one (31) computers were also installed at various clinics and fourteen (14) computers were installed at the Milton Cato Memorial Hospital. The Police Training School was also outfitted with ten (10) computers to assist the recruits and other officers in their research work. All police stations now have the ability to communicate digitally with each other. Additionally, the various hospitals and clinics now have the ability to communicate with each other through the Health Information System which links all clinics to a server and the internet connection at each clinic provides the ability for them to communicate.

Community Center Project



The fifth project implemented is the Community Centre Project and this provides wireless internet access at fourteen (14) Community Centers in various communities throughout St. Vincent and the Grenadines at a minimum speed of 8Mbps. The contract for this project was signed in 2012 with Karib Cable. The cost for this project is One Hundred and Nineteen Thousand, Five Hundred and Three Dollars and Twenty Nine cents (\$119,503.29) and has been implemented for a period of two years. Under this project, the newly established Salvation Army Children's Home was also outfitted with six (6) computers and internet access to assist in the development of ICT skills of the children who will be at the home. All residents from the various communities where these project sites are located have access to the wireless internet 24/7.

All the above projects outlines the vast experience that the NTRC and its staff have in the implementation of multi-faceted projects with various regional and international stakeholders including ECTEL and the World Bank.

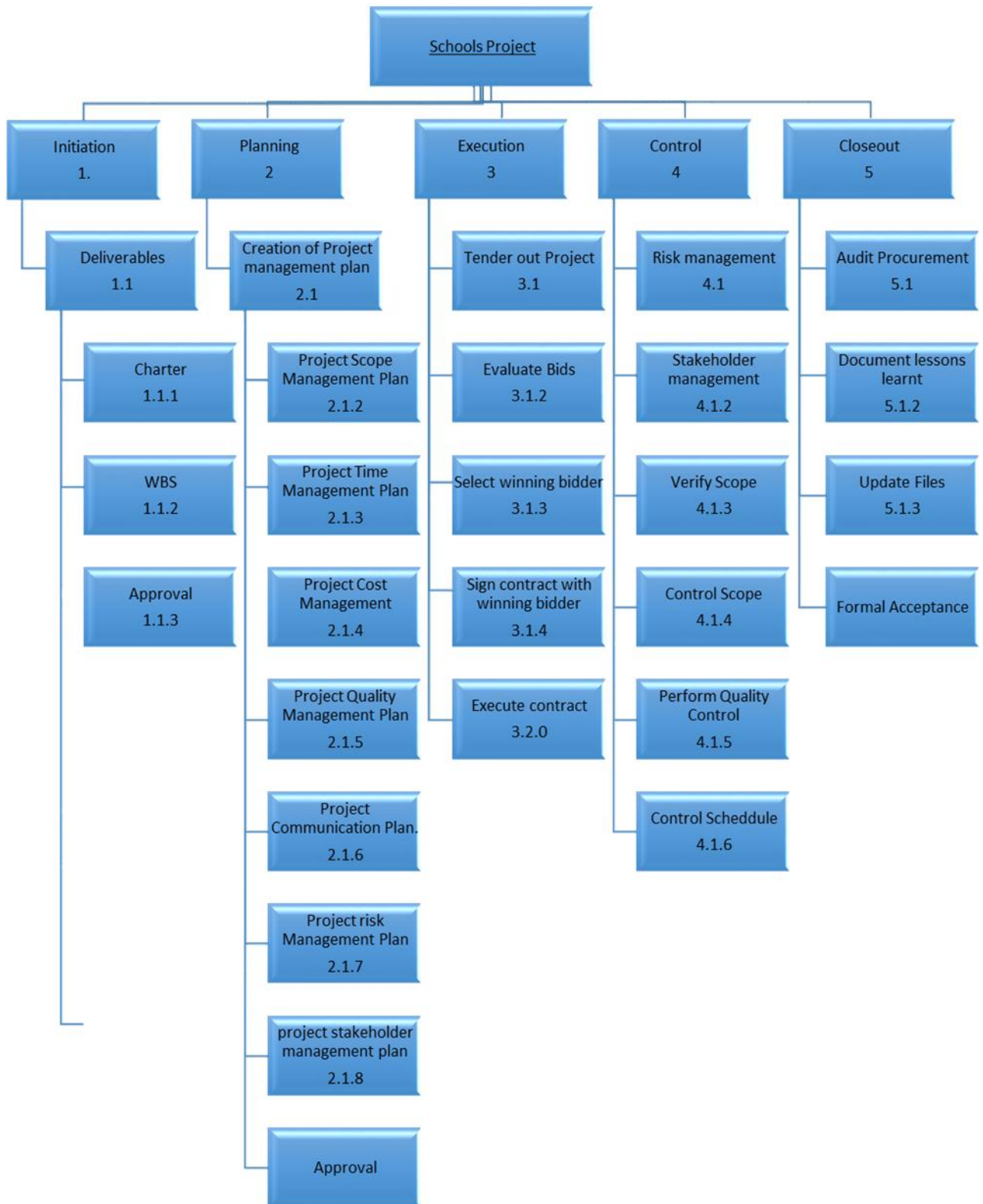
Stakeholders

Direct stakeholders:

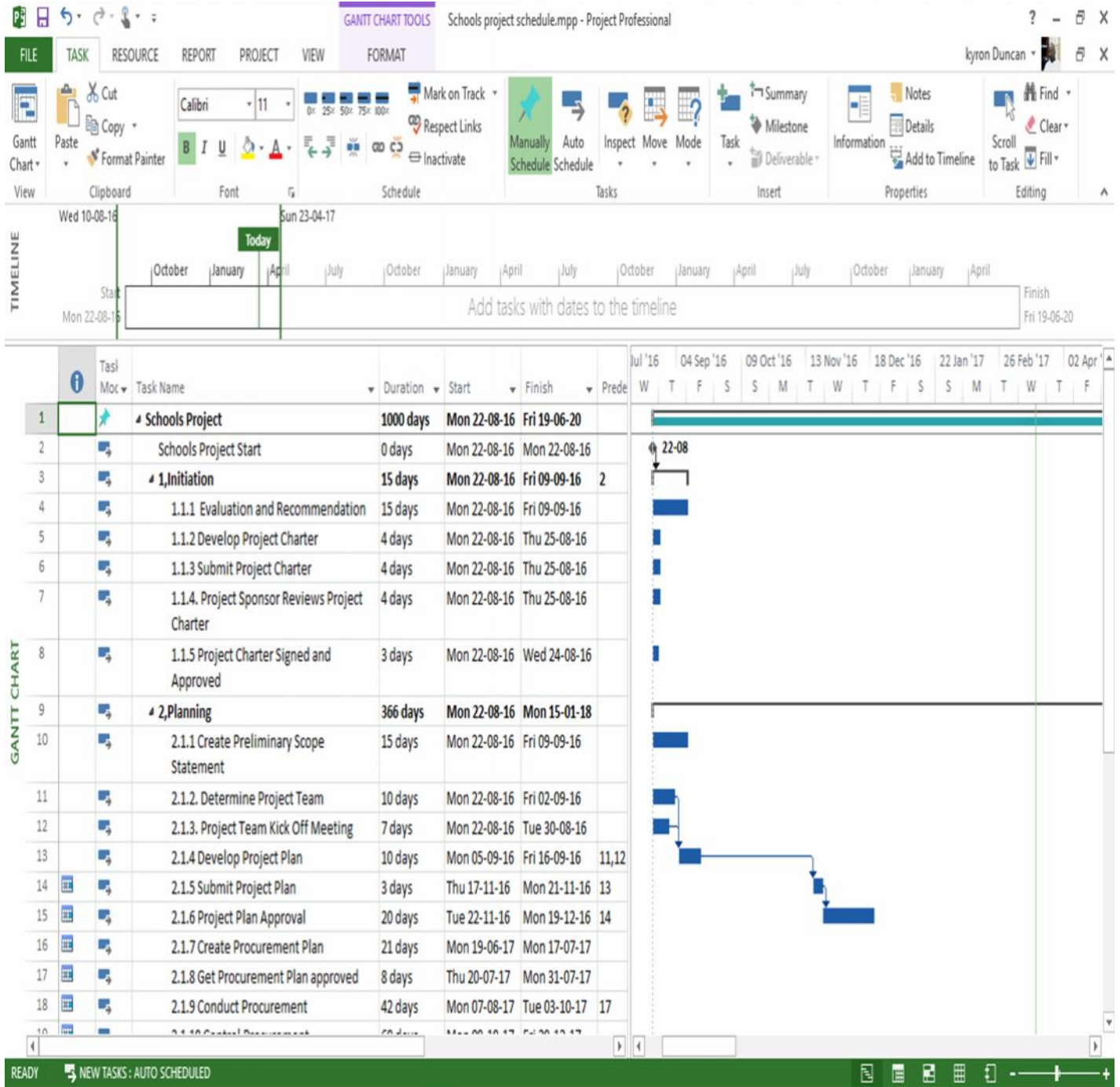
1. The Board Members of The National Telecommunications Regulatory Commission

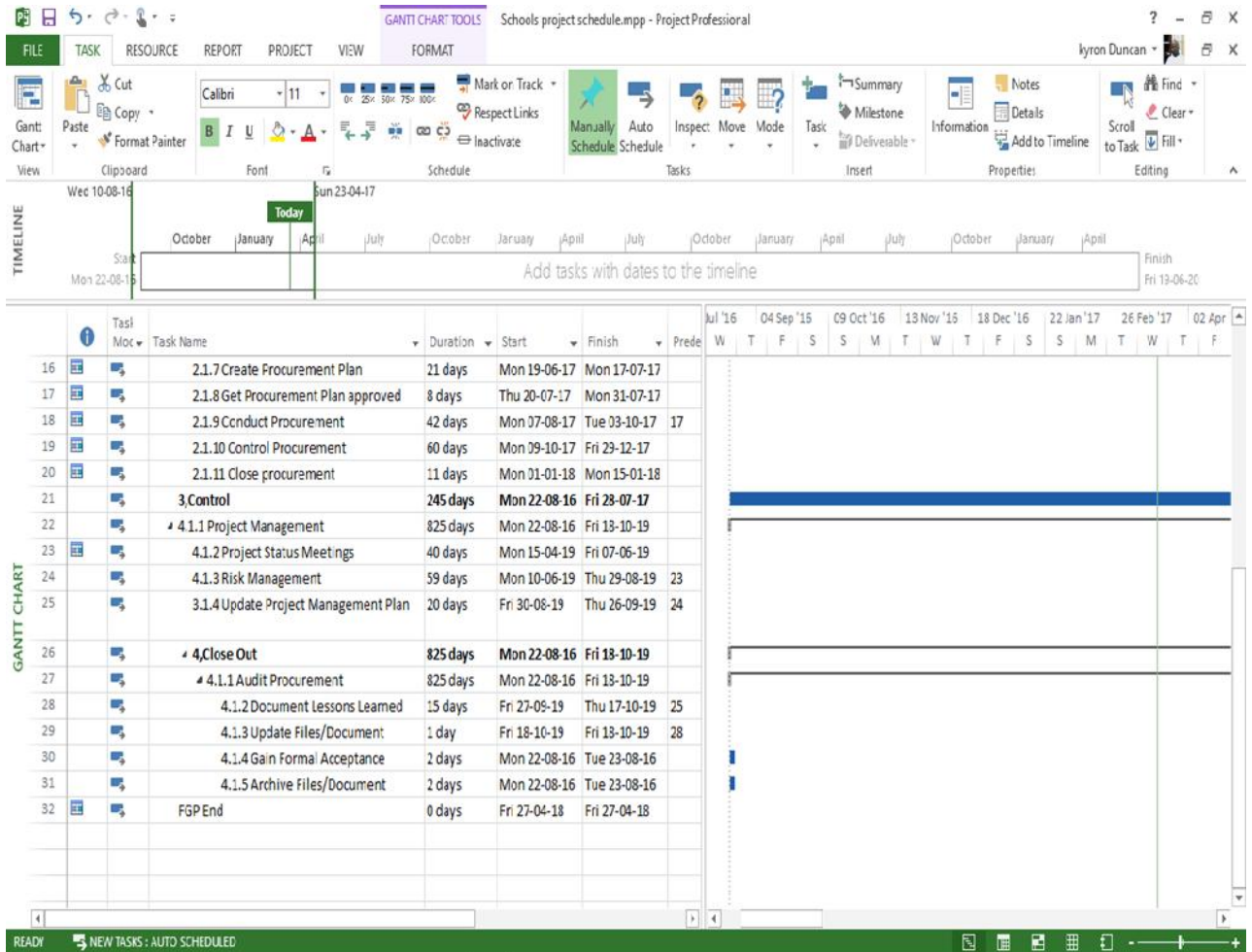
2. The Tutor of the FGP seminar	
Project Manager: Kyron Kemuel Ekion Duncan	Signature: 
Authorized by: Johan Alemán Rojas	Signature: 

Appendix 2: FGP WBS



Appendix 3: FGP Schedule





Appendix 4: WBS Dictionary

<u>Level</u>	<u>WBS Code</u>	<u>WBS Code</u>	<u>Definition</u>
1	1	Schools project	All work to implement in the schools project.
2	1.1	Initiation	The work to initiate the project.
3	1.1.2	Develop Project Charter	Project Manager to develop the Project Charter.
3	1.1.5	Project Charter Signed/Approved	The Chairman of the NTRC signs the Project Charter which authorizes the Project Manager to move to the Planning Process.
2	1.2	Planning	The work for the planning process for the project.
3	1.2.1	Create project Management Plan	Project Manager creates a Project Management Plan.
		Creation of scope management Plan	Project Manager creates a Scope Management Plan.
		Creation of time management Plan	Project Manager creates a Time Management Plan.
		Creation of cost management Plan	Project Manager creates a cost Management Plan.
		Creation of quality management Plan	Project Manager creates a quality Management Plan.
		Creation of communication management Plan	Project Manager creates a communication Management Plan.
		Creation of risk management Plan	Project Manager creates a Scope Management Plan.
		Creation of stakeholder management Plan	Project Manager creates a stakeholder Management Plan.
		Approval	The Project Manager submits the Project Management Plan for approval from the Chairman of the NTRC.
3	1.2.2	Execution	The process in ensuring that the work on the schools project is carried out.
		Tender out Project	The NTRC will be tendering out a contract for the procurement, installation and maintenance of the services and equipment under the Schools project.
		Evaluate Bids	The NTRC will be evaluating project proposals submitted by entities for the execution of the project.
		Select Winning Bidder	The NTRC will be selecting a winning bidder based on the proposals submitted. This winning bidder

			will be responsible for the procurement, installation and maintenance of the equipment and services under the schools project.
		Sign contract with winning bidder	The NTRC will sign a contract with winning bidder for the purchase, installation and maintenance of equipment and services under this project.
		Execute Contract	The terms of the contract will be executed.
2	1.4	Control	The work involved for the control process of the project.
3	1.4.3	Risk Management	Risk management efforts as defined in the Risk Management Plan.
		Stakeholder Management	Stakeholder management efforts as defined in the stakeholder Management Plan.
		Verify Scope	Verifying the works are conducted according to the scope.
		Control Scope	The process of monitoring the status of the project and product scope and managing changes to the scope baseline.
		Perform Quality Control	The process of performing quality checks on the services and equipment.
		Control Schedule	The process of monitoring the status of project activities to update project progress and manage changes to the schedule baseline to achieve the plan
2	1.5	Closeout	The work to close-out the project.
3	1.5.1	Audit Procurement	An audit of all hardware and software procured for the project, ensures that all procured products are accounted for and in the asset management system.
3	1.5.2	Document Lessons Learned	Project Manager along with the project team performs a lessons learned meeting and documents the lessons learned for the project.
3	1.5.3	Update Files/Records	All files and records are updated to reflect the widget management system.
3	1.5.4	Gain Formal Acceptance	The Project Sponsor formally accepts the project by signing the acceptance document included in the project plan.

