UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

THE DEVELOPMENT OF A PROJECT MANAGEMENT PLAN TO FACILITATE PROCUREMENT FOR HALLIBURTON SURINAME DIVISION

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DEDICATION

I dedicate my dissertation work to my family and many friends. A special feeling of gratitude to my loving parents, Sjama Sewratan Ratchasing and Soerinderkoemar Sewratan whose words of encouragement and push for tenacity ring in my ears. My brother, Shailindra Sewratan, and sister in law, Soeraya Sewratan Mangelsing, have also never left my side and are very special.

I also dedicate this dissertation to my many friends and Sangh (Social Organization) family who have supported me throughout the process.

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INDEX OF CONTENTS

INDEX OF FIGURES

INDEX OF CHARTS

ABBREVIATIONS AND ACRONYMS

AC: Actual Cost

CC: Cost Center

CMT: Cementing

CPI: Cost Performance Index

EV: Earned Value

FFP: Firm Fixed Price

FGP: Final Graduation project

FM: Functional Manager

HR: Human Resources

HSE: Health, Safety and Environment

IEM: Internal Equipment Maintenance

ML: Most Likely

MPMM: Method123 Project Management Methodology

NSDP: Near Shore Drilling Project

O: Optimistic

OPM3: Organizational Project Management Maturity Model

P: Pessimistic

PERT: Programme Evaluation Review Technique

PM: Project Manager

PMBOK® Guide: Project Management Body of Knowledge Guide

PMCoE: Project Management Center of Excellence

PMI: Project Management Institute

PML: Supply Chain Management

PMP: Project Management Plan

PO: Purchase Order

PPE: Personal Protective Equipment

PR: Purchase Requisition

PS: Procurement Specialist

PSL: Product Service Line

PV: Planned Value

QA: Quality Assurance

QC: Quality Control

QP: Quality Planning

RACI: Responsible Accountable Consulted Informed

RFP: Request For Approval

SAP: Systems Applications and Products in Data Processing

SLA: Service Level Agreement

SOW: Statement of Work

Sperry Drilling Svcs: Sperry Drilling Services

SPI: Schedule Performance Index

SQ: Service Quality

SV: Schedule Variance

UCI: University of International Cooperation

US: United States

VSH: Verenigde Surinaamse HoldingMIJ/United Surinam Holding Company

WBS: Work Breakdown Structure

W&P/WP: Wireline and Perforating

EXECUTIVE SUMMARY (ABSTRACT)

This document described the development of a project management plan to set-up the procurement contracts with local vendors for Halliburton Suriname Branch. Halliburton is a service company in the oil and gas business and is contracted to Staatsolie, the government owned Oil Company in Suriname, since the 1980's. Until last year, there were only two PSLs (Product Service Lines) from Halliburton, out of the 14 PSLs, based in Suriname. The business was quite small, around 25 employees, and there was no need to install local procurement so far. The procurement and HR (Human Resources) were coordinated from Halliburton Trinidad Branch.

Early this year Staatsolie started with the Near Shore Drilling Project (NSDP). After the tender with the service companies, where Halliburton also participated, Halliburton was the lucky one to win the whole package for the Near Shore operations. The organization obtained the contract to perform all well services. This project goes together with the setting up of more PSLs in Suriname for better service quality. In addition to the PSLs, Cementing and Wireline & Perforating, that the company had till last year, now it has also Sperry, Baroid, HSE and Project Management based in Suriname. Now it became high time to install local procurements in the organization because of the nature of the business. That is, some PSLs requires to purchase items urgently when they need it. As it was earlier, to purchase an item Halliburton were dependent on Trinidad, and on the travel (transportation) time of the item to arrive in Suriname. Now with this change in the business, it will make it easier for the PSLs to purchase their items locally as well as save a considerable amount of transportation costs.

The company used the project management tools together with MyRequest tools (tools used by the company to create Purchase Requisitions) or the SAP (Systems Applications and Products in Data Processing). However, after the charter was signed, execution was set to begin without a formal project management plan to guide all of the critical aspects of the project's lifecycle. Therefore, to successfully install the procurement department in Suriname, associated with all contracts with local vendors and procedures/processes to create the MyRequest or Purchase Requisitions (PR), a comprehensive Project Management Plan had to be developed.

The general objective was to develop a Project Management Plan, framed within the standards of the Project Management Institute (PMI), to be used to manage the implementation of procurement needs for Halliburton Suriname Branch. The specific objectives were: to develop the Integration Management Plan in order to unify and coordinate the processes and project management activities; to create a scope management plan to ensure that it includes all the work, and only the work, required to successfully complete the project; to create a time management plan to support the development and management of a project schedule to ensure the project is completed within the time constraints; to create a cost management plan to define the processes for developing and managing the project budget to ensure it is completed within the budget constraints; to develop a quality management plan to identify the quality requirements for the project in order to ensure results meet

expectations for approval; to create a resource management plan to ensure that all resources are identified and managed effectively for the successful completion of the project ; to develop a communications management plan to ensure the timely and effecitve communication of the project status and other key information; to create a risk management plan to identify and examine risks to the successful completion of the project; to develop a procurement management plan to be used to obtain products, services or results required by the project and to develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder management.

The methodology used for the research was analytical or explanatory. The main sources used to gather information included A Guide to the Project Management Body of Knowledge (*PMBOK® GUIDE*) Sixth Edition and interviews, which were held with members from the project management team, the responsible persons from the PSLs and the vendors. The information was analyzed to create each subcomponent of the subsidiary plans used to develop the Project Management Plan for the installation of procurement locally.

Having explored the objectives outlined previously, it can be concluded that the need for the Procurement System in Suriname is of vital importance if the company wants to meet global goals of reducing cost numbers and having a better revenue every month.

In this case, the PMP will guide Halliburton Suriname Branch, focusing on the deliverables stablished, assuring existing standards are met, and promoting the project's completion within the time and cost constraints. The plan provides guidance so all stakeholder needs are taken into consideration and ensure transparency in decision-making. Although procurement management has been used for years at Halliburton Suriname Division, the *PMBOK® GUIDE* provided a set of good project management practices used by the project team to develop a more thorough project management plan and to improve the way the company will manage a project as important as the procurement system implementation project. Therefore, this PMP represents a milestone regarding to the project management approach, methodology, strategy, and decision-making processes that will guide the company projects from now on.

The Stakeholder and Communication management plans are crucial, since the PMP represents a significant opportunity to promote best practices within the organization. Most of the stakeholders are from Halliburton itself, in-home, and they know the advantage of the project to their work. However, it is a good practice to encourage stakeholder's involvement for project success purposes.

It is recommended that the project team should consider the use of the planning process and templates created during the development of the Project Management Plan for the Procurement System Implementation Project, as a basis for implementing a methodology to be used by the company for future projects of similar relevance. This means that the project management team should recommend the benefits of using the concepts from the *PMBOK® GUIDE* to upper management. In addition, all PSLs in Suriname should be provided with the concepts of *PMBOK® GUIDE* to increase the percentage of project's success from now on.

1. INTRODUCTION

1.1 Background

Founded in 1919, Halliburton is one of the world's largest providers of products and services to the energy industry. With 60,000 employees, representing 140 nationalities in more than 80 countries, the company helps its customers maximize value through the lifecycle of the resevoir – from locating hydrcarbons and managing geological data, to drilling and formation evaluation, well construction and completion, and optimizing production throughout the life of the asset.

Halliburton comprises 14 product service lines (PSLs). PSLs are primarily responsible and accountable for strategy, technology development, process development, people development and capital allocation. The PSLs operate in two divisions: Drilling and Evaluation, and Completion and Production. In addition, the companies Consulting and Project Management PSL works across both divisions and is the spearhead of their integrated-services strategy. Its financial results are included in the Drilling and Evaluation Division.

Halliburton has been operating is Suriname since the 1980's for the state owned oil and gas company called Staatsolie. At Halliburton in Suriname, all procurement matters were managed from Trinidad. This was so because the business was small until last year and it was economically not profitable to install procurement locally.

1.2 Statement of the problem

Since untill early last year Halliburton Suriname Branch consists only for 2 PSL's namely Cemeting and Wireline and Perforating, it was a quite small business with only these two PSL's, so the organization was getting support from Trinidad for HR and Procurement matters. However, it was taking long to purchase items and

due to the nature of the operation, the company sometimes need items urgently, so the main issues were the delivery time and the high transportation costs.

Staatsolie started recently with the Near Shore Drilling Project (NSDP). After tendering with Service Companies, Halliburton got the whole package to operate on the West Castor (Near Shore) Rig. This means that now the company have more PSL's of Halliburton in Suriname. In addition to the Cementing and Wireline & Perforating PSLs, now it has also Sperry, PM and other PSLs. The operation became much bigger now which means they need to incorporate Procurement locally for easiness and to lower the transportation costs.

Considering the operations became much bigger, due to the Near Shore Drilling Project of Staatsolie and due to the size and complexity of the project, it is of great importance to produce an extensive management tool to install procurement locally. Therefor, each element of the Project Management Plan will be created, along with all of the tools, techniques and concepts used to justify each management decision selected for the installation of locally procurements covering all processes/procedures/contracts with vendors and responsible PSLs.

1.3 Purpose

Procurement, now also based in Suriname, identified a couple of (local) vendors to work with in order to get items easily in a timely manner and with lower transportation costs. Therefore, in order to increase the successful installation of procurements locally for Halliburton Suriname Branch, the Project Manager will seek to develop the Project Management Plan by detailing the management of all critical aspects of the project.

The research proposal will explore the Project Management Institute's (PMI) guide to create a Project Management Plan, providing justification for the decisions made while developing the project's integration, scope, time, cost, quality, human resources, communication, risk, procurement and stakeholder management plans.

The subsidiary documents will guide the Project Management Team during the executing, monitoring and controlling and closing processes. In addition, they will facilitate the procurement processes/procedures to effectively and efficiently manage procurements for Halliburton Suriname Branch, especially for the Near Shore Drilling Project, with a reasonable timeframe, with desirable quality and within budget.

1.4 General objective

To develop a Project Management Plan, framed within the standards of the Project Management Institute (PMI), to be used to manage the implementation of procurement needs for Halliburton Suriname Branch.

1.5 Specific objectives

The specific objectives for this project are:

1.5.1 To develop the Integration Management Plan in order to unify and coordinate the processes and project management activities.

1.5.2 To create a scope management plan to ensure that it includes all the work, and only the work, required to successfully complete the project.

1.5.3 To create a time management plan to support the development and management of a project schedule to ensure the project is completed within the time constraints.