Appendix 5: Requirement Traceability Matrix

Requirements Traceability Matrix					
Project Name					
Deliverable	Business Need/Opportunity	Project Objective	WBS Deliverables	Priority	Testing
Pole for access point	Need	Yes	Yes	High	No
Enclosure for the housing of cables	Need	Yes	Yes	High	Yes
External Access Point	Need	Yes	Yes	High	Yes
100 Mbps Download and 20 Mbps Upload internet connection	Need	Yes	Yes	High	Yes

Appendix 6: Template for acceptance of Deliverables

	<u>National Telecommunication Regulatory Commission</u>		
	<u>Schools Project</u>		
	<u>Implementation Check Sheet</u>		
	<u>Location: SION HILL GOVERNMENT SCHOOL</u>		
<u>Quantity</u>	<u>Equipment</u>	<u>In place and operational</u>	<u>Comments</u>
	-	-	-
<u>1</u>	<u>pole for access point to be mounted</u>	-	
<u>1</u>	<u>Enclosure for the housing of cables, cords and modems.</u>	-	
	-	-	-
<u>1</u>	<u>External Wireless Access Point;</u>	-	
	<u>Specification: Meraki MR66</u>	-	
	<u>Outdoor Access Point</u>	-	
	<u>WAP with injector and mounting Kit</u>	-	
	-	-	-
	<u>Services</u>	-	-
	-	-	
<u>1</u>	<u>100 Mbps Download speed internet connection</u>	-	
<u>1</u>	<u>20 Mbps upload speed</u>	-	
<u>1</u>	<u>painted pole</u>	-	
	-	-	-
	-	-	-
	<u>Verified by:</u>		
	<u>Winning</u>	<u>Bidder</u>	
	<u>Representative:</u>		<u>Date:</u>
	<u>NTRC</u>		
	<u>Representative:</u>		<u>Date:</u>

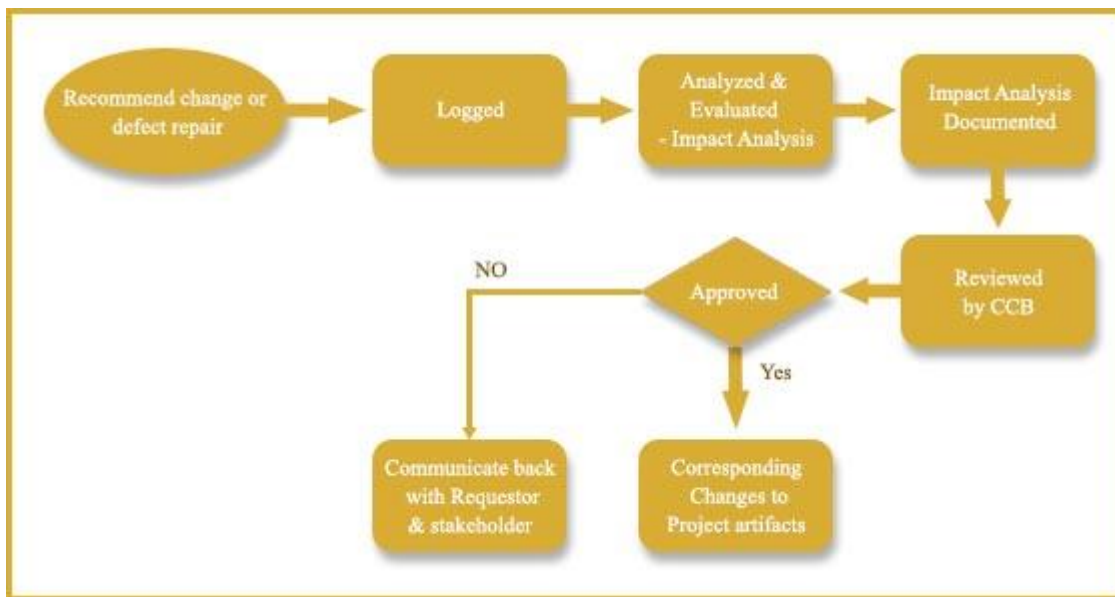
Appendix 7: Change Control Process

Request form

Project Change Request			
Project Name		Change Number	
Requested by		Date Of Request	
Presented to			
Change Name			
Description Of Change			
Reason For Change			
Effect on Deliverables			
Effect on Organization			
Effect on Schedule			
Effect on Project Cost			
Item Description		Hours	Dollars
		<u>Reduction</u> <u>Increase</u>	<u>Reduction</u> <u>Increase</u>
Analysis			
Approved <input type="checkbox"/>			

Rejected ■			
Approved/Rejected by:			

Change control Process;



The diagram above outlines the simple change control process.

Whenever a change request is received, suggested, or identified, it needs to be logged in the Change log of the Project, Irrespective of the size of the change or the impact of the change, each change need to be logged in the change log.

Project manager alone cannot do the impact analysis, inputs from the project team and if required, from stakeholders are needed. In impact analysis, the impact of the proposed change is analysed on all project constraints like on scope, schedule, quality, risk, cost or any other project dimension. This is a very important step in integrated change control as impact analysis will be considered as input for the Change request's approval or rejection.

Once the impact analysis done, it is provided to Board of the NTRC along with change request for the decision of Approval/Postponed/Rejection. In several organizations, authority to take decision on change request lies with Project Manager also, depending on the level/impact of change. And if the impact of change is bigger than that, change request goes to NTRC Board for further decision. A point to remember here – Before Change request is reviewed by the CCB; Impact analysis must have done by the project team as it is the input to NTRC Board for taking decision on change request. Once the Board takes the decision, it needs to be registered in the change log.

If Change request gets approved, the work related to change request becomes part of the project and all related project documents, plans and baselines got updated. For these updates impact analysis is referred to get the information what all need to be reviewed/updated.

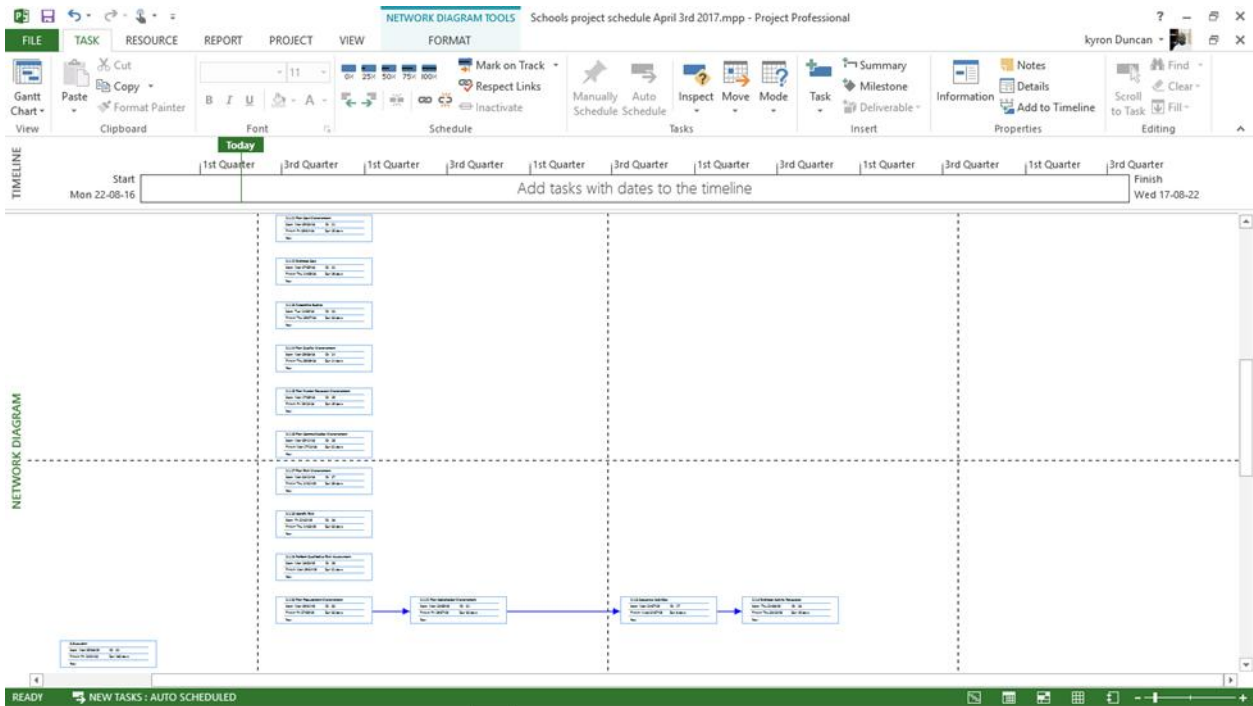
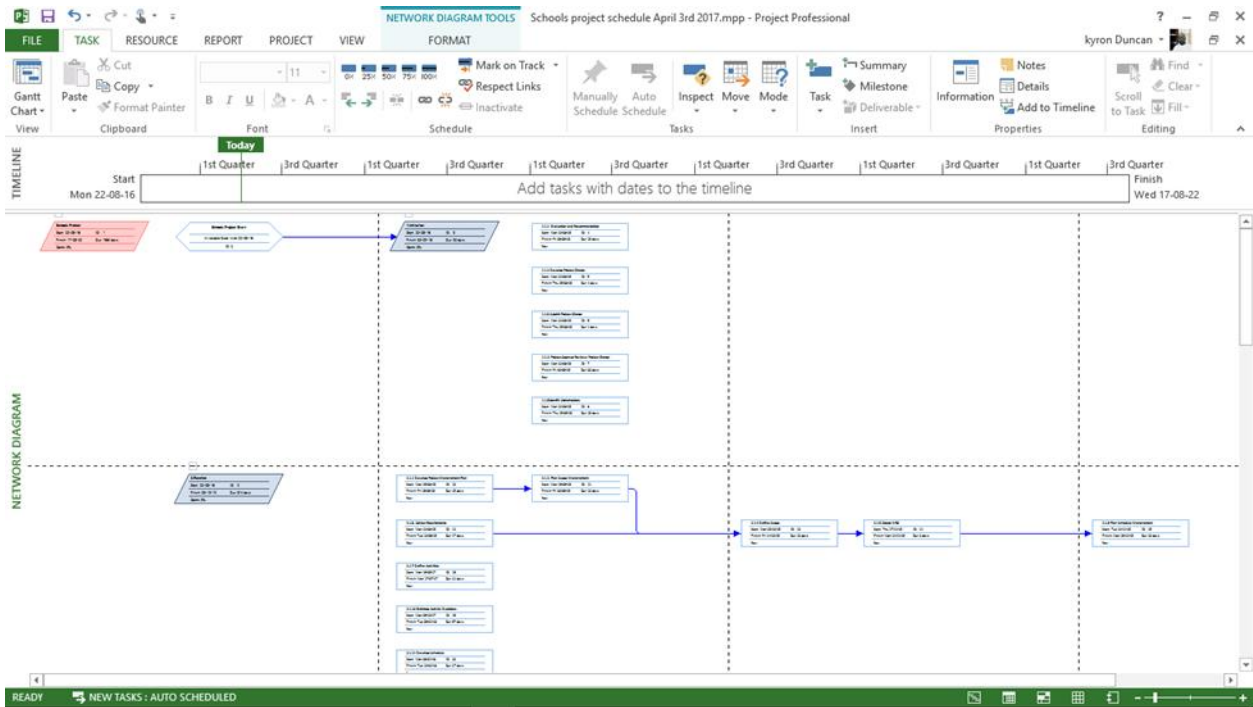
If Change request gets Rejected or Postponed, the communication is sent to requestor / stakeholder with the reasons of rejection or postponed.

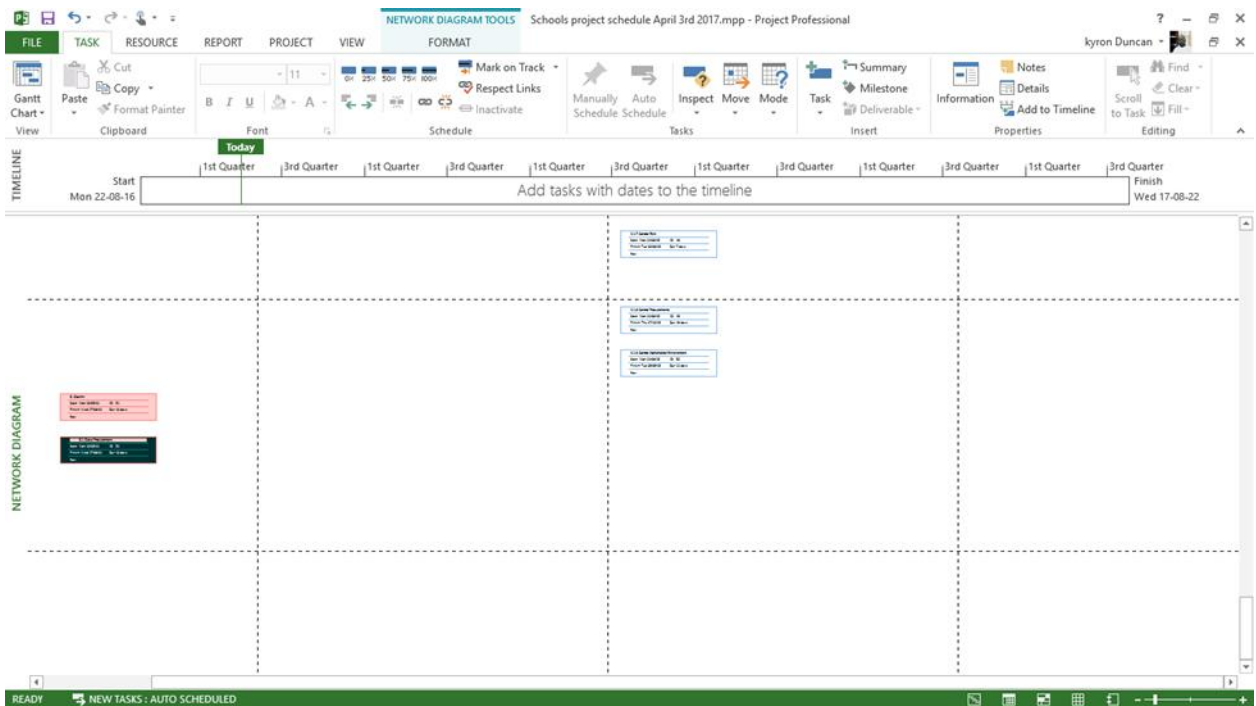
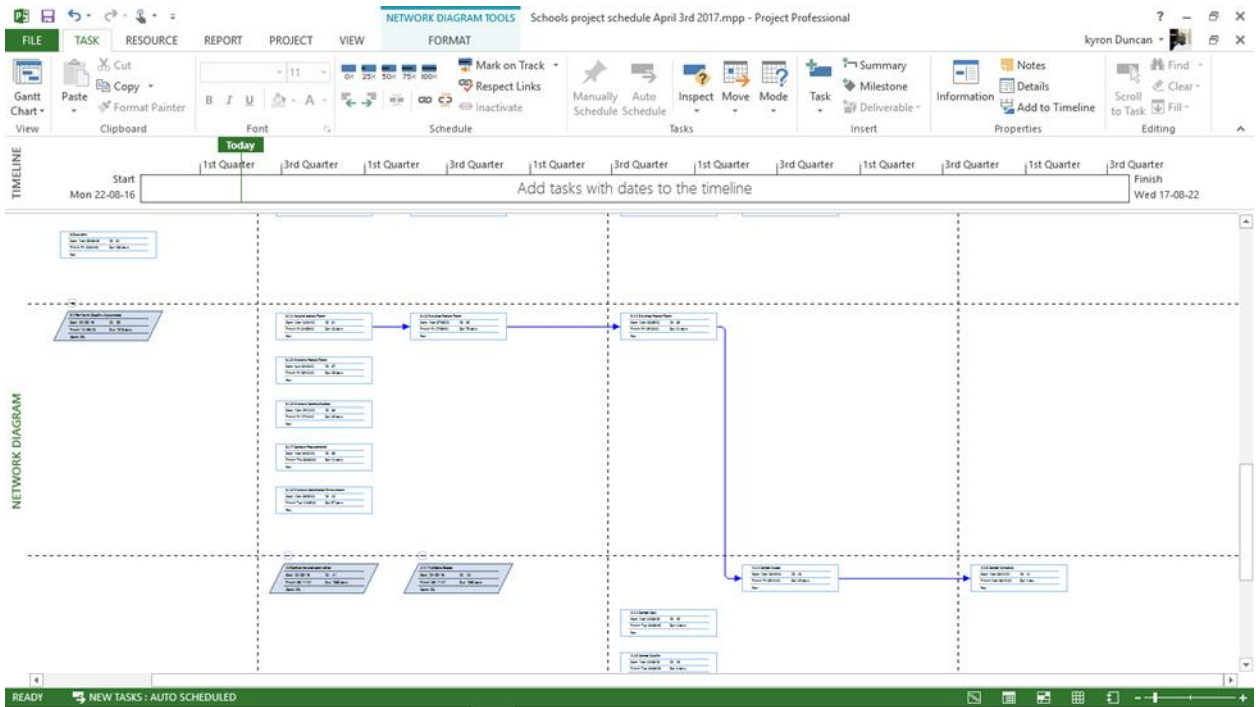
Appendix 8: Activity list