1.5.4 To create a cost management plan to define the processes for developing and managing the project budget to ensure it is completed within the budget constraints.

1.5.5 To develop a quality management plan to identify the quality requirements for the project in order to ensure results meet expectations for approval.

1.5.6 To create a resource management plan to ensure that all resources are identified and managed effectively for the successful completion of the project.

1.5.7 To develop a communications management plan to ensure the timely and effecitve communication of the project status and other key information.

1.5.8 To create a risk management plan to identify and examine risks to the successful completion of the project.

1.5.9 To develop a procurement management plan to be used to obtain products, services or results required by the project.

1.5.10 To develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder management.

2. THEORETICAL FRAMEWORK

2.1 Company/Enterprise framework

2.1.1 Company/Enterprise background

Founded in 1919, Halliburton celebrates this year its 100 years of service as one of the world's largest providers of products and services to the energy industry. With 60,000 employees, representing 140 nationalities in more than 80 countries, the company helps its customers maximize value throughout the lifecycle of the reservoir – from locating hydrocarbons and managing geological data, to drilling and formation evaluation, well construction and completion, and optimizing production throughout the life of the asset.

Halliburton's fascinating and proud history reveals a continuous focus on innovation and expansion that began with the company's founder, Erle P. Halliburton. After borrowing a wagon, a team of mules and a pump, he built a wooden mixing box and started an oil well cementing business in Duncan, Oklahoma. In the 1930s, Halliburton established its first research laboratories where the company tested cement mixes, began offering acidizing services to break down the resistance of limestone formations and increase the production of oil and gas, and performed its first offshore cementing job using a barge-mounted cementing unit at a rig in the Creole Field in the Gulf of Mexico. This was the beginning of what was to become the world's most extensive offshore service (Halliburton, n.d.).

Halliburton took the initial step toward becoming a worldwide company in 1926. In the 1980s, Staatsolie (the government owned company) contracted Halliburton in Suriname to provide logging & perforating and cementing services. The business was quite small, around 25 employees working in the two PSLs Wireline & Perforating and Cementing. Because of the size of the business, it was economically not profitable to install procurement locally in Suriname. Having installed procurement means to have at least one more headcount which, in the end, will affect the revenue. This means that procurement were managed all the time from Halliburton Trinidad Branch. Even HR activities for Suriname are done from Trinidad. Coming back to procurement, it was

taking time to receive an item in Suriname. Due to the nature of the business, the company sometimes require some items very urgently. Moreover, this was always an issue, because the organization depends on Trinidad, how fast/slow they work, etc. In addition, it was also hitting the revenue because of the transportation costs.

Early this year Staatsolie increased their operation with the Near Shore Drilling Project (NSDP). After tendering with different service companies, Staatsolie chose for Halliburton to work with on the West Castor Rig (the Rig at Near Shore). Halliburton got the complete package of Drilling, Cementing and Logging. This increased the activities of Halliburton Suriname and the business became much bigger than it was until last year. In addition to the PSLs Wireline & Perforating (WP) and Cementing (CMT), now Halliburton Suriname consists of Sperry, PML (Supply Chain Management) and Project Management. Due to the size of the business, it was now required to install local procurement to easily and effectively deal with vendors.

2.1.2 Mission and vision statements

“At Halliburton, we collaborate and engineer solutions to maximize asset value for our customers. Our mission as a company identifies what we do today, why we do it and from whom; while our vision defines what we aspire to be and gives us an image of what success will look like. Our values are our corporate DNA, the foundation from how we relate to each other and every individual and entity with whom we interact. These are the principles that every Halliburton employee is expected to use, live by, and demonstrate on a daily basis”, retrieved from Halliburton website.

Halliburton’s mission statement is as follows:

To achieve superior growth and returns for our shareholders by delivering technology and services that improve efficiency, increase recovery and maximize production for our customers.

The vision statement is as follows:

To deliver a customer experience second to none, as globally competitive, creative and ethical thought-leaders.

2.1.3 Organizational structure

The objective in designing a project structure is to provide a formal environment that the project manager can use to influence team members to do their best in completing their assignment duties. Therefore, the project manager must create a project structure that will meet the various project needs at different phases of the project.

It is the task of the Project Manager to identify the central problem to solve and determine, with input from the sponsor and stakeholders, how to tackle it: what the project's objectives and scope will be and which activities will deliver the desired results. He then plans and schedules tasks, oversees day-to-day execution, and monitors progress until he evaluates performance, brings the project to a close and captures the lessons learned. The project manager for this project needs to understand this in order to have a good communication between the procurement department shown below.

The procurement department of Halliburton in Suriname is, now with this NSDP, of about average size. Some of the employees from the procurement are based in Trinidad and some are locally in Suriname. In figure 1 the structure of the procurement department has been depicted.

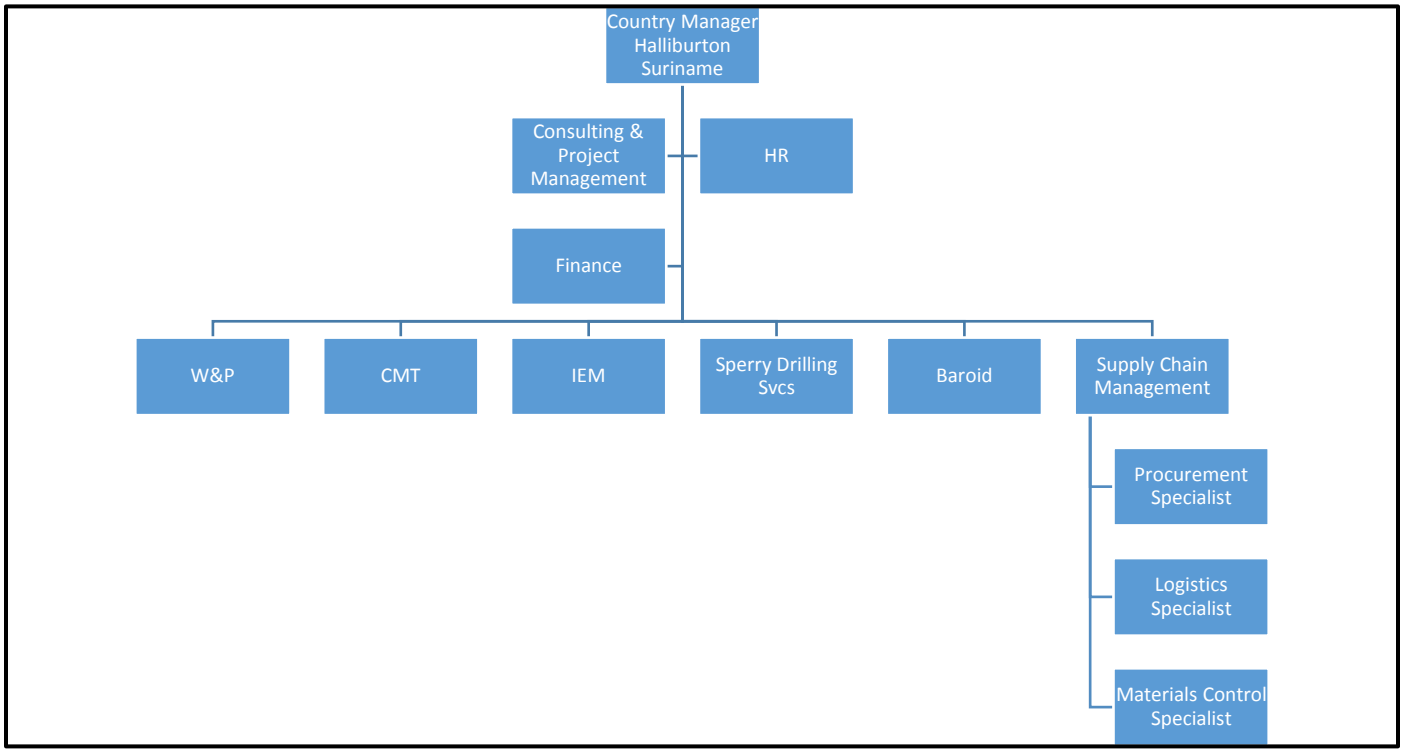


Figure 1: Organization Chart (Source: Compiled by Author)

Depicted in figure 1, the organization chart is shown with breakdown only in the Supply Chain Management PSL, since this is of main importance for this project. The Supply Chain Managemetn PSL deals almost with all other PSLs, because they are the one who are responsible for the procurement of all the PSLs. Especially for this NSDP, the organization has some specialists supporting Suriname operations. As stated earlier, here in Suriname the company doesn't have the Supply Chain Management PSL installed. Trinidad was supportng them all the time. But since the operations is getting bigger, it is now time to have the Supply Chain Management PSL installed with locals so that the organization can become independent from other countries.

2.1.4 Products offered

As stated earlier, until last year there were only two PSLs of Halliburton based in Suriname namely WP and CMT.

WP provides the logging and perforating services. The wells from Staatsolie, after having drilled them, are logged by WP,cemented by CMT PSL and afterwards perforated by WP, in order for the fluid downhole to flow into the well and pump it to the surface.

Now, with the NSDP, the PSL Sperry provides the service called logging while drilling. They are responsible for drilling the wells at the West Castor Rig. While drilling, they also log the well. In addition, the PSL Project Management is dealing with the business case and the NSDP itself.

The development of this Project Management Plan will offer the installation of procurement in Suriname for Halliburton Suriname Branch.

2.2 Project Management concepts

2.2.1 Project

According to the Project Management Body of Knowledge (*PMBOK® GUIDE*), a project is defined as a temporary endeavor undertaken to create a unique product, service or result (PMI,p.4, 2017). In here, some terms need to be defined for a better understanding of the concept.

- **Unique product, service or result.** Projects are undertaken to fulfill objectives by producing deliverables. An objective is defined as an outcome toward which work is to be directed, a strategic position to be attained, a purpose to be achieved, a result to be obtained, a product to be produced or a service to be performed. A deliverable is defined as 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 (PMI, p.4, 2017).
- **Temporary.** Temporary means that every project has a definite beginning and a definite end. The end is reached when all the objectives have been achieved or when it is clear that the project objectives will not or cannot be achieved, or when

the need for the project no longer exists and the project is terminated. In each case, the duration of the project is limited. Projects are not ongoing efforts but have a life cycle. The temporary nature of projects also applies to other aspects of a project**:** the business opportunity is temporary (some projects have a limited time to produce their products or services) or the project team, as a working unit, seldom lasts after the project. Usually, a team is created for the sole purpose of carrying out the project. When the project ends, the team separates, and or is reassigned.