	Task Name
	Schools Project
	Schools Project Start
1,Initiation	Initiation
1.1.1	Evaluation and Recommendation
1.1.2	Develop Project Charter
1.1.3	Submit Project Charter
1.1.4	Project Sponsor Reviews Project Charter
1.1.5	Identify Stakeholders
2,Planning	Planning
2.1.1	Develop Project Management Plan
2.1.2.	Plan Scope Management
2.1.3.	Collect Requirements
2.1.4	Define Scope
2.1.5	Create WBS
2.1.6	Plan Schedule Management
2.1.7	Define Activities
2.1.8	Sequence Activities
2.1.9	Estimate Activity Resources
2.1.10	Estimate Activity Durations
2.1.11	Develop Schedule
2.1.11	Plan Cost Management
2.1.12	Estimate Cost
2.1.13	Determine Budget
2.1.14	Plan Quality Management
2.1.15	Plan Human Resource Management
2.1.16	Plan Communication Management
2.1.17	Plan Risk Management
2.1.18	Identify Risk
2.1.19	Perform Qualitative Risk Assessment
2.1.20	Plan Procurement Management
2.1.21	Plan Stakeholder Management
3,Executing	Executing
3.1	Perform Quality Assurance
3.1.2	Acquire project Team
3.1.3	Develop Project Team
3.1.4	Develop Project Team
3.1.5	Manage Project Team
3.1.6	Manage Communication
3.1.7	Conduct Procurements
3.1.8	Manage Stakeholder Engagement

4,	Monitoring and controlling
4.1.1	Validate Scope
4.1.2	Control Scope
4.1.3	Control Schedule
4.1.4	Control Cost
4.1.5	Control Quality
4.1.6	Control Communication
4.1.7	Control Risk
4.1.8	Control Procurements
4.1.9	Control Stakeholder Engagement
5.	Closing
5.1	Close Procurement

Appendix 9: Project Schedule Network Diagram





Appendix 10: Activity Resource Requirements

Task Name	Resources required	Quantity	Skills	Duration
Develop Project Charter	Human resource	4	Project Management certification	15 days
Submit Project Charter	This task require 1 individual who will be the project manager.	1	Bsc in Project Management	4 days
Project Sponsor Reviews Project Charter	This task will require one individual who will be the Director of the NTRC	1	Management and decision making skills	3
Project Charter Signed and Approved	This task will require one individual who is the sponsor and this will be the chairman of the NTRC	1	Management and decision making skills	1
Create Preliminary Scope Statement	This task require a project team of four project team members one who will be the project manager.	4	Bsc in Project Management Project Management skills	15 days
Determine Project Team	This task will require 4 individuals	4	Management and decision making skills	10 days
Project Team Kick Off Meeting	This task will require 4 individuals	4	Management and decision making skills	7
Develop Project Plan	This task will require 4 individuals	4	Bsc in Project Management Project Management skills and	10

			certification	
Submit Project Plan	This task require 1 individual who will be the project manager.	1	Bsc in Project Management	3
Project Plan Approval	This task will require one individual who is the sponsor and this will be the chairman of the NTRC.	1	Management and decision making skills	10 days
Project Management	This task will require four team members inclusive of the project manager.	4	Bsc in Project Management Project Management skills and certification	200 days
Project Status Meetings	This task will require four team members inclusive of the project manager.	4	Bsc in Project Management Project Management skills and certification	40 days
Risk Management	This task will require four team members inclusive of the project manager.	4	Bsc in Project Management Project Management skills and certification	20 days
Update Project Management Plan	This task will require four team members inclusive of the project manager.	4	Bsc in Project Management Project Management skills and certification	20 days
Audit Procurement	This task will require four team members inclusive of the project manager.	4	Bsc in Project Management Project Management skills and certification	16 days

Document Lessons Learned	This task will require four team members inclusive of the project manager.	4	Bsc in Project Management Project Management skills and certification	15 days
Update Files/Document	This task will require four team members inclusive of the project manager.	4	Bsc in Project Management Project Management skills and certification	14 days
Gain Formal Acceptance	This activity will require two individuals one being the sponsor.	2	Bsc in Project Management Project Management skills and certification	1 days
Archive Files/Document	This task will require one individual.	1	Bsc in Project Management Project Management skills and certification	1 days

Appendix 11: Activity list Duration

Task Name	Duration
-----------	----------

Schools Project	
Schools Project Start	Duration
Initiation	0 days
Evaluation and Recommendation	30 days
Develop Project Charter	15 days
Submit Project Charter	4 days
Project Sponsor Reviews Project Charter	4 days
Identify Stakeholders	30 days
Planning	19 days
Develop Project Management Plan	814 days
Plan Scope Management	15 days
Collect Requirements	10 days
Define Scope	17 days
Create WBS	10 days
Plan Schedule Management	3 days
Define Activities	20 days
Sequence Activities	21 days
Estimate Activity Resources	8 days
Estimate Activity Durations	46 days
Develop Schedule	67 days
Plan Cost Management	27 days
Estimate Cost	25 days
Determine Budget	29 days
Plan Quality Management	33 days
Plan Human Resource Management	24 days
Plan Communication Management	25 days
Plan Risk Management	31 days
Identify Risk	39 days
Perform Qualitative Risk Assessment	30 days
Plan Procurement Management	31 days
Plan Stakeholder Management	30 days
Executing	30 days
Perform Quality Assurance	180 days
Acquire project Team	1362 days
Develop Project Team	40 days
Develop Project Team	75 days
Manage Project Team	21 days
Manage Communication	26 days
Conduct Procurements	25 days
Manage Stakeholder Engagement	44 days

Monitoring and controlling	57 days
Validate Scope	592 days
Control Scope	742 days
Control Schedule	15 days
Control Cost	1 day
Control Quality	2 days
Control Communication	2 days
Control Risk	14 days
Control Procurements	7 days
Control Stakeholder Engagement	49 days
Closing	12 days
Close Procurement	43 days

Appendix 12: Activity Cost Estimates;

Project: Schools Project
Project Sponsor:
Start date:
Completion Date :

Task Name	Cost
Schools Project	
Schools Project Start	
Initiation	

Evaluation and Recommendation	
Develop Project Charter	
Submit Project Charter	
Project Sponsor Reviews Project Charter	
Identify Stakeholders	
Planning	
Develop Project Management Plan	
Plan Scope Management	
Collect Requirements	
Define Scope	
Create WBS	
Plan Schedule Management	
Define Activities	
Sequence Activities	
Estimate Activity Resources	
Estimate Activity Durations	
Develop Schedule	
Plan Cost Management	
Estimate Cost	
Determine Budget	
Plan Quality Management	
Plan Human Resource Management	
Plan Communication Management	
Plan Risk Management	
Identify Risk	
Perform Qualitative Risk Assessment	
Plan Procurement Management	
Plan Stakeholder Management	
Executing	
Perform Quality Assurance	
Acquire project Team	\$300,000,00
Develop Project Team	\$13,34,7.17
Develop Project Team	
Manage Project Team	
Manage Communication	
Conduct Procurements	\$1,000,000.00
Manage Stakeholder Engagement	
Monitoring and controlling	
Validate Scope	
Control Scope	
Control Schedule	

Control Cost	
Control Quality	
Control Communication	
Control Risk	
Control Procurements	
Control Stakeholder Engagement	
Closing	
Close Procurement	

Appendix 13: Project budget

List of Equipment and Services under the School Project														
Description of Equipment	Unit Prices	Freight to Miami	Freight from Miami to SVG via Sea Freight	Insurance	Custom Charges 30%	VAT Amount	Total per unit	contingency (30%)	Quantity	Total Cost Year (1)	Total Cost Year (2)	Total Cost Year (3)	Total Cost Year (4)	Total Cost Year (5)
Capital Expenditure:														
1. Access Point: MERAKI MR 66	905.76	150.00	200.00	81.50	271.73	241.35	1,850.34	2,405.44	25.00	60,135.93	-	-	-	-
2. Access Point : MERAKI MR 18	1,920.00	150.00	200.00	81.50	576.00	439.13	3,366.63	4,376.61	-	-	-	-	-	-
3. Modem	163.00	-	-	-	-	24.00	187.00	243.10	25.00	6,077.50	-	-	-	-
4. Infrastructure Development														
a. Pole, installation, painting	2,500.00	-	-	-	-	375.00	2,875.00	3,737.50	25.00	93,437.50	-	-	-	-
b. Electrical fittings, trunking and misc. equipment	200.00	-	-	-	-	30.00	230.00	299.00	25.00	7,475.00	-	-	-	-
c. Transformers	90.00	-	-	-	-	13.50	103.50	134.55	25.00	3,363.75	-	-	-	-
d. Housing for modem and electrical outlets	600.00	-	-	-	-	90.00	690.00	897.00	25.00	22,425.00	-	-	-	-
e. Cabling	100.00	-	-	-	-	15.00	115.00	149.50	25.00	3,737.50	-	-	-	-
f. Columns to facilitate meter from Vinlec	2,500.00	-	-	-	-	375.00	2,875.00	3,737.50	25.00	93,437.50	-	-	-	-
g. Electrical work for meter	600.00	-	-	-	-	90.00	690.00	897.00	25.00	22,425.00	-	-	-	-
Total Equipment Cost										312,514.68				
10% Warranty										31,251.47	31,251.47	31,251.47	31,251.47	31,251.47
Other Costs;														
14. Installation of Internet	120.00	-	-	-	-	18.00	138.00	179.40	25.00	4,485.00	-			
15. Project Management	100,000.00	-	-	-	-	15,000.00	115,000.00	149,500.00	1.00	149,500.00	-			
Total										153,985.00				
Recurring Expenditure														
16. Content Management	15,000.00	-	-	-	-		15,000.00	19,500.00	1.00	19,500.00	15,000.00	15,000.00	15,000	15000
17. Internet Cost Main land (yearly)	4,140.00	-	-	-	-		4,140.00	5,382.00	25.00	134,550.00	103,500.00	103,500.00	103500	103500
Total Recurring Expenditure										154,050.00	149,751.47	149,751.47	149,751.47	149,751.47
Total Yearly Cost										651,801.14	149,751.47	149,751.47	149,751.47	149,751.47
Total Cost of Project										1,250,807.01				
Variance of 5%(a variance is anticipated at 5% for items which have not been accounted for or foreseen)	\$ 62,540.35									1,313,347.37				

Appendix 15: Issue Log

Issue number	Issue Description	Responsible	Reported Date	Action	Action Date	Due Date	Priority	Status

Appendix 16: Risk Register

Project	Schools project									
Prepared By	Kyron Duncan									
Risk Register										
Type of Risk	Description of Risk	Probability			Impact			Risk Reduction Strategy	Contingency Plans	Risk Owner
		High	Med	Low	Perf	Cost	Time			
	Availability of equipment to execute the work			X		X	X	Track availability of equipment	Rent the needed equipment	Project Manager

	Availability of skilled labourers to execute the works			X		X	X	Ensure that only skilled persons are employed under this project	Outsource the skilled labour required to execute project	Project Manager
	Inability to attain the required internet speeds at each location under the project.		X		X	X		Monitor the internet speeds available by the service provider in the country.	Negotiate highest available speed with the contractor.	Project Manager
	Timely arrival of equipment to project sites			X		X	X	Ensure that the contractor submit purchase orders outlining dates of purchases and when it is expected to arrive	Have contractor outsource medium of delivering the equipment to each site.	Project Manager

	Good weather for the installation of equipment			X	X	X	X	Regularly check the weather forecast during the execution of the project.	Have the contractor execute work on weekends if bad weather affects work during the weekday.	Project Manager
	Timely Access to each project site			X		X	X	Liaise with the various stakeholders and ensure that they are aware of the date and time when the installations will be taking place at each location under the project	Get the keys for the building and have the installations done during the weekend	Project Manager
	Time overrun			X	X	X	X	Monitor the project schedule closely. Minimise rework by ensuring regular site visits	Have the contractor acquire more human resources to complete the job in the required time at his cost.	Project Manager

	Poor quality work		X			X	X	Follow the quality management plan and have weekly site visits	Have the rework done to have the work to the requirements stated in the scope.	Project Manager
	Internet coverage is not accessible through each location		X		X	X	X	Have regular site visits and ensure that the equipment is installed in an optimal position.	Relocate the external access point to a better location to provide wider coverage at each location.	Project Manager
	Faulty Equipment			X	X	X	X	Ensure that the contractor has warranty on the equipment at the time of purchase and have the contractor purchase additional spares.	Installation of the spares	Project Manager

Appendix 17: Stakeholder Register

Full Name	Position	Role In Project	Reporting medium	Frequency	Contact Information	Expectation	Influence level	Power level
Jimmy Prince	Minister of Education	Recipient	Hard copy and email	2 weeks	7844561111	Project success	High/	High
Mr. Timothy Scott	Chairman	Sponsor	Hard copy and email	1 week	7844572279	Project success	High	High
Apollo Knights	Director NTRC	Sponsor	Hard Copy and email	1 week	7844572279	Project success	High	High
Contract winner	Telecom Provider	contractor	Hard copy, email	2 weeks		Project success	High/manager closely	Moderate
All students	Students	Recipient	Consultation	quarterly	-	Project success	Low/keep satisfied	low
All teachers	Teachers	Recipient	Consultation	Quarterly	-	Project success	Low/keep satisfied	low
Community groups	Community	Recipient	Consultation	Quarterly	-	Project success	Low/keep informed	low

Appendix 18: Delivery Matrix

Deliverable	Delivery date	Person Responsible
Project Management Plan	January 7 th 2017	Apollo Knights- Director NTRC
Procurement of Equipment	September 1 st 2017	Winning Contractor

Installation of a painted pole at a minimum height of twenty five feet from the ground for the mounting of an external internet access point at each of the 25 locations under this project.	April 24 th 2018	Winning Contractor
Installation of an external access point with the minimum specifications outlined in the scope at each location. This access point is to be installed on a pole which will be located at each location under this project	April 24 th 2018	Winning Contractor
Installation of a metal enclosure on the pole to facilitate the modem, cords and adapters to provide the service at each of the 25 locations under this project.	April 24 th 2018	Winning Contractor
Installation of One 100Mbps download and 20 Mbps Upload speed internet connection at each of the 25 locations under this project to facilitate the service being requested.	April 24 th 2018	Winning Contractor

Appendix 19:Activity Resource Requirements

Task Name	Resources required
Develop Project Charter	This task requires four (4) individuals; one who will be the project manager.
Submit Project Charter	This task requires one (1) individual who will be the project manager.
Project Sponsor Reviews Project Charter	This task will require one individual who will be the Director of the NTRC
Project Charter Signed and Approved	This task will require one individual who is the sponsor. This will be the chairman of the NTRC.
Create Preliminary Scope Statement	This task requires a project team of four (4) project team members; one will be the project manager.
Determine Project Team	This task will require four (4) individuals.

Project Team Kick Off Meeting	This task will require four (4) individuals.
Develop Project Plan	This task will require four (4) individuals.
Submit Project Plan	This task requires one (1) individual who will be the project manager.
Project Plan Approval	This task will require one (1) individual who is the sponsor. This will be the chairman of the NTRC.
Project Management	This task will require four (4) team members inclusive of the project manager.
Project Status Meetings	This task will require four (4) team members inclusive of the project manager.
Risk Management	This task will require four (4) team members inclusive of the project manager.
Update Project Management Plan	This task will require four (4) team members inclusive of the project manager.
Audit Procurement	This task will require four (4) team members inclusive of the project manager.
Document Lessons Learned	This task will require four (4) team members inclusive of the project manager.
Update Files/Document	This task will require four (4) team members inclusive of the project manager.
Gain Formal Acceptance	This activity will require two (2) individuals; one will be the sponsor.
Archive Files/Document	This task will require one individual.

Appendix 20- Request for Applications

National Telecommunications Regulatory Commission
Universal Service Fund

TO PROVIDE:

The supply, installation and the maintenance of hardware, software and internet connections to facilitate access to wireless internet service at all Twenty Five (25) educational institutions throughout St Vincent and the Grenadines.

Issued at Kingstown

____ of ____, 2017

<p>National Telecommunications Regulatory Commission. 2nd Floor NIS Building Upper Bay Street; Kingstown</p>	
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Introduction

1. Purpose of the RFA Process

The purpose of this Request for Applications (“RFA”) is to invite qualified Telecommunications providers to submit proposals for the supply, installation and maintenance of hardware, software and internet connections to facilitate access to wireless internet service at all twenty five (25) educational institutions throughout St. Vincent and the Grenadines.

1.1 Qualifications of Bidder

Notwithstanding the terms of their licence, existing Telecommunications providers shall be automatically considered eligible to bid for all projects under the USF. Additionally any other entity in St Vincent and the Grenadines can tender a bid for the project but must acquire a license under the Telecommunications Act of 2001 before a contract can be

awarded and executed. Applicants should possess a minimum of 5 years experience in wireless communications in a similar environment to that which is existent with this project.

The Universal Service Fund RFA process is aimed at increasing access to Telecommunications networks and services in rural, under-served and maritime areas of St Vincent and the Grenadines in a manner consistent with fair competition and international best practices.

Source of Funds

The Fund shall be financed primarily by the monies collected from telecommunications providers as stipulated in the Telecommunications (Universal Service Fund) Order. Additional funds may be received from direct Government appropriations, or in the form of grants, donations, or other contributions made by individuals or legal entities.

Time and Schedule

<u>EVENT</u>	<u>TIME FRAME</u>
Request for Bids	_____ Of _____ 2017
Bid Submission Deadline	_____ Of _____ 2017
Bid Opening	_____ Of _____ 2017
Bid Evaluation	_____ Of _____ 2017
Winning Bid Announcement	_____ Of _____ 2017
Contract Award	_____ Of _____ 2017

NOTE: If the scheduled day for an event falls on a public holiday in St. Vincent and the Grenadines then the day of the event will be the next working day after the holiday.

Project Administration and Correspondence

All correspondence relating to this RFA should be addressed to:

The National Telecommunications Regulatory Commission

Bid Document

2nd Floor NIS Building

Upper Bay Street

Kingstown, St Vincent.

NOTE: For the purpose of this document, the term USF Services means the supply, installation and maintenance of hardware, software and Internet connections to facilitate access to wireless internet service at all twenty five (25) educational institutions throughout St Vincent and the Grenadines.

Instructions to Applicants

Selection of Successful Applicant

The National Telecommunications Regulatory Commission plans to execute a USF Services and Subsidy Agreement with the qualified applicant whose proposal is responsive (i.e., meets the requirements identified below) and that proposes the lowest USF Subsidy for the defined USF areas in accordance with this RFA.

A proposal will be considered responsive only if all of the following requirements are met:

It is submitted by a suitably qualified applicant in accordance with the Notice of Request for Applications document issued by the Commission.

It is complete and submitted in accordance with all the requirements of this RFA.

It is received before the closing date and time for submission of proposals identified.

It is submitted by an applicant who is a USF Contributor or, if the applicant is a consortium applicant, by a Consortium applicant leader which is a USF Contributor.

The applicant must possess valid Licence(s) for the relevant region and telecommunication services. The applicant must satisfy the Commission that the proposed USF Service Provider is in substantial compliance with the conditions of its Licence(s).

The applicant submits a network description and operational description that demonstrates that the USF Services will meet all applicable quality of service measures and requirements.

The applicant submits the tariffs and charges.

Proposals that do not comply substantially with the above requirements will be rejected as non-responsive.

Selection Process and Evaluation of Proposals

The information submitted by the applicants in response to this RFA will be the sole basis for the selection of the USF Service Provider. Provided that the proposal is substantially responsive, the Commission reserves the right to request that applicants provide additional information and documents to assist them in evaluating the proposals. However, the Commission will not assist applicants to supplement proposals which are otherwise deficient or non-compliant. Failure to provide additional information within the identified timeframe may result in the applicant's proposal being determined to be non-compliant.

The Commission will assess the responsiveness of the proposals and will reject any proposals that fail to substantially meet the requirements identified in this RFA.

Subsidy proposals of applicants which have been deemed substantially responsive will be compared to determine the lowest subsidy proposal for the defined USF project in the lot, based on the subsidy amount proposed by each applicant.

The Commission will review the qualifications of the applicant who has the lowest subsidy. The applicant will be considered qualified if its proposal demonstrates that it meets the qualification criteria.

If the applicant who submitted the lowest subsidy is considered qualified then this applicant will be treated as the successful bidder; otherwise, the applicant that has proposed the next lowest subsidy will be assessed against the qualification criteria and this process will continue until a successful applicant is selected.

Ties - In the event that there is more than one applicant bidding the lowest USF subsidy for one or more USF project, the Commission shall proceed as follows:

The tied qualified applicants will receive written notice of the tie and instructions for submission of a second round of bids.

The tied qualified applicants will proceed to a second round of bidding in which they will submit new USF proposals that comply with the requirements.

The new USF subsidy proposal amount submitted by the tied qualified applicants must be smaller than or equal to the original USF subsidy proposal amount submitted by the qualified applicants.

The new USF subsidy proposals shall be delivered in a sealed envelope, that is, securely closed so that it is not possible to open it without visual evidence thereof, to the address identified and before the date and time specified in the written notice referred to. New USF subsidy proposals will not be accepted after the date and time specified in the written notice.

The Commission's determinations in the evaluation process shall be final and binding upon applicants, subject to the laws of St Vincent and the Grenadines.

Field Proven Equipment and Software

All proposed equipment and software shall have been satisfactorily field-proven in actual service.

All radio or telecommunications equipment to be used by the successful service provider with respect to this bid document must be granted a certificate of type approval by the National Telecommunications Regulatory Commission as described in section 3 of the Saint Vincent and the Grenadines Telecommunications (Terminal Equipment and Public Network) Regulations 2002. In response to this bid document the Commission will accept only equipment with a recognized foreign type approval as described in section

12 of the above mentioned regulation. FCC, Canadian and ETSI certifications are the accepted type approval certifications

Content and Format of Proposals

Each proposal shall be assembled in two separate parts, contained in separate and clearly marked envelopes, as follows:

- (a) **Part 1** - “Service Proposal”, setting out information about the network and the USF service proposal of the applicant; and
- (b) **Part 2** - “USF Subsidy Proposal”, which shall set out the proposed USF subsidy amount for the USF project.

The required content and form of each part of the proposal are outlined in more detail below. All parts of the proposal must be printed using indelible ink.

Part 1 Structure Requirements – Qualifications and Service Proposal

Part 1 of the proposal shall include the following documents and information

Cover Letter and Attachments

The cover letter and each page of the attached proposal materials must be signed by a person or persons duly authorised to act on behalf of the applicant.

The cover letter must indicate a firm commitment to engage in final negotiation of the USF Services and Subsidy Agreement promptly and in good faith.

The cover letter must confirm that the proposal is open for acceptance by the Commission.

Information and Documentation on the Applicant

The name, legal status, registered office address and a description of the business of the proposed USF service provider must be provided.

The name, legal status, registered office address and a description of the business of all shareholders in the proposed USF service provider must be provided.

Documentation on Field Proven Equipment and Software

The applicant shall provide the technical specifications of the major types of equipment and software to be supplied, installed and operated in order to provide the USF services, including the local access facilities, the backbone transmission facilities, the switching and routing facilities and applicable network interfaces.

The applicant shall submit evidence that the proposed suppliers of the equipment identified have been in the business of manufacturing telecommunications equipment for at least three years before the date of the proposal.

In view of the rapid technological development in communications technology, hardware and software, applicants may propose that the USF service provider will install updated versions of the equipment and software in actual service. Applicants shall provide full details of the technological changes introduced in the proposed equipment and software.

The applicant must demonstrate satisfactory performance of the proposed equipment and software as part of the operations it has identified in this RFA for a minimum period of one year prior to the date of submission of the proposal.

Universal Service Network Description

The applicant must provide a concise description of the planned Universal Service network of the proposed USF service provider. The proposed USF service must be consistent with the requirements specified in the USF Services and Subsidy Agreement. The network description provided by the applicant must clearly demonstrate that the USF service provider will extend transmission and/or backhaul facilities into the USF project, with sufficient planned capacity to meet the requirements of the USF Services. The plans and technologies proposed by the applicant must meet

the requirements specified in this RFA and the USF Services and Subsidy Agreement.

The USF network description shall include:

- (i) A description of the local access, transmission, switching, routing and interface technology to be employed, including applicable technical standards, and a network map illustrating the intended network architecture and USF service installations;
- (ii) A summary description of the roll-out and service coverage plans for the USF services, that meet or exceed the project implementation milestones;
- (iii) The frequency spectrum to be used by the USF service provider (including the frequency spectrum bands, numbers of channels, radio-communications equipment, characteristics and anticipated type of use);
- (iv) The specific bandwidth capacity estimated by the applicant as required to meet traffic requirements in the USF project over the five years of commercial operations, and how that capacity will be provided by the USF service provider.

Operations Description - The proposal must include:

A general description of the intended operations of the USF service provider, including its general approach to implementation of the USF Services under this project; and

A brief description of any land or rights in land (i.e., rights of way) that must be acquired for the operations, the estimated cost of acquiring such land or rights in land and the impact acquiring such rights might have on the applicant's network roll-out plan.

Quality of Service Description - The proposal must include a summary of the methodology and processes that will be implemented by the proposed USF service provider to meet the service requirements and quality of service standards identified in Schedules A and B to the USF Services and Subsidy Agreement, including performance monitoring, reporting and fault resolution processes.

Maintenance Plan- The proposal must include a five (5) year maintenance plan which will highlight the activities of cleaning, repair, maintenance and any other preventative or proactive measures will be taken to ensure the service is provided constantly of the system implemented under this project.

Projected Financial Statements - The applicant must provide projected financial statements for years one through five of the USF service provider, including an income statement, balance sheet and statements of sources and application of funds for the USF service provider prepared in accordance with internationally accepted accounting standards. For this purpose, the financial statements shall treat the USF subsidy amount as if it were part of the debt, equity or deferred income of the USF service provider. The financial statements shall include projections of fee revenues from the USF services and any optional services.

Tariffs and Charges - The proposal must include the following information:

- (a) A clear description of the proposed tariffs and service charges for the USF Services under this project; and

A clear description of the National or Regional tariffs of the proposed USF service provider, which correspond to the proposed tariffs for the USF services, sufficient to demonstrate that the proposed tariffs for the USF services, will not exceed corresponding national or regional tariffs.

Additional Information

The applicant's comments on the draft USF services to be provided under this project and Subsidy Agreement or any other transaction documents or requirements, including particularly any terms or conditions that the applicant cannot or will not comply with; a clear description of the national or regional tariffs of the proposed USF service provider, which correspond to the proposed tariffs for the USF services, sufficient to demonstrate that the proposed tariffs for the USF services will not exceed corresponding national or regional tariffs; and

Any information that does not specifically respond to this RFA, but that the applicant thinks is relevant to the proposal.

Part 2 Subsidy Proposal

Information to be submitted by the applicant in Part 2 of its proposal;

- (b) **Subsidy Proposal** – The applicant must provide a completed USF Subsidy Proposal Form prepared in accordance with **1** to this RFA. As indicated in **1** of this document, the amount of the proposed USF subsidy shall be set out in words and numbers and in the event of any discrepancy between the words and numbers, the amount set out in words shall govern, and the currency of the proposed USF subsidy shall be stated in East Caribbean Dollars.
- (c) **USF Areas** – The applicant’s USF subsidy proposal must state the proposed amount of USF subsidy for implementation of the USF network and delivery of the USF services through this project.
- (d) **Calculation of Subsidy** – The proposal must include a concise financial analysis detailing the calculation of the proposed USF subsidy amount. The information furnished in this regard will be kept strictly confidential by the Commission; however, and as indicated, the Commission shall be entitled to publicly announce the total amount of each applicant’s USF subsidy proposal. The financial analysis must clearly demonstrate the breakdown of projected USF services costs, itemized to show the costs of the USF services components identified.
 - (i) The service provider should clearly list the total cost both, capital and recurring associated with establishing each access point for each location under this project in the submission of their bid.

34. **Compliance Checklist**

- 34.1 A “Compliance Checklist” is attached to this RFA. Applicants must include a completed compliance checklist in each copy of their proposals, and may find it a useful reminder of the documents and information required to be included in their proposals.
- 34.2 When completing the compliance checklist, applicants must identify the specific parts and page numbers of their proposals that correspond to the documents and information identified in the compliance checklist.

35. **Submission of the Proposal**

The applicant shall prepare three copies of the proposal, clearly marking the first copy "Original Proposal" and the 2nd, 3rd, copies "Copy of Proposal".

The applicant shall also prepare one electronic copy of the proposal (i.e., a CD-ROM or DVD containing a copy of the proposal that is in a format readable by Microsoft Office or Adobe Acrobat software).

All copies of the proposal shall be clearly marked with the name of the applicant.

In the event of any discrepancy between copies, the original shall govern.

Each proposal package shall be clearly marked with the following information:

Proposal to: Supply, install and maintain hardware, software and Internet connections necessary to facilitate access to wireless internet service to all twenty five (25) Educational institutions in St Vincent and the Grenadines.

Name of applicant:

Local Contact Name, Phone Number and E-Mail Address

Each part of the proposal shall be separated into clearly labelled envelopes, with each envelope containing the five copies of the applicable part of the proposal. The envelopes containing the separate parts of the proposal shall be packaged together in a single box or other container. The container shall be sealed; that is securely packed and closed, so that it is not possible to open it without visual evidence thereof.

The Commission will provide a written receipt confirming the delivery of each proposal received prior to the closing date and time.

Delivery of the Proposal

The proposal packages shall be delivered to the following address before the closing date and time identified,

The National Telecommunications Regulatory Commission
Bid Document
2nd Floor NIS Building
Upper Bay Street
Kingstown
St Vincent

If the proposal container is not sealed and marked properly, the Commission will assume no responsibility for the proposal or the disposition of its contents. Improperly marked or sealed packages may be rejected by the Commission.