- **Unique.** Every project is unique; it can be unique to the organizations or there are unique elements that distinguish two projects from each other; even though the same company constructs identical buildings, the building have two different owners, different locations, etc. and as such they are two different projects.

On the other hand, according to Kerzner (2013), a project has the following characteristics:

- It has a specific objective to be completed within certain specifications
- It has a life cycle with a defined start and a must be terminated on finite due date
- It has a funding limits
- It consumes human and non-human resources
- Is multifunctional.

As stated earlier, all project are unique even two projects have the same subject, they will be different at some point. Even this project is unique and it is based on the practices of the *PMBOK® Guide.*

2.2.2 Project management

Project management is the discipline of initiating, planning, executing, controlling and closing the work of a team to achieve specific goals and meet specific success criteria. Project Management is a problem-based, interdisciplinary course in project

management skills and techniques that are needed to successfully manage projects in a modern business environment (JB,p. 1, 2017).

Project Constraints

A constraint in project management is any restriction that limits project's desired outcome. Project constraints is one of the important factors that would influence the way the company manage the project and in some cases, it would be a determinant factor to decide whether to continue the project or not (Krishnan, p.1, 2017). It is a common misconception that the project management constraints are internal i.e. limitations due to internal factors associated to that particular project. Though internal limitations such as project scope or cost play a major role in defining the project constraints, some external factors such as environment, external stakeholders can also impose restrictions or limitations that would result as project constraints. Typically, time, cost and scope are considered as the triple constraints, while other constraints are quality, risk, resources and customer satisfaction. A change to one constraint can have effects on other constraints and this should be evaluated carefully when planning or executing a project.

2.2.3 Project life cycle

The project life cycle determines the series of phases that a project passes through from its inception to the end of the project (PMI, p.19, 2017). In addition, Adrienne Watt stated in chapter 3 of his book "Project Management" that all projects have a start, a middle period where activities take place to advance the project, and an ending (either successful or unsuccessful). To carry out the work for the project in order to meet the project's objectives is the common goal of the project manager and the project team. Typically, any project can be divided into four major phases, which are initiation, planning, implementation and closure. All these together represent the path that a project takes from the beginning to its end and are generally referred as the "life cycle" of a project (Watt,p.30, 2012). The Project Life Cycle is depicted in figure 2, after which each phase is described.

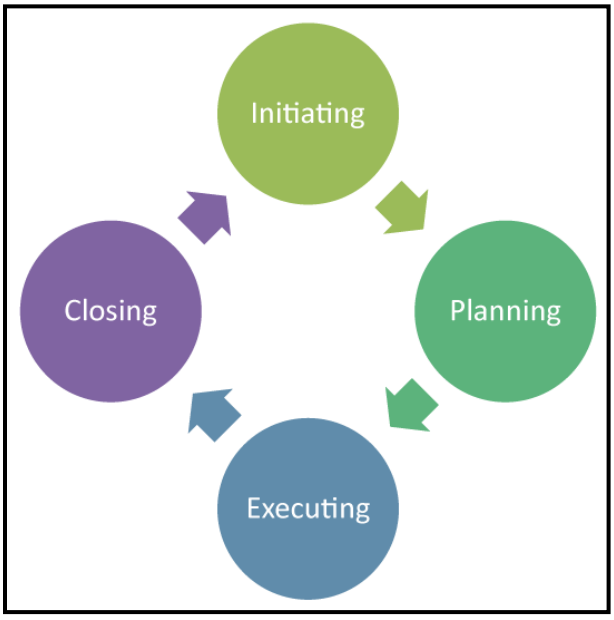


Figure 2: Project Life Cycle (Source: Services, p. 1, 2019)

Project Initiation

The project is defined and authorized in the initiation phase. Information to define the project can come from several places such as Project Statement of Work (SoW), Business Case, Contract, etc. With the information provided, the project manager creates the project charter that authorizes the project and documents the initial requirements for the project. The activities related to the project Initiation Phase has been depicted in figure 3.

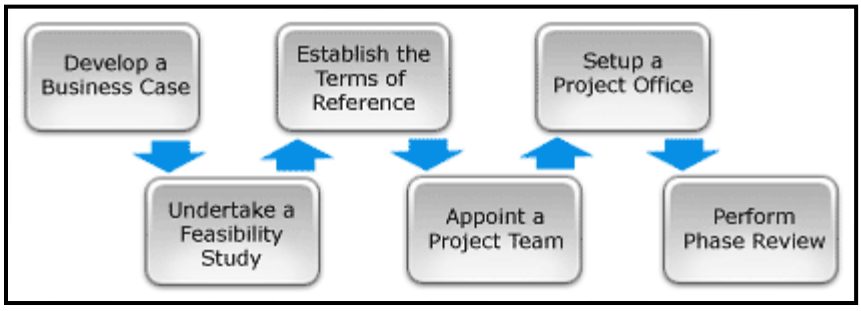


Figure 3: Project Initiation (Source: MPMM, 2019)

Project Planning

The purpose of the planning phase of the project is to determine the approach the organization will take and define all the details of how the project will take place. The planning phase is further distinguished into strategic planning, that is where the company develop the overall approach to the project, and the implementation planning, to figure out all the details of how the project will be done. Figure 4 shows an overview regarding the project-planning phase.