Closing Date for Submission of the Proposal - The sealed proposal package shall be delivered to the Commission at the address specified no later than _____

Late Proposal - Proposals received after the closing date and time shall be returned unopened to the applicant(s).

Applications emailed to the Commissions without the expressed permission of the Commission will be rejected

Opening of Proposals

The Commission will publicly open the duly received proposals, in the presence of authorised representatives of any applicants who desire to attend, at 4:30 pm on the closing date in the conference room of the Commission, 2nd Floor, NIS Building, Upper Bay Street Kingstown. The opening will proceed whether one or more representatives of applicants are present or absent. Following opening of the proposals, the Commission will proceed with evaluation of the proposals.

All proposals shall be opened, with a representative of the Commission reading out the name of the applicants and the amounts of the individual applicants' subsidy proposals and any other applicant information that the Commission may consider appropriate. Only proposals opened and read out at the proposal opening shall be considered for further evaluation, irrespective of the circumstances.

No proposals shall be rejected at bid opening except for late proposals.

The Commission shall prepare a record of the initial proposal opening that shall include, at a minimum, the name of the applicant, the amount of the individual applicants' subsidy proposals and identification of any proposals rejected for late submission. The applicants' representatives who are present shall be requested to sign an attendance sheet. A copy of the record shall be distributed to all applicants.

Letter of Intent

The Commission will issue a Letter of Intent ("LOI") to the successful qualified applicant to confirm the Commission's intention to grant the USF Services and Subsidy Agreement to the USF service provider proposed by the applicant. The LOI will also require the USF service provider proposed by a successful applicant to submit the required performance bond within 10 days of receipt of the LOI.

If the USF service provider proposed by the applicant to whom the LOI is directed does not submit the required Performance Bond within 10 days from the date of issue of the LOI, the Commission may:

disqualify the applicant and the USF service provider proposed by the applicant; and

issue another LOI to the qualified applicant that has submitted the next lowest USF Subsidy proposal for the USF Areas.

An applicant to whom a LOI is directed must accept the LOI by notice in writing (the "Letter of Acceptance") to the Commission within seven (7) days from the date of receipt of the LOI.

It is the intention of the Commission that the USF services and Subsidy Agreement (the "Contract") will be finally negotiated and signed within 18 days of the date of issue of the LOI. In the event that the Commission and the recipient of the LOI are unable to finalize the terms of the Contract within the 30 day period, the Commission shall be entitled to terminate negotiations, return the performance bond and issue another LOI to the qualified applicant that has submitted the next lowest USF subsidy proposal.

Once the Contract has been entered into with the USF service provider put forward by the winning applicant, the Commission shall publish the results of the RFA process including at least the following information: (i) name of each applicant who submitted a proposal;

(ii) name of applicants whose proposals were rejected, and the reason(s) for their rejection; (iii) the USF subsidy proposal amounts as read out at the subsidy proposal opening; (iv) the name of the winning applicant; and (v) a summary of the resulting contract. The information shall also be published on the Commission's website and be published in the media.

Performance Bond

A USF service provider proposed by an applicant to whom an LOI has been directed shall furnish the Performance Guarantee in the form of a letter and shall be furnished within ten (10) days of the date of issue of the LOI once requested by the NTRC.

Information Provided by The Commission

The information contained in this RFA and any other information provided to applicants during the proposal process is intended to assist applicants in the preparation of their proposals. The Commission will ensure that all applicants are provided with the same information during the proposal process.

Communications, Comments and Requests for Clarification

All deliveries, notices or other communications made by the Commission to applicants in connection with the proposal process shall be sent by fax, e-mail or personal delivery to the registered office of the applicant, as specified at the time the applicant registered with the Commission pursuant to this RFA process.

All deliveries, notices or other communications made by applicants to the Commission in connection with the proposal process, except for submission of the proposal itself, shall be sent in writing by e-mail or personal delivery, unless otherwise specified by the Commission to the contact person and address.

During the period between the deadline for submissions of proposals and the award of the USF subsidy, no applicant, no USF service provider proposed by an applicant and no party interested in a proposal shall be permitted to discuss the merits of any proposal with any representative of the Commission. Any communications, or attempted communications, in contravention of this section shall be grounds for immediate disqualification.

Applicants are expected to carefully examine all instructions, forms and annexes in this RFA. Failure to furnish all information required by this RFA or the submission of a proposal that does not comply with the RFA in all respects may result in disqualification of the proposal.

A prospective applicant requiring any clarification of this RFA or the draft USF Services and Subsidy Agreement may pose one or more questions to the Commission in writing by e-mail or personal delivery up to fourteen (14) days prior to the closing date for proposals. The Commission will respond in writing to such written questions following the pre-proposal consultation meeting. Written questions received by the Commission less than fourteen (14) days prior to the closing date will not be answered.

A prospective applicant may make comments on the structure and contents of this RFA or the draft USF Services and Subsidy Agreement. Such comments should be sent in writing by e-mail or personal delivery to the Commission up to fourteen (14) days prior to the closing date for proposals. The Commission will respond in writing to such written comments following the pre-proposal consultation meeting. The Commission will not respond to written comments received less than fourteen (14) days prior to the closing date.

To assist in the examination and evaluation of proposals, the Commission may, at its discretion, ask any applicant for a clarification of its proposal. Any clarification submitted by an applicant in respect to its proposal that is not in response to a request by the Commission shall not be considered. The Commission's request for clarification and any response shall be in writing. No change in the proposed USF subsidy amount shall be sought, offered or permitted, except to confirm the correction of arithmetic errors discovered by the Commission in the evaluation of the proposals.

Confidentiality of Proposals

Except for the public opening of USF subsidy proposals, The Commission shall treat all proposals received in relation to this RFA as confidential during the period before the award of the USF Project Services and Subsidy Agreement.

Information relating to the examination, evaluation, comparison, and qualification of proposals, and any recommendation of contract award, shall not be disclosed by any representative of the Commission to applicants or any other persons not officially concerned with such process except as specifically permitted by the Commission.

Reservation of Rights

The Commission reserves the right, in its sole discretion, to take any action, including amendment of this RFA, which it considers necessary to ensure that the RFA process proceeds in a fair, open and transparent manner, in accordance with the laws of St Vincent and the Grenadines and to meet the objectives of the Commission.

The Commission reserves the right to modify or terminate the RFA process at any time in its sole discretion.

The Commission is not legally obligated to execute the USF Services and Subsidy Agreement. It may terminate the RFA process or revoke an award of the USF Services and Subsidy Agreement at any time before the USF Services and Subsidy Agreement is executed.

The Commission reserves the right to limit the number of equipment required under this project based on the resources available under the Universal Service Fund.

Legal and Formal Requirements

Governing Law - This RFA and any USF Services and Subsidy Agreement executed pursuant to this RFA shall be exclusively subject to, and interpreted in accordance with, the laws of St. Vincent and the Grenadines.

Settlement of disputes - Any dispute, controversy or claim arising out of or in connection with this RFA document, or the breach, termination or invalidity thereof, shall be subject to the dispute resolution terms and processes.

Limitation of Liability – Except in cases of criminal negligence or wilful misconduct,

- (a) the provider shall not be liable to the Commission, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the provider to pay liquidated damages to the Commission; and
- (b) The aggregate liability of the provider to the Commission, whether under the contract, in tort or otherwise, shall not exceed the Universal Service Fund subsidy.

Rights Granted to USF Service Provider/Corporate Social Responsibility (CSR)/Corporate Branding

- 21.1 The Service Provider acting within its own Corporate Social Responsibility (CSR) framework can decide to contribute equipment and/or services that fits within the scope of works of this project and which contribution can be offset in some form by the opportunities that would be made available by the Commission and the Ministry of Education for corporate branding under the project life cycle of five (5) years.
- 21.2 The level of contribution proposed by the winning bid if any will guide the level of branding that will be allowed by the Commission and the Ministry of Education on this project. To guide the process the Commission has developed a set of branding guidelines in collaboration with the Ministry of Education as follows:
- (a) The Service Provider will not be permitted to conduct any marketing, training or public awareness activities which have not been agreed to by the Commission and the Ministry of Education at any location under this project.
 - (b) Any ad, media release or publication, which is caused to be produced by the Service Provider as it relates to this project, should mention the role of the Universal Service Fund (USF) in the project. Additionally, such communiqué must be approved by the Commission before being published.
 - (c) The Commission may decide to invite representatives from the service provider to media interviews and public relations events held in relation to the provision of the Services under this project.
 - (d) For any function where the Commission invites the Service Provider to attend in relation to this project, the Service Provider may erect one (1)

banner/signage , which will not exceed 6Ft x 3 Ft, but which may not be placed in a way to obstruct the direct path of any other Public Relations material of the Commission. The Commission also reserves the right to approve the content of such banner and materials and also the placement of such advertising material in a location as it sees fit.

- (e) The Service Provider may be granted authorization to have a booth placed at designated locations under this project and which locations and time will be approved by the Ministry of Education, to promote, advertise or for the sale of services and products for the duration of this project.
- (f) The Service Provider, in the event that a ceremony is held to mark the launch of this project by the Commission, will be invited to attend and to give remarks.
- (g) The Service Provider may be permitted to erect a maximum of three (3) posters (properly framed) not measuring more than 2 1/2 ft x 3 ft each at each location. Such posters will highlight the Service Provider's brand and other marketing information, along with the role of the Universal Service Fund in this project and will be placed **within** the buildings at each location of this project. These posters should be placed in the computer labs of the locations in this project. In the event that no computer labs are in place at the locations then the posters will be allowed to be erected at other suitable areas that meet the approval of the Principal of that specific location but not on the outside of any building. The content of these posters have to be approved by the Commission and the Ministry of Education.
- (h) The Service Provider may be permitted to erect a single sign (weather proof) not measuring more that 2 1/2 feet x 3 feet at each location. Such sign will highlight the Service Provider's brand and other marketing information, along with the role of the Universal Service Fund in this project. This sign if allowed would be placed on the **exterior** of a building at each location under this project. Such location must be approved by the Principal of the School. The content of this sign have to be approved by the Commission and the Ministry of Education.

- (i) For clarity all posters, banners and signs, which are caused to be produced by the Service Provider for this project, must highlight the role the Universal Service Fund and must be approved by the Commission before they are put in place.
- (j) Electronic devices (computers, mobile phones, etc) connecting to the wireless network provided under this project will be directed to either the homepage(website) of the service provider, homepage of the Commission or the homepage of the Ministry of Education(the Ministry of education may decide on another homepage instead of its own). The proportion of electronic devices that will be directed to the homepage of the Service Provider will depend on whether the service provider makes a contribution of goods/services under this project and the level of such contribution. The Commission would make the final decision on the proportioning of traffic to the various homepages.
- (k) Any contributions proposed by the Service Provider under this section should be accounted for in the calculation of the USF subsidy being proposed for this project.

1: USF Subsidy Proposal Form

RFA TO PROVIDE USF TELECOMMUNICATIONS SERVICES

To: The Director
The National Telecommunications Regulatory Commission
Second Floor, NIS Building,
Upper Bay Street
Kingstown.

Applicant's USF Subsidy Proposal;

The applicant, [*insert name of Applicant*], hereby commits to assume all of the USF service obligations identified in the RFA and USF Services and Subsidy Agreement in consideration for the award of the USF Services and Subsidy Agreement and payment of the amount of USF subsidy indicated in the following table:

<p>USF Project:</p> <p><i>(Contract title).</i></p>	<p>Amount of Proposed USF Subsidy (in E.C dollars):</p> <p><i>[Enter amount of USF Subsidy proposed for the USF Project. The amount must be set out in both words and numbers.]</i></p>
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In the event of any discrepancy between the USF Subsidy amount set out in words and numbers, the amount set out in words shall govern.

Signature: _____ Print Name: _____

In the capacity of [*insert title/position of individual signing*] duly authorized to sign for and on behalf of [*insert name of Applicant*].

Dated this _____ day of _____, 2017.

Witness Signature: _____ Print Name: _____

Dated this _____ day of _____, 2017.

2: Compliance Checklist

Included In Proposal Package	Column For USFCo Use Only		Applicants’ Qualifications and Service Proposal Information Requirements
Applicant must indicate with page number in Proposal	Compliance Evaluation (Pass/Fail)		<p>Each proposal shall consist of two separate parts, contained in separate and clearly marked envelopes, as follows:</p> <p>Part 1 - Service Proposal”, setting out information about the applicant, the USF service provider proposed by the applicant and the USF Service proposal of the applicant.</p> <p>Part 2 - “USF Subsidy Proposal”, which shall set out the proposed USF Subsidy amount.</p> <p>The required content and form of each Part of the proposal are summarized below.</p> <p>Only licensed telecommunication Providers are eligible for bidding</p>
PART 1 STRUCTURE REQUIREMENTS – QUALIFICATIONS and SERVICE PROPOSAL			
			<u>Cover Letter & Attachments</u>
		(a)	Cover letter and each page of attached proposal materials to be signed by a person or persons duly authorized to act on behalf of the applicant. Where the applicant is a consortium, including a joint venture, the cover letter and attachments must be signed by a person or persons duly authorised to act on behalf all members of the consortium.
		(b)	Letter provides a summary description of the applicant, including the members of any related consortium, and of the USF Service Provider

			proposed by the applicant.
		(c)	Letter indicates a firm commitment to engage in final negotiation of the USF Services and subsidy agreement promptly and in good faith.
		(d)	Letter confirms that the proposal is open for acceptance by the Commission.
		(e)	Attach one or more Powers of Attorney or notarised certificates clearly evidencing the authority of the signatory(ies) of the cover letter and other documents submitted with the proposal, which require signature on behalf of the applicant, a shareholder of the applicant, the members of the applicant consortium, if applicable or the USF service provider proposed by the applicant.
			<u>Information and Documentation on the Applicant</u>
			Include the following further information and documentation
		(a)	Name, legal status, registered office address and a description of the business of the proposed USF service provider.
		(b)	Name, legal status, registered office address and a description of the business of all shareholders in the proposed USF service provider.
		(c)	Name, legal status and registered office address of any person who controls the proposed USF service provider.
		(d)	Name, legal status and registered office address of all persons who own, directly or indirectly, any ownership interest in a shareholder of the proposed USF service provider.
		(e)	The name, country of citizenship and address of each person who is a director of the proposed USF service provider.
		(f)	Proof of experience in the wireless communication of more than 7 years
			<u>Maintenance Plan</u>
			<p>A maintenance plan must contain a clear and precise plan of action for the maintenance, upkeep and monitoring of the equipment.</p> <p>NOTE: Down time for any aspect of the network established at all locations should not be more than a 24 hour period</p> <p>The plan must include but should not be limited to the following:</p>

		(a)	The frequency of which equipment will be monitored to ensure online status.
		(b)	The number of at site visits for cleaning and repairs and maintenance.
		(c)	What work will be executed in A and B of above.
		(d)	Any other relevant information
		(e)	All the cost associated with the maintenance of the equipment over the period of the project
			<u>Network Description</u>
			Provide a concise description of the planned USF services being proposed USF service provider, including the following: <i>Note: The network description provided by the applicant must clearly demonstrate that the USF service provider will extend transmission and/or backhaul facilities into the USF areas, with sufficient planned capacity to meet the requirements of the USF services. The USF service provider may rely on the facilities or services of other licensees to meet these transmission and/or backhaul requirements. USF service provider must construct and operate its network substantially in accordance with the plans submitted and the technology described in the proposal, and such plans and technologies must meet the requirements specified in the RFA and the USF Services and Subsidy Agreement.</i>
		(i)	Description of the local access, transmission, switching, routing and interface technology to be employed, including applicable technical standards and network map.
		(ii)	Summary of roll-out/service coverage plans (meeting or exceeding Project Implementation Milestones).
		(iii)	The frequency spectrum to be used by the USF service provider (including the frequency spectrum bands, numbers of channels, radio-communications equipment and anticipated type of use).
		(iv)	USF network bandwidth capacity estimated to meet traffic requirements in the USF areas over the first five years of commercial operations; and description of how that capacity will be provided by the USF service provider.

		(v)	Proposed interconnection points. The applicant must provide its best estimate of the number and size of the interconnection circuits and the point(s) of interconnection the proposed USF service provider will require during the first five years of operation. The USF service provider shall continue to provide the Commission and such other operators with such information as its network plans evolve.
			<u>Operations Description</u>
			Include a general description of the operations of the USF service provider; include too a brief description of any land or rights in land (i.e. rights of way) that must be acquired for the operations and the estimated cost of acquiring such land or rights in land and the impact acquiring such rights might have on the applicant's network roll-out plan.
			<u>Quality of Service Description</u>
			The proposal must include a summary of the methodology and processes that will be implemented by the proposed USF service provider to meet the service requirements and quality of service standards identified in Schedules A and B to the USF Services and Subsidy Agreement, including performance monitoring, reporting and fault resolution processes.
			<u>Projected Financial Statements</u>
			Provide projected financial statements for years one through five of the USF service provider, including an income statement, balance sheet and statements of sources and application of funds for the USF service provider prepared in accordance with internationally accepted accounting standards. <i>Note: For this purpose, the financial statements shall treat the USF subsidy amount as if it were part of the debt, equity or deferred income of the USF service provider. Include projections of fee revenues from customers and an estimate of revenues from inter-carrier services, including leased line services, and optional USF services.</i>
			<u>Tariffs and charges</u>
			Provide the following tariff information: <i>Note: USF service provider must provide the USF services in accordance with the tariffs described in the proposal, and such tariffs must meet the requirements specified in this RFA and the USF Services and Subsidy Agreement.</i>

		(i)	Clear description of the proposed tariffs of the proposed USF service provider for the USF services; and
		(ii)	A clear description of the national or regional tariffs of the proposed USF service provider, which correspond to the proposed tariffs for the USF services, sufficient to demonstrate that the proposed tariffs for the USF services will not exceed corresponding national or regional tariffs.
			<u>Additional Information</u>
		(a)	Comments on the draft USF Services and Subsidy Agreement or other transaction documents (including particularly any terms or conditions that the applicant cannot or will not comply with).
		(b)	Any information that does not specifically respond to this RFA, but that the applicant thinks is relevant to the proposal.
		(c)	Provide evidence that arrangements are in place to provide the proposed USF service provider with access to the technology, professional know-how and operational experience required to operate the USF network and provide the USF services.
		(d)	Include documentation that substantiates the following specific operational experience
		(e)	The network has a transmission backbone component for voice and data services.
		(f)	The network is predominantly facilities-based.
		(g)	The network has been operated by the applicant for a minimum of one year.
		(i)	Number of years of operation.
		(ii)	Telecommunications management experience of the proposed USF

			service provider.
		(iii)	Types of telecommunications services provided.
		(iv)	Experience of the proposed USF service provider in rolling out a telecommunications network.
			<u>Field Proven Equipment</u>
		(a)	Provide technical specifications of the major types of equipment and software to be supplied, installed and operated in order to provide the USF services, including the local access facilities, the backbone transmission facilities, the switching and routing facilities and the interface technology.
		(b)	Demonstrate that the proposed suppliers of the equipment to be installed have been in the business of manufacturing telecommunications equipment for at least three years before the date of the proposal.
		(c)	Demonstrate the supply of equipment and software of the type described in the proposal to at least two telecommunications network operators and that the equipment and software have been in satisfactory service with those telecommunications network operators for a minimum period of one year prior to the date of submission of the proposal.
		(d)	Full details of any technological changes introduced in the proposed equipment or software. <i>Note: Changes introduced in the field-proven equipment or software must be “evolutionary” and not “revolutionary” in nature.</i>
		(e)	All radio or telecommunications equipment to be used by the successful service provider with respect to this bid document must be granted a certificate of type approval by the National Telecommunications Regulatory Commission as described in section 3 of the Saint Vincent and the Grenadines Telecommunications (Terminal Equipment and Public Network) Regulations 2002. In response to this bid document the Commission will accept only equipment with a recognized foreign type approval as described in section 12 of the above mentioned regulation. FCC, Canadian and ETSI certifications are the accepted type approval certifications
		(f)	Submission of letters from either the proposed equipment suppliers or two network operators certifying satisfactory performance of the

			<p>proposed equipment.</p> <p><i>Note: The Commission reserves the right to verify the quality of the equipment and software and its satisfactory performance in actual service with the two network operators.</i></p>
		(g)	The applicant must demonstrate satisfactory performance of the proposed equipment and software as part of the operations it has identified for this RFA for a minimum period of one year prior to the date of submission of the proposal.
			<u>Responsiveness</u>
		(a)	Demonstrate that the applicant is a USF contributor or that, if the applicant is a consortium, that the consortium leader is a USF contributor.
		(b)	Demonstrate that the proposed USF service provider is incorporated.
		(c)	It is submitted by an applicant (or any company or other person identified in the proposal as a member or participant in a consortium applicant) that have registered with the Commission and purchased an official copy of the RFA in accordance with the Notice of Request for applications document issued by the Commission.
		(d)	It is complete and submitted in accordance with all the requirements of this RFA and is received before the closing date and time for submission of proposals identified.
		(e)	The applicant must possess valid licence(s) for the relevant region and telecommunication services, issued by PTA. The applicant must satisfy the Commission that the proposed USF service provider is in substantial compliance with the conditions of its Licence(s).
		(f)	The applicant submits the network description and operational description.
		(g)	The applicant submits the tariff and charges.
			Eligibility to Receive USF Subsidy
		(a)	Demonstrate that the proposed USF service provider is eligible to receive the USF subsidy.

PART 2 STRUCTURE REQUIREMENTS – SUBSIDY PROPOSAL

			<u>Subsidy Proposal</u>
		(a)	Completed USF subsidy proposal form prepared in accordance with Annex 1 to the RFA.
		(c)	Amount of the proposed USF subsidy set out in words and numbers.
		(d)	The amount of the proposed USF subsidy must be stated in E.C Dollars.
		(i)	The service provider should clearly list the total cost both capital and recurring associated with establishing each access point for each location under this project in the submission of their bid. This would aid in the evaluation process for all bids received.
			<u>Calculation of Subsidy</u>
		(a)	Include concise financial analysis detailing the calculation of the proposed USF subsidy amount.
		(b)	The financial analysis must clearly demonstrate the breakdown of projected USF network costs, itemized to show the costs of the USF network components identified.
		(3)	The service provider should clearly list the total cost both, capital and recurring associated with establishing each access point for each location under this project in the submission of their bid <i>Note: The financial analysis information furnished by applicants will be kept strictly confidential by the Commission.</i>
SUBMISSION OF THE PROPOSAL –			
		(a)	Prepare three copies of the proposal, clearly marking the first copy “Original Proposal” and the 2nd, 3rd, copies “Copy of Proposal”.
		(b)	Prepare one electronic copy of the proposal (i.e. a CD-ROM or computer diskette containing a copy of the proposal that is in a format readable by Microsoft Word or Adobe Acrobat software).

		(c)	Clearly mark all copies of the proposal with the name of the applicant.
		(d)	As indicated the proposal consists of two separate parts: Part 1, the Service Proposal; and Part 2, the USF Subsidy Proposal. Each part of the proposal shall be separated into clearly labelled envelopes, with each envelope containing the five copies of the applicable part of the proposal. The envelopes containing the separate parts of the proposal shall be packaged together in a single box or other container. The container shall be sealed; that is securely packed and closed, so that it is not possible to open it without visual evidence thereof.
		(e)	Clearly mark each proposal package with the following information: Proposal to provide emergency phone booth and payphone services Name of Applicant: Local Contact Name and Phone Number: <i>“DO NOT OPEN, EXCEPT IN PRESENCE OF The Commission’s EVALUATION COMMITTEE”</i>
		(f)	Enclose Bid Bond in a separately sealed envelope clearly marked with the name of the applicant and the text “Bid Bond”. <i>Note: The separate Bid Bond and envelope should be delivered with the proposal packages and included in the final assembly described in (d) above.</i>
		(g)	Deliver proposal packages to the following address before the closing date and time specified. The Director National Telecommunication Regulatory Commission 2 nd Floor NIS Building Upper Bay Street. Kingstown <i>Note: No proposals will be received after the closing date and time identified.</i>
		(h)	The proposal, the accompanying documents, and all correspondence relating to the RFA shall be prepared and submitted in the English language.

		(i)	<p>Include a completed version of this compliance checklist in each copy of the proposal.</p> <p><i>Note: When completing the compliance checklist, identify the specific parts and page numbers of the proposals that correspond to the documents and information identified in the compliance checklist.</i></p>
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3: Terms of Reference

TERMS OF REFERENCE

The supply, installation and maintenance of hardware, software and internet connections to facilitate access to wireless internet service at all Twenty Five (25) educational institutions throughout St Vincent and the Grenadines.

BACKGROUND INFORMATION

Beneficiary Country

St. Vincent and the Grenadines

Contracting Authority

National Telecommunications Regulatory Commission

Duration of Contract

The duration of this project is for a period of five (5) years

Contract Name

The supply, installation and maintenance of hardware, software and internet connections to facilitate access to wireless internet service at all one hundred and seven (107) educational institutions throughout St Vincent and the Grenadines.

CONTRACT OBJECTIVES & EXPECTED RESULTS

Overall Objective

The objective of the project is to introduce or improve Broadband Internet access at all educational institutions throughout St Vincent and the Grenadines.

SCOPE OF THE WORK

The following Twenty Five (25) Schools, which are managed by the Ministry of Education of St Vincent and the Grenadines, will be outfitted with an outdoor internet access point. Also, they will have suitably located omni-directional antennas with high speed internet connection.

Locations

1. The Kingstown Government School
2. The Barrouallie Secondary School
3. The Georgetown Secondary School
4. The Belair Government School
5. The Girls High School
6. The Mountain View Academy
7. The St. Vincent Boys Grammar School
8. The Bishop College Kingstown
9. The St. Joseph Convent School Kingstown
10. The Layou Methodist School
11. The Chateaubelair Primary
12. The Fitz Hughes Primary School
13. The Spring Village Government School
14. The Buccament Bay Secondary
15. The Union Island Secondary School
16. The Bequia Anglican High School
17. The Dr. J. P Eustace Secondary School
18. The Intermediate Secondary School

19. The Emmanuel High School
20. The Belmont Government School
21. The Colinarie Government School
22. The Windsor Primary School
23. The St Martin's Secondary School
24. The Adelphi Secondary School
25. The Sion Hill Government School

As it relates to upload and download speeds, please note the following:

- All 25 locations listed above will have connections with a 100Mbps minimum download speed and a minimum upload speed of 20Mbps throughout the five-year duration of the project.

The following criteria listed, but not limited to, must be met for the installation of the outdoor Wi-Fi Access Points:

- Each access point must be erected on a pole in a suitable location on the grounds of the school, at a minimum height of twenty-five (25) feet from the ground. This will provide maximum coverage with sufficient signal strength to maintain a stable internet connection. Please note that anyone visiting any of the 25 schools listed above with a Wi-Fi enabled device must be able to connect to this access point at any point on or around the location.
- The pole that is to be erected must be placed in a location that does not impede any activity at each school. Also, it must be painted in a colour which is in line with the immediate surroundings.
- All power cords, modems and other equipment needed to provide the services at each location should be securely mounted on the pole and be enclosed in secured and lockable enclosure. This will prevent damage from the elements such as rain, wind, dust and vandalism.
- The access point, which will be placed on the pole to provide wireless internet service to the locations listed above, should have the minimum specifications.

Device Information
Meraki MR66 Outdoor Access Point
Radios
<ul style="list-style-type: none"> 1 × 802.11b/g/n radio 1 × 802.11a/n radio Auto-selection of optimal 2.4 GHz or 5 GHz band Max radio rate of 300 Mbps per radio 2.4 GHz +26 dBm peak transmission power 5 GHz +24 dBm peak transmission power

802.11n Capabilities
<ul style="list-style-type: none"> 2 x 2 multiple input, multiple output (MIMO) with two spatial streams Maximal ratio combining (MRC) Beamforming Packet aggregation Cyclic shift diversity (CSD) support
Power
<ul style="list-style-type: none"> Power over Ethernet: 24 - 57 V (802.3af compatible) Power consumption: 10.5 W max
Mounting
<ul style="list-style-type: none"> Mounts to walls and horizontal, vertical, and angled poles Mounting hardware included
Physical Security
<ul style="list-style-type: none"> Security screw included
<ul style="list-style-type: none"> Kensington lock hard point Anti-tamper cable bay Concealed mount plate
Environment
<ul style="list-style-type: none"> Operating temperature: -4°F to 122°F (-20°C to 50°C) IP67 environmental rating (sealed against water and dust)
Interfaces
<ul style="list-style-type: none"> One 100/1000 Mbps auto-crossover Ethernet port Four external N-type connectors Signal strength LEDs
Security
<ul style="list-style-type: none"> Integrated policy firewall (Identity Policy Manager) Air Marshal: real-time WIPS with forensics Guest Isolation WEP, WPA WPA2-PSK WPA2-Enterprise with 802.1X TKIP and AES encryption VLAN tagging (802.1Q)
Quality of Service
<ul style="list-style-type: none"> Wireless Quality of Service (WMM/802.11e) DSCP (802.1p)
Mobility
<ul style="list-style-type: none"> PMK and OKC credential support for fast Layer 2 roaming L3 roaming
LED Indicators

4 signal strength 1 Ethernet connectivity
1 power/booting/firmware upgrade status
Regulatory
FCC (US) IC (Canada) CE (Europe) with DFS C-Tick (Australia)
Certification
Wi-Fi Alliance

CONTENT MANAGEMENT

The USF service provider shall provide a centrally controlled content management system to cover all locations under this project. This centrally controlled content management software/ system will be installed primarily for, but not limited to, filtering web content, and protecting users from phishing scams, as well as for malware site and botnet protection.

PROPOSAL PROCESS

At a minimum, proposals should address the following requirements:

- Fully describe the equipments and procedures which are going to be used to execute this project.
- Response times to repair damaged modems and other equipment or connections.

- The proposal should also highlight a detailed work plan with regards to the implementation of the project and associated timelines for the implementation of the connections.
- The proposal should also include a detailed maintenance plan for the equipment.

Geographical area to be covered

All schools throughout St Vincent and the Grenadines.

Target Groups

All individuals including students who want to access computer and internet services.

Logistics and Timing

The intended commencement date is within 1 month of the signature of the contract and the period of execution of works under this contract will be 6 months.

Appendix 21- Draft Agreement

Contract Agreement

THIS AGREEMENT (“Contract”) is entered into this _____ day of _____, 2017, by and between the National Telecommunications Regulatory Commission of St. Vincent and the Grenadines (“the Commission”), having its principal place of business at the 2nd Floor, National Insurance Services Building, Upper Bay Street, Kingstown, St. Vincent and the Grenadines, and _____ a Company duly incorporated and registered in accordance with the Laws of Saint Vincent and the Grenadines and having its principal office located at _____ (“the Universal Service Provider” or “the Provider”).

WHEREAS the Commission is desirous that certain Services should be provided by the Universal Service Provider, viz., the, Installation and Maintenance of hardware, software and internet connectivity at all twenty five (25) educational institutions throughout St. Vincent and the Grenadines, (hereinafter “the Services”)

AND WHEREAS the Provider has been selected by the Commission through a competitive bidding process to provide the Services,

AND WHEREAS the Provider is willing to perform such Services in accordance with and subject to the terms herein,

NOW THEREFORE THE PARTIES hereby agree as follows:

1. Definitions

1.1. In this Contract, the following terms shall be interpreted as indicated:

- (a) “The Commission” means the National Telecommunications Regulatory Commission of St. Vincent and the Grenadines.