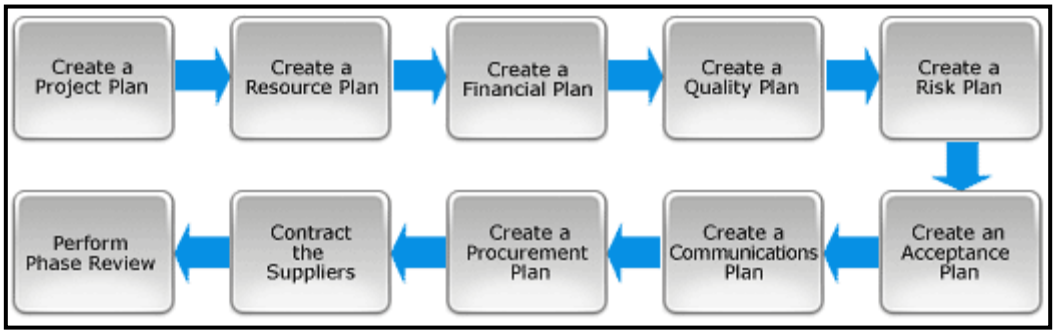


Figure 4: Project Planning (Source: MPMM, 2019).

Project execution

The activities that are defined in the previous phases are carried out in this phase. This is the phase where most of the time money and people are used on a project. The task of the project manager here is to keep all the activities moving forward in a coordinated manner. The company will need to track the progress of each activity and adjust the plans when the situation changes, also known as the Monitor and Control process. The activities during the Project execution, Monitor and Control Process, are depicted in figure 5.

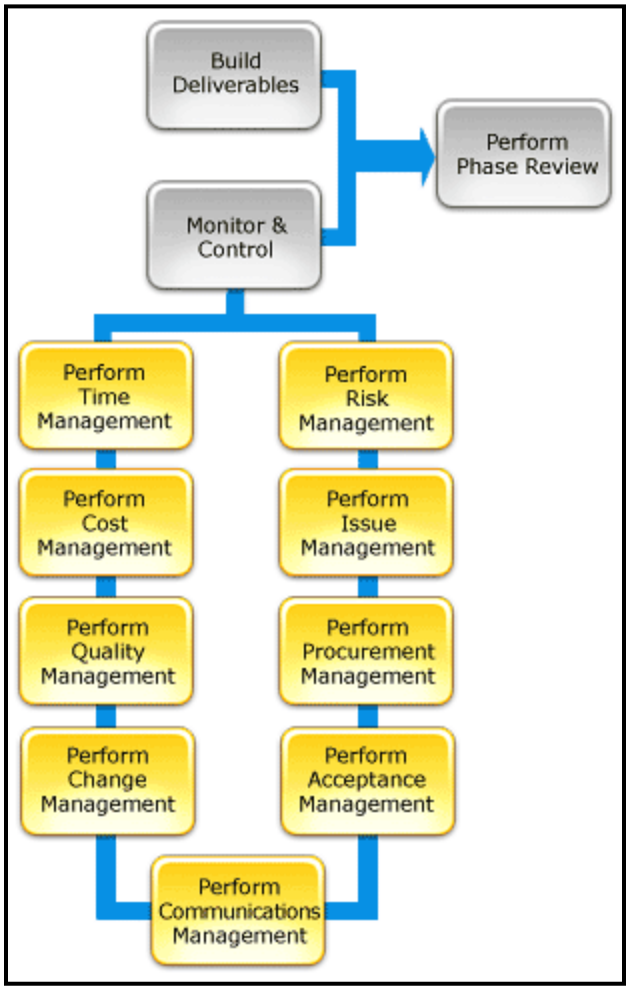


Figure 5: Project Execution (Source: MPMM, 2019)

Project Closure

In this phase, the project is formally closed. The key activities for the project closure are:

- Verify that the completion criteria are met
- Create a project closure report
- Collect and archive project artifacts
- Perform a project postmortem

Project closure, depicted in figure 6, involves releasing the final deliverables to the customer, handing over project documentation to the business, terminating supplier contracts, releasing project resources and communicating project closure to all

stakeholders. The last remaining step is to undertake a Post Implementation Review to identify the level of project success and note any lessons for future projects.

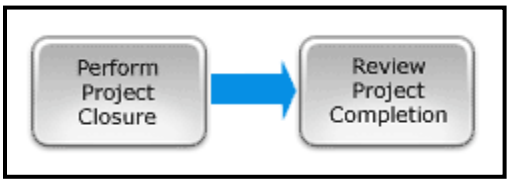


Figure 6: Project Closure (Source: MPMM, 2019)

2.2.4 Project management processes

According to the Project Management Institute (2013), Project Management is accomplished by 47 logically grouped Project Management Processes, which are grouped in five Process Groups, namely:

1. Project Initiation
    i. Selection resource limits
    ii. Recognizing the benefits of the project
    iii. Uncover initial requirements, assumptions, risks, constraints, stakeholders and existing agreements
    iv. Select project manager
    v. Develop project charter
    vi. Assess project feasibility
    vii. Create measurable objective

2. Project Planning
    i. Create project scope statement
    ii. Estimate work requirements, quality and quantity of work and resources needed
    iii. Estimate time and develop schedule
    iv. Evaluation of the various risks
    v. Gain formal approval

3. Project execution
    i. Acquire project team members
    ii. Execute the work

4. Project monitoring and control
    i. Track and analyze project progress, compare with predicted outcome
    ii. Request, approve or reject changes

5. Project closure
    i. Verifying that all of the work has been accomplished
    ii. Contractual closure of the contract
    iii. Financial closure of the charge numbers
    iv. Administrative closure of the paperwork

2.2.5 Project management knowledge areas

In the *PMBOK® Guide* the process groups are the chronological phases that the project goes through and the knowledge areas occur throughout any time during the process groups. The process groups are horizontal and the knowledge areas are vertical. They are the core technical subject matter of the project management profession and they bring the project to life. Based on the *PMBOK® Guide* there are 10 knowledge areas, each one will be described hereafter.