- (b) “The Contract” means the agreement entered into between the Commission and the Universal Service Provider, including all attachments, and appendices thereto and all documents incorporated by reference therein.
- (c) “Day” means calendar day.
- (d) “Equipment” means all the equipment, machinery, and/or other materials specified in the Request for Application (RFA) document located in Annex B and which the Provider requires to provide the services required under the Contract.
- (e) “The Final Implementation Date” means One hundred and twenty (120) days from the signing of this Contract.
- (f) “The Location” means all schools in St. Vincent and the Grenadines specified in the Request for Application (RFA) and is also located in Annex A.
- (g) “The Network” means the network owned and operated by the Provider in accordance with a valid licence issued for that purpose.
- (h) “Payment” means the amount of money the Commission will give the Provider as instalments from the Universal Service Fund Subsidy in accordance with the payment schedule contained herein.
- (i) “The Request for Application or RFA document” means the document describing the nature and scope of services requested by the Commission referenced in Annex B.
- (j) “The Services” means the installation and maintenance of hardware and software and internet connections to facilitate wireless internet services at all twenty five (25) schools throughout St. Vincent and the Grenadines, and specified in the RFA referenced in Annex B.
- (k) “The Universal Service Provider” means the individual or firm supplying the equipment and services under this Contract.
- (l) “The Universal Service Fund Subsidy” means the total price payable to the Provider under this Contract in full and proper performance of its contractual obligations.
- (m) “The Contract Price” means all moneys to be paid by the USF to the USF provider for the provision of all services under the contract.

2. Contract Documents

2.1 The following documents shall be deemed to form and be read and construed as part of this Contract together with all Annexes and appendices thereto,

- (a) -List of locations under this project
- (b) -The Request for Application document dated _____;
- (c) -The bid presented by the Provider dated _____;
- (d) -The bid addendum if submitted
- (e) -List of equipment

2.2 Subject to the order of precedence set forth in this Contract, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary and mutually explanatory. The Contract Agreement shall be read as a whole.

3. **The Services**

- (a) The Universal Service Provider shall perform the Services in accordance with the specifications and requirements, and at the locations identified in the RFA document located in Annex B
- (b) The Universal Service Provider shall ensure that all equipment specified in RFA and also located in Annex B shall be in the possession of the Provider within Forty five (45) days of signing of this Contract.
- (c) The Universal Service Provider shall ensure that the installation of all equipment, including all hardware and software and any other equipment specified in the RFA and/or required for the provision of the Services is completed by the Final Implementation Date.

4. **Access**

The Commission shall take all reasonable measures to ensure reasonable access to the locations specified in the RFA and Annex A by duly authorized representatives and/or employees of the Provider to facilitate performance of the Contract.

5. **Term**

This Contract commences on the ___ day of June, 2017 and continues in force for a period of five (5) years expiring on the ___ day of June, 2022 unless earlier terminated in accordance with Clause 17 of this Contract.

6. Compensation

6..1 The Commission will be seeking VAT concession on the equipment and services under this project which amounts to _____ **dollars (ECD\$_____)** as outlined in the Service Provider's Bid Addendum Version 5.0 submission dated _____.

6.2 The schedule of payments to be made to the Provider under this Contract shall be as follows:

6.4.1 _____ (**ECD\$ _____**) for the total cost of all goods and equipment, which is to be divided as follows:

- (i) _____ Ten percent (10%) to be paid by the Commission within thirty (30) days of signing this Contract.
- (ii) _____ representing forty percent (40%) to be paid by the Commission on receipt of all equipment by the Provider.
- (iii) _____ representing fifty percent (50%) to be paid by the Commission within thirty (30) days of the successful installation and commissioning of all equipment and networks.

6.2.2 _____ (**ECD \$ _____**) for the maintenance of all equipment and the provision of services over five (5) years, which amount to be divided as follows:

- (i) _____ (**ECD\$ _____**) payable within three (3) months of the start of the first year of the Contract;
- (ii) _____ (**ECD\$ _____**) payable within six (6) months of the start of the second year of the Contract;
- (iii) _____ (**ECD\$ _____**) payable within six (6) months of the start of the third year of the Contract;
- (iv) _____ (**ECD\$ _____**) payable within six (6) months of the start of the fourth year of the Contract;

- (v) _____ (ECD\$_____) payable within six (6) months of the start of the Fifth year of the Contract;

6.2.3 _____ (ECD\$_____) over five (5) years, to secure the payment of All Risk and Peril Insurance on behalf of, and in the name of the Commission for all equipment purchased under this Contract, which amount to be divided as follows:

- (i) _____ (ECD \$_____) within six (6) months of the start of this Contract;
- (ii) _____ (ECD \$_____) within six (6) months of the second year of this Contract;
- (iii) _____ (ECD \$_____) within six (6) months of the third year of this Contract;
- (iv) _____ (ECD \$_____) within six (6) months of the fourth year of this Contract;
- (v) _____ (ECD \$_____) within six (6) months of the fifth year of this Contract;

7. Reporting and Project Administration

7.1 Director

The Commission designates Mr. Apollo Knights as the Commission's Director. The Director will be responsible for the coordination of activities under this Contract, for acceptance and approval of the reports and of other deliverables by the Provider and for receiving and approving invoices for payment.

7.2 Reports

The reports listed under “Universal Service Provider’s Reporting Obligations,” shall be submitted during the Term of this Contract in the format provided by the Commission. Each report shall include but not be limited to; the project description and goals, assessment of Provider’s progress, analysis of unexpected circumstances affecting or likely to affect performance of the Provider under this Contract, any or all deviations from agreed project milestones, and/or any other relevant information relating to the performance of the Provider under this Contract.

8. Performance Standards

The Provider undertakes to perform the Services with the highest standards of professional and ethical competence and integrity and in accordance with accepted industry standards.

9. Confidentiality

Except as may be specifically provided for in this Contract or as required by applicable laws, neither party may disclose any confidential information or trade secrets provided by one party to the other with respect to the Services to be implemented pursuant to this Contract, or disclose any other matter pertaining to this Contract without the express written consent of the other. Each party must retain any confidential information in strict confidence for the benefit of the other party, provided that the foregoing will not apply to any information that either party establishes as being already in the public domain or already known to the party receiving the information.

10. Ownership

All equipment purchased by the Provider to provide the Services hereunder shall be purchased for and on behalf of the Ministry of Education and shall be under the sole ownership and control of the Commission..

11. Insurance

Upon receipt of the Equipment in accordance with this Contract, the Provider shall, out of the funds set out at Clause 6.3.3, of this Contract, effect for and on behalf of and in the sole name of the Commission and All Risk and Peril Insurance Policy to cover the Equipment purchased under this Contract with Insurers as identified by the Commission. Immediately upon receipt of annual policy renewal notices (if applicable), the Commission shall forward such notices to the Provider in order for the Provider to pay the annual premium on or before the date stated in such annual renewal notice for the payment of the renewal premium. In the event that the premiums are increased by the Insurer during the term of this Contract, the Commission shall pay the Provider the difference in the new premium and the sums provided for under Clause 6.3.3, option 1 and 6.4.3, option 2 of this Contract. In no circumstances shall the Provider be liable to pay the Insurers or the Commission any sums greater than sums stated at Clause 6.3.3 option 1 and Clause 6.4.3 of this Contract.

12. Failure to Meet Agreed Milestones

Except where a Force Majeure Event has occurred in accordance with Clause 15, if the Provider fails to deliver any or all of the Services within the period(s) specified in the Contract or within such extended periods as may be agreed in writing by the Parties pursuant to Clause 16 of this Contract, the Commission shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to 1% of the delivered price of the unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of 10%. Once the maximum is reached, the Commission may consider termination of the Contract pursuant to Clause 17.

13. Warranties and Representations

13.1 Mutual warranties and Representations

Each party warrants to the other that:

- (a) It is validly existing and has the power to carry on its business as presently conducted;
- (b) It is free to enter into this Contract and has the power to deliver and perform its obligations and that all necessary actions and consents have been taken and validly obtained by it for the lawful execution, delivery and performance of this Contract;
- (c) This Contract constitutes binding legal obligations on them;
- (d) It shall execute any further documents and do all such further things as may be required to give effect to this Contract; and
- (e) It has not entered into and will not enter into any agreement with any third party which might conflict with the terms of this Contract.

13.2 Provider's Warranties and Representations

The Universal Service Provider warrants and represents that:

- (a) all goods and equipment supplied under the Contract will allow the provision of the Services in accordance with the quality levels outlined in the RFA document;
- (b) except with the written consent of the Commission, all telecommunications equipment installed to provide the Services shall be new and shall be type-approved in accordance with the laws of St. Vincent and the Grenadines and international standards;
- (c) any network constructed to provide the Services and any Services provided under this Contract shall comply with all applicable laws in St. Vincent and the Grenadines, including but not limited to telecommunications, environment, and import and export related laws;
- (d) All telecommunications facilities, network or equipment installed by the Universal Service Provider shall be maintained by the provider in good working order, ordinary wear and tear excepted. Down-time for any aspect of the network shall not exceed two (2) working days;
- (e) Any network constructed by the Provider to provide the Services and any Services provided under this Contract shall meet or exceed the specifications identified in this Contract;
- (f) The Provider has or will have, either by itself or in conjunction with its affiliates, or subcontractors, the skills, expertise, qualifications and experience necessary to construct and operate the network and provide the Services in accordance with this Contract;
- (g) Any representations and or warranties made in the Provider's Application as to facts materially related to the Services, including facts pertaining to the Universal Service Provider's corporate structure, organization, operations, general skills and

capabilities relevant to the Services, remain true and correct and will be observed by the Provider in all material respects.

14. Limitation of Liability

Except in cases of criminal negligence or wilful misconduct,

(c) the Provider shall not be liable to the Commission, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Provider to pay liquidated damages to the Commission; and

(d) the aggregate liability of the Provider to the Commission, whether under the Contract, in tort or otherwise, shall not exceed the Universal Service Fund Subsidy.

15. Force Majeure

15.1 For the purposes of this Contract, “Force Majeure Event” means any of the following events beyond the control of the parties:

(a) With respect to the obligation of both parties:

- (i) lightning, hurricanes, storms, earthquakes, landslides, floods, tsunami, washouts and other Acts of God;
- (ii) strikes, lockouts or other industrial disturbances of the party;
- (iii) civil disturbances, sabotage, war, blockades, insurrections, terrorist actions, vandalism, riots, epidemics;
- (iv) any law, order, proclamation, regulation, ordinance, demand or requirement of any governmental authority; and
- (v) any other material event that could reasonably be considered to be force majeure by reason that it is beyond the control of the party affected;

(b) and with respect to the obligations of the Provider alone, substantial or material fires, explosions, breakage of or other accidents to plant, machinery, equipment or other facilities of the Provider, but does not include the inability of either party to obtain financing or any other financial inability on the part of either party.

15.2 If and to the extent that a party’s performance of any of its obligations pursuant to this Contract is prevented, hindered or delayed by reason of a Force Majeure Event and such non-performance, hindrance or delay could not have been prevented by reasonable foresight or precautions, and cannot reasonably be circumvented through the use of alternative sources, work-around plans or other means, then the non-performing, hindered or delayed party may give written notice (a “Force Majeure Notice” to the other party within seven (7) days of the event.

15.3 A Force Majeure Notice shall contain reasonable particulars of the Force Majeure Event in question and the effect of such Force Majeure Event as it relates to the obligations of the non-performing, hindered or delayed party hereunder.

15.4 Within ten (10) business days of receipt of the Force Majeure Notice, the receiving party shall either:

- (i) certify in writing that (a “Force Majeure Certification”) that a Force Majeure Event has occurred, or
- (ii) indicate in writing that a Force Majeure Event has not occurred, providing reasons for this conclusion.

16. Delays and Rescheduling

- (i) Delivery of the Services shall be made by the Universal Service Provider in accordance with the time schedule prescribed by the Commission in this Contract.
- (ii) If at any time during performance of the Contract, the Provider or its subcontractors should encounter conditions impeding timely delivery of the Services, the Provider shall promptly notify the Commission in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Provider’s notice, the Commission shall evaluate the situation and may at its discretion extend the Provider’s time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.

17. Termination

17.1 Termination for Default

- (a) The Commission, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Provider, may terminate the Contract in whole or in part
 - (i) if the Provider fails to deliver any or all of the Services within the period specified in the Contract, or within any extension thereof granted by the Commission pursuant to Clause 16;
 - (ii) if the Provider fails to perform any other obligation under the Contract.
- (b) In the event, the Commission terminates the Contract in whole or in part, pursuant to Clause 17.1(a), the Commission may procure, upon such terms and in such manner as it deems appropriate, equipment or related Services similar to those undelivered or not performed, and the Provider shall be liable to the Commission for any additional costs for such similar equipment

or related Services. However, the Provider shall continue performance of the Contract to the extent not terminated.

17.2 Termination for Convenience

- B. (a) The Commission, by notice sent to the Universal Service Provider, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Commission's convenience, the extent to which performance of the Universal Service Provider under the Contract is terminated, and the date upon which such termination becomes effective.
- C. (b) Any Services that are or have been delivered within twenty-eight (28) days after the Provider's receipt of notice of termination shall be accepted by the Commission at the Contract terms and prices. For the remaining Services, the Commission may elect:
 - D. (i) to have any portion completed and delivered at the Contract terms and prices; and/or
 - (ii) to cancel the remainder and pay to the Provider an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Provider.

17.3 Termination by the Universal Service Provider

The Universal Service Provider may terminate the Contract for failure of the Commission to pay any of the sums specified in Clause 6, upon giving thirty (30) days written notice to the Commission.

18. Records, Audit and Inspection

- (a) The Universal Service Provider shall maintain all records required for the preparation of reports under Clause 7. The Provider shall also maintain complete records of its network plans, contracts entered into, and expenses incurred in connection with the implementation of the Services under this Contract and the provision of the Services, and any other records required for compliance with its obligations under this Contract, or relating to the performance of this Contract, shall be retained for 7 years from the date of final payment or completion of the contract, whichever is later.
- (b) The Commission shall have the right to send its auditors or other appointed representatives, on giving at least two (2) working days prior written notice, to the Universal Service Providers' places of business during normal business

hours, for the purpose of auditing or otherwise inspecting information and records of the Provider pertaining in any way to the performance of this Contract.

19. Dispute Settlement

- (a) If any dispute or difference of any kind whatsoever shall arise between the Purchaser and the Universal Service Provider in connection with or arising out of the Contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.
- (b) If after twenty-eight (28) days the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Commission or the Provider may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.
- (c) Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Services under the Contract.
- (d) Arbitration proceedings shall be conducted in accordance with the rules of procedure specified in the Laws of St. Vincent and the Grenadines.
- (e) Notwithstanding any reference to arbitration herein,
 - (i) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
 - (ii) the Commission shall pay the Provider any monies due the Provider.

20. Indemnification

The Universal Service Provider and its agents shall defend, indemnify, protect and save harmless the Commission its agents, servants and employees from and against any suits, claims, demands and damages of whatsoever kind or nature arising out of any negligent act, error or omission of the Provider or its agents, servants and employees in the performance of the Services under this Contract, including but not limited to reasonable expenditure for and costs of investigation, hiring of experts, witnesses, court costs, reasonable Attorney's settlements, judgments or otherwise. Provided however, that in no event shall the Provider's obligation to indemnify the Commission under this Contract exceed the

Universal Service Fund Subsidy in the aggregate for all claims for the entire term of this Contract.