1) Project Integration Management

Contains the tasks that hold the overall project together and integrate it into a unified whole. In chart 1, the different activities related to this knowledge area are depicted.

Chart 1: Integration Management Process (Source: Mulcahy, p.108-144, 2013)

Project Integration Management Process	Done during
Develop Project Charter	Initiating Process Group
Develop Project Management Plan	Planning Process Group
Direct and Manage Project Work	Executing Process Group

Project Integration Management Process	Done during
Monitor and Control Project Work	Monitoring and Controlling Process Group
Perform Integrated Change Control	Monitoring and Controlling Process Group
Close Project Phase	Closing Process Group

2) Project Scope Management

Defines the project scope, project requirement scope, project work, making the work breakdown structure, making the scope baselines and managing the scope of the project. This is one point where the company can plan the ways of keeping the project within the established boundaries. The activities related to the scope management are depicted in chart 2.

Chart 2: Scope Management Process (Source: Mulcahy, p.160-186, 2013)

Scope Management Process	Done during
Plan Scope Management	Planning Process Group
Collect Requirements	Planning Process Group
Define Scope	Planning Process Group
Create WBS	Planning Process Group
Validate Scope	Monitoring and Controlling Process Group
Control Scope	Monitoring and Controlling Process Group

3) Project Time Management

The project manager estimates the duration of the tasks in this knowledge area. This is where he/she sequences the tasks and chooses the number of resources required to achieve the objective of the project. The activities related to the time management are depicted in chart 3.

Chart 3: Time Management Process (Source: Mulcahy, p. 198-240, 2013)

Time Management Process	Done during
Plan Schedule Management	Planning Process Group
Define Activities	Planning Process Group

Time Management Process	Done during
Sequence Activities	Planning Process Group
Estimate Activity Resources	Planning Process Group
Estimate Activity Durations	Planning Process Group
Develop Schedule	Planning Process Group
Control Schedule	Monitoring and Controlling Process Group

4) Project Cost Management

Budget baseline is established and costs are estimated in this knowledge area. Depicted in chart 4, the activities in this process are to plan, estimate, determine and control cost to complete the project within the approved budget.

Chart 4: Cost Management Process (Source: Mulcahy, p. 254-280, 2013)

Cost Management Process	Done during
Plan Cost Management	Planning Process Group
Estimate Cost	Planning Process Group
Determine Budget	Planning Process Group
Control Cost	Monitoring and Controlling Process Group

5) Project Quality Management

In this area, all the quality issues are monitored and fixed. It is the process to determine, perform and control quality policies, objectives and responsibilities to meet the needs for which the project was undertaken.

Chart 5: Quality Management Process (Source: Mulcahy, p. 292-323, 2013)

Quality Management Process	Done during
Plan Quality Management	Planning Process Group
Perform Quality Assurance	Executing Process Group
Control Quality	Monitoring and Controlling Process Group

6) Project Resource Management

This knowledge area comprises of the processes very essential to define the ways resources, Physical and/or Human will be utilized, developed, acquired and managed. The activities to this area are depicted in chart 6.

Chart 6: Resource Management Process (Source: PMI, p. 345-390, 2017)

Resource Management Process	Done during
Plan Resource Management	Once or at predefined points
Estimate Activity Resources	Periodically as needed
Acquire Resources	Periodically as needed
Develop Project Team	Throughout the project
Manage Project Team	Throughout the project
Control Resources	Throughout the project

7) Project Communications Management

Defines how communications within the project will work. The project manager makes the communications management plan, ensures the plan is followed and controls information flow within the project. Depicted in chart 7, there are three activities to be carried out in this area.

Chart 7: Communications Management Process (Source: Mulcahy, p. 382-396, 2013)

Communications Management Process	Done during
Plan Communication Management	Planning Process Group
Manage Communications	Executing Process Group
Control Communications	Monitoring and Controlling Process Group

8) Project Risk Management

Depicted in chart 8, the main activities for this area are identifying risks, planning risk management, conducting risk assessments and controlling risks. Here the organization concentrate on identifying, analyzing, planning responses to both “threat risks” (negative) and “opportunity risks” (positive).

Chart 8: Risk Management Process (Source: Mulcahy, p. 406-444, 2013)

Risk Management Process	Done during
Plan Risk Management	Planning Process Group
Identify Risk	Planning Process Group
Perform Qualitative Risk Analysis	Planning Process Group
Perform Quantitative Risk Analysis	Planning Process Group
Plan Risk Responses	Planning Process Group
Control Risks	Monitoring and Controlling Process Group

9) Project Procurement Management

Processes to purchase or acquire products, services or results needed from outside the project team. Chart nine shows the activities related to this area.