21. Expenses

Each of the parties hereto will pay their respective legal and accounting costs and expenses incurred in connection with the preparation, execution and delivery of this Contract and all documents and instruments executed pursuant hereto and any other costs and expenses whatsoever and howsoever incurred.

22. Public Announcements

No public announcement or press release concerning this Contract will be made by the Universal Service Provider without the prior consent of the Commission.

23. Benefit of the Contract

This Contract will ensure to the benefit of and be binding upon the respective heirs, executors, administrators, successors and permitted assigns of the parties hereto.

24. Entire Contract

This Contract constitutes the entire agreement between the parties hereto with respect to the subject matter hereof and cancels and supersedes any prior understandings and agreements between the parties here with respect thereto. There are no representations, warranties, terms, conditions, undertaking or collateral agreements, express, implied or statutory, between the parties other than as expressly set forth in this Contract.

25. Severability

No modification of or amendment to this Contract is valid or binding unless set forth in writing and fully executed by both of the parties hereto and no waiver of any breach of any term or provision of this Contract is effective or binding unless made in writing and is signed by the party purporting to give the same and unless otherwise provided, is limited to the specific breach waived.

26. Assignment

This Contract may not be assigned by the Universal Service Provider without the prior written consent of the Commission.

27. Subcontractors

The Universal Service Provider shall be severally liable and responsible for the due performance of this Contract regardless of its engagement of subcontractors or other suppliers.

28. Notices

Any demand, notice or other communication to be given in connection with this Contract must be given in writing and must be given by personal delivery or such other method as may be agreed between the parties, addressed to the recipient as follows:

The Commission:

The Secretary/Director
National Telecommunications Regulatory Commission
P.O. Box 2368
2nd Floor NIS Building
Upper Bay Street
Kingstown
St. Vincent

Tel: 1 784 457 2729
Fax: 1 784 457 2834

Universal Service Provider:

General Manager
Cable and Wireless (St Vincent and the Grenadines) Limited
Halifax Street
Kingstown
St. Vincent
Tel: 1 784 457 1901
Fax: 1 784 457 2777

or to such other address or individual as may be designated by written notice given by either party to the other. Any demand, notice or other communication given by personal delivery will be conclusively deemed to have been given on the day of actual delivery thereof.

29. Governing Law

The Contract shall be governed by the laws of St. Vincent and the Grenadines.

30. Rights Granted to USF Service Provider

30.1 The Service Provider will not be permitted to conduct any additional marketing, training or public awareness activities which have not been agreed to by the Commission and the Ministry of Education at any location under this project.

30.2 Any ad, media release or publication, which is caused to be produced by the Service Provider as it relates to this project, should mention the role of the Universal Service Fund (USF) in the project. Additionally, such communiqué must be approved by the Commission before being published.

30.3 The Commission will invite representatives from the service provider to media interviews and public relations events held in relation to the provision of the Services under this project.

30.4 For any function where the Commission invites the Service Provider to attend in relation to this project, the Service Provider may erect one (1) banner/signage, which will not exceed 6Ft x 3 Ft, and which may not be placed in a way to obstruct the direct path of any other Public Relations material of the Commission. The Commission also reserves the right to approve the content of such banner and materials and also the placement of such advertising material in a location as it sees fit.

30.5 The Service Provider is granted authorization to have a booth placed at designated locations under this project and which locations and time will be approved by the Ministry of Education, to promote, advertise or for the sale of services and products for the duration of this project.

30.6 The Service Provider, in the event that a ceremony is held to mark the launch of this project by the Commission, will be invited to attend and to give remarks.

30.7 The Service Provider is permitted to erect a maximum of three (3) posters (properly framed) not measuring more than 2 1/2 ft x 3 ft each at each location. Such posters will highlight the Service Provider's brand and other marketing information, along with the role of the Universal Service Fund in this project and will be placed **within** the buildings at each location of this project. These posters should be placed in the computer labs of the locations in this project. In the event that no computer labs are in place at the locations then the posters will be allowed to be erected at another suitable areas that meet the approval of the Principal of that specific location but not on the outside of any building. The content of these posters have to be approved by the Commission and the Ministry of Education.

- 30.8 The Service Provider is permitted to erect a single sign (weather proof) not measuring more than 2 1/2 feet x 3 feet at each location. Such sign will highlight the Service Provider's brand and other marketing information, along with the role of the Universal Service Fund in this project. This sign would be placed on the **exterior** of the building at each location under this project. Such location must be approved by the Principal of the School. The content of this sign must be approved by the Commission and the Ministry of Education.

- 30.9 For clarity all posters, banners and signs, which are caused to be produced by the Service Provider for this project, must highlight the role of the Universal Service Fund and must be approved by the Commission before they are put in place.

- 30.10 Electronic devices (computers, mobile phones, etc) connecting to the wireless network provided under this project will be directed to either the homepage (website) of the service provider, homepage (Website) of the Commission or the homepage (Website) of the Ministry of Education (the Ministry of Education may decide on another homepage instead of its own). The proportion of electronic devices that will be directed to the homepage of the Service Provider will be 50%. Of the remaining devices, 50% will be directed to the website of the Commission and the remaining 50% to the Ministry of Education. (The Ministry of Education may decide on another homepage instead of its own)

IN WITNESS WHEREOF the Parties have executed this Contract on the day and the date first hereinbefore written.

Signed for and on behalf of the _____)
National Telecommunications Regulatory Commission) _____
 By: _____)

Name:

Title:

Date:

Witness:

Title:

Signed for and on behalf of _____)
(ST. Vincent and the Grenadines) Limited) _____
 by: _____)

Name:

Title:

Date:

Witness:

Title:

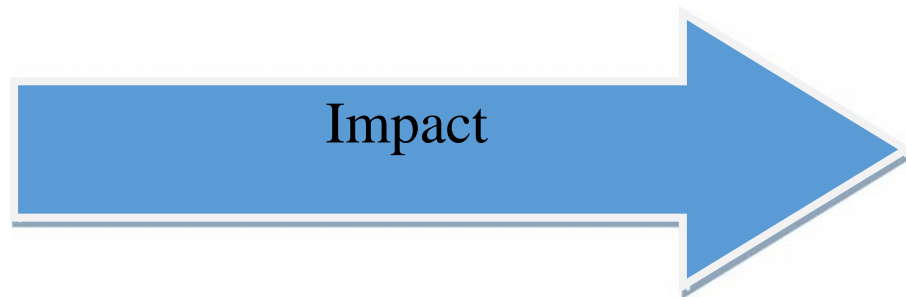
Appendix 22: Risk Probability Impact Scale

	<u>Low</u>	<u>Medium</u>	<u>High</u>
HIGH			
Medium	<u>Low</u> Inability to attain the required internet speeds at each location under the	<u>Medium</u> Time overrun Internet coverage is not accessible through each location	<u>Medium</u>
LOW	<u>Low</u> Timely arrival of equipment to project sites Good weather for the installation of equipment Timely Access to each project site Faulty Equipment	<u>Low</u> •Availability of equipment to execute the work. Availability of skilled labourers to execute the works Poor quality work	<u>Low</u>
	1	2	3

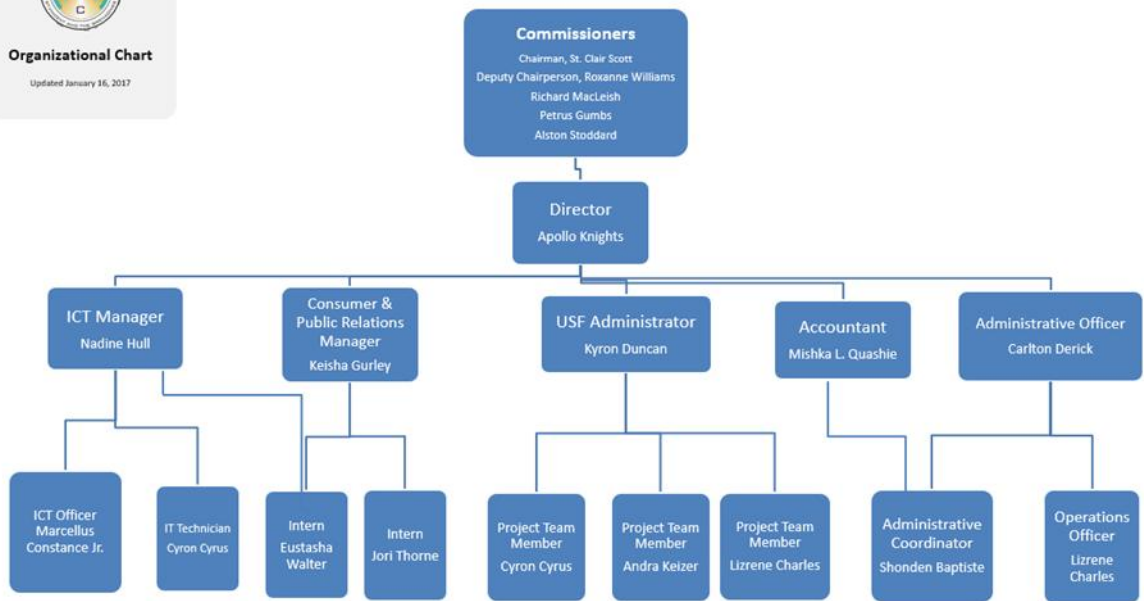
LOW

Medium

High



Appendix 23: Project Organizational Chart



Appendix 24: Project Team Directory

Project Team Directory			
Name	Position	Phone Number	Email Address
Mr. Kyron Duncan	Project manager	1-784-4572279	kduncan@ntrc.vc
Mr. Cyron Cyrus	Project Assistant 1	1-784-4561212	ccyrus@ntrc.vc
Ms. Lizrene Charles	Project Assistant 2	1-784-4512377	lcharles@ntrc.vc
Ms. Andra Keizer	Project Assistant 3	1-784-4587654	akeizer@ntrc.vc

Appendix 25:Stakeholder Profile

	Name	Role	Authority	Competency	
1	Mr. St Clair Timothy Scott	Sponsor	YES	Management	
2	Mr. Apollo Knights	Sponsor	YES	Management	
3	Mr. Kyron Duncan	Project Manager	YES	Project Management	
4	Mr. Cyron Cyrus	Project Assistant	NO	Project Management	
5	Ms. Lizrene Charles	Project Assistant	NO	Project Management	
6	Ms. Andra Keizer	Project	NO	Project	

		Assistant		Management	
7	Mr. Jimmy Prince	Recipient	No	user	
8	Students	Recipient	No	User	
9	Teachers	Recipient	No	User	
10	Contract Winner	Contractor	No	Contracting	
11	Community Groups	Recipients	No	User	

Appendix 26:Stakeholder Engagement Assessment Matrix

Stakeholder	Unaware	Resistant	Neutral	Supportive	Leading
1					X
2					X
3					X
4					X
5					X
6					X
7				X	
8				X	
9				X	
10				X	
11	X				

Note: For those stakeholders who are unaware, meetings will be held to engage and inform them.

Appendix 27: Stakeholder Engagement Strategy

Appendix 29: Project team Performance Assessments

NAME	
DATE OF EMPLOYMENT	
TITLE OF POSITION	
PERFORMANCE PERIOD	
APPRAISING OFFICER	

PERFORMANCE REVIEW

Rating Scale:

- (5) **Exceptional**
Performance far exceeded expectations due to exceptionally high quality of work performed in all *essential* areas of responsibility. Initiative and self-direction are dominant.
- (4) **Exceeds expectations**
Performance consistently exceeded expectations in all *essential* areas of responsibility, and the quality of work overall was excellent. Annual goals were met.
- (3) **Meets expectations**
Performance consistently met expectations in all *essential* areas of responsibility, at times possibly exceeding expectations, and the quality of work overall was very good. The most critical annual goals were met.
- (2) **Partially meets expectations**

Performance did not *consistently* meet expectations – performance failed to meet expectations in one or more *essential* areas of responsibility, and/or one or more of the most critical goals were not met. A professional development plan to improve performance must be outlined in Section 4, including timelines, and monitored to measure progress.

(1) **Unsatisfactory**

Performance was consistently below expectations in most *essential* areas of responsibility, and/or reasonable progress toward critical goals was not made. Significant improvement is needed in one or more important areas. In Section 4, a plan to correct performance, including timelines, must be outlined and monitored to measure progress

COMPETENCY AREA	POINTS	MARKS	COMMENTS										
<p>1. <u>Quality of work</u> Consider the employee's ability to produce high quality of work as indicated by accuracy, thoroughness and meeting deadlines.</p>	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">5</td> <td style="text-align: center;">4</td> <td style="text-align: center;">3</td> <td style="text-align: center;">2</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table>	5	4	3	2	1						35	<p>Employee:</p>
5	4	3	2	1									
<p>2. <u>Quantity of work</u> Consider the amount of work produce by the employee on a daily basis.</p>	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">5</td> <td style="text-align: center;">4</td> <td style="text-align: center;">3</td> <td style="text-align: center;">2</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table>	5	4	3	2	1						35	<p>Employee:</p>
5	4	3	2	1									

<p>3. <u>Punctuality & Attendance</u> Observes designated arrival time and lunch time period with promptness.</p>	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>1</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	5	4	3	2	1						<p>5</p>	<p>Employee:</p>
5	4	3	2	1									
<p>4. <u>Aptitude</u> Demonstrated ability to learn new things and make suggestions and improvement</p>	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>1</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	5	4	3	2	1						<p>5</p>	<p>Employee:</p>
5	4	3	2	1									
<p>5. <u>Professionalism</u> Demonstrated a disciplined approach to work and keeps and implements time management and task schedule.</p>	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>1</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	5	4	3	2	1						<p>5</p>	<p>Employee:</p>
5	4	3	2	1									
<p>6. <u>Communication and</u></p>			<p>Employee:</p>										

<p><u>interpersonal skills</u> Employee's ability to communicate effectively and understand the importance of interaction for organization success.</p>	<table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						<p style="text-align: center;">5</p>	

COMPETENCY AREA	POINTS	MARKS	COMMENTS										
<p><u>7.Team Work</u> Balances own responsibilities with interests of the team and/or department; respects group goals. Demonstrates positive influences within groups/teams in which he/she participates</p>	<table border="1"> <tr> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>1</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	5	4	3	2	1						<p style="text-align: center;">5</p>	<p>Employee:</p>
5	4	3	2	1									
<p><u>8. Responsibility & Accountability</u></p>			<p>Employee:</p>										

Accepts responsibility for actions taken and understands the implications of accountability to effective decision making	<table border="1"> <tr> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>1</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	5	4	3	2	1						5	
5	4	3	2	1									

SUMMARY OF PERFORMANCE:

Present Job Performance:

Exceptional	90-100%
Exceed expectations	80-89%
Meets expectations	65-79%
Partially meet expectations	50-64%
Unsatisfactory	0-49%

Employee's Overall Comments:

Director's Overall Comments:

Appendix 30: Certificate of Philologist



THE UNIVERSITY OF THE WEST INDIES

Kenesha Justlin Richardson

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 ARTS
LINGUISTICS

with
First Class Honours

July 1, 2012

DATE

Earl R. Harris

VICE-CHANCELLOR

C. William Horne

UNIVERSITY REGISTRAR

Appendix 31: letter from Philogist

*Kenesha Richardson
C/O P.O Box 130
Kingstown*

*Cell: 1-784-498-5692
Work: 1-784-457-7948*

Email: profesora101@gmail.com

February 20th, 2017

To Whom it May Concern

I am Miss Kenesha Richardson, a Specialist Teacher and Head of the Modern Languages Department and the Business, Art and Music Department at the Bethel High School.

I reviewed this document for Mr. Kyron Duncan, correcting syntactical, semantic, in-text citation errors and appendices (2- 12). This review was done from pages one (1) to 102.

Sincerely yours,

K. Richardson
Kenesha Richardson (Miss)