Chart 9: Procurement Management Process (Source: Mulcahy, p. 458-515, 2013)

Procurement Management Process	Done during
Plan Procurement Management	Planning Process Group
Conduct Procurement	Executing Process Group
Control Procurements	Monitoring and Controlling Process Group
Close Procurements	Closing Process Group

10) Project Stakeholder Management

This area encompasses all the processes, which is used by a project manager for recognizing and satisfying the ones who are affected by the project. The affected party can be either internal or external, in nature.

Chart 10: Stakeholder Management Process (Source: Mulcahy, p. 528-541, 2013).

Stakeholder Management Process	Done during
Identify Stakeholders	Initiating Process Group
Plan Stakeholders Management	Planning Process Group
Manage Stakeholder Engagement	Executing Process Group
Control Stakeholder Engagement	Monitoring and Controlling Process Group

All these ten knowledge areas are the basics for completing a project successfully and will be integrated for this enterprise. Some knowledge areas like stakeholder, cost and communication management are practiced but are seen as logical steps.

2.3 Project Management Plan

2.3.1 Terminology and correlation with project performance

Project Management Institute (2013, p. 1) defines standard as *"a formal document that describes established norms, methods, process and practices"*. The *PMBOK® Guide* and Organizational Project Management Maturity Model (OPM3®) are all standards within the discipline of project management. A standard is generally accepted as best practice within a discipline.

PMBOK® Guide 6th Ed. defines a Project Management Plan (PMP) as the document that describes how the project will be executed, monitored and controlled. Develop project management plan is the process of defining, preparing and coordinating all plan components and consolidating then into an integrated Project Management Plan (PMI, 2017). The purpose of such a document is to provide a comprehensive baseline of what has to be achieved by the project, how it is to be achieved, who will be involved, how it will be reported and measured and how information will be communicated. It should be used as a reference for any decision that is made on the project and for clarification of unclear areas.

The Project Management Plan should be used as a reference throughout the project to ensure that the management of the project is carried out consistently and in line with policy and procedures. Although the PMP is developed as part of the project initiation and definition, it should be a living document that evolves as the project progresses and is updated with the latest relevant information as required (Ltd, n.d.).

Methodologies provide a structure so that an organization can perform projects in a standardized, systematic and disciplined manner. This is done using practices that

increase the likelihood to deliver a successful project (Steyn J. M., 2012). Adopting a methodology allows to extract the most efficiency from project management activities and greater efficiencies increases chances of project success.

According to Kerzner (2013), maturity in project management is the implementation of a standard methodology and accompanying processes such that there exists a high likelihood of repeated successes.

Kerzner (2010) and Whitaker (2016) has identified the following benefits of a methodology:

- Decreased cycle time and lower costs
- Realistic plans with greater chances of meeting deadlines
- Better communication
- Feedback: lessons learned
- Greater customer satisfaction
- Increased efficiency & reputation
- More successful projects

A framework is a set of guidelines to proceed in a particular direction. Then, the methodological framework consists of tools, sources, research methods, tools, assumptions & constraints and deliverables that will be described in the next chapter.

3 METHODOLOGICAL FRAMEWORK

3.1 Information sources

A source, also called as reference, is a text or other work providing information that is used (University, 2016). The correct and efficient way to use sources is that writers must be able to identify the nature of each source and why they use that source. Clearly stating the sources will allow writers to be able to distinguish between their own contribution and the argument expressed by the sources that are being used. Although, several distinctions can be made between various types of sources, in academic research the common division is between primary and secondary sources, which will be described next.

3.1.1 Primary sources

Indiana University (2017) defines primary sources as to be providing direct or firsthand evidence about an event, object, person or work of art. Characteristically, these are contemporary to the events and people described. In addition, primary sources show minimal or no mediation between the document/artifact and its creator (University I., 2017). According to Harvard Library (2019), primary sources are created by witnesses or recorders who experienced the events or conditions being documented. Regardless of the format available, primary sources are characterized by their content.

The primary sources used for this graduation are:

- Interviews
- Communications via email

Primary sources used for each one of the specific objectives for this graduation are depicted in Chart 11.

3.1.2 Secondary sources

Secondary sources are created by someone who did not experience first-hand or participate in the events or conditions of the research (Library, 2019). It is said that secondary sources interprets and analyzes primary sources and may contain pictures, quotes or graphics of primary sources.

Secondary sources used for this graduation are:

- *PMBOK® Guide sixth* edition.
- Information from Halliburton website.
- Relevant documentation obtained from the internet.

Secondary sources used for each one of the specific objectives for this graduation are depicted in Chart 11.

Chart 11: Information Sources (Source: Compiled by Author).

Objectives	Information sources	
	Primary	Secondary
To develop the Integration Management Plan in order to unify and coordinate the processes and project management activities.	▪ Interviews ▪ Communications via email	▪ *PMBOK® Guide sixth* edition. ▪ Relevant documentation obtained from the internet. ▪ Information from Halliburton website.
To create a scope management plan to ensure that it includes all the work, and only the work, required to successfully complete the project.	▪ Interviews ▪ Communications via email	▪ PMBOK® Guide sixth edition. ▪ Relevant documentation obtained from the internet. ▪ Information from Halliburton website.

Objectives	Information sources	
	Primary	Secondary
To create a time management plan to support the development and management of a project schedule to ensure the project is completed within the time constraints.	▪ Interviews ▪ Communications via email	▪ PMBOK® Guide sixth edition. ▪ Relevant documentation obtained from the internet.
To create a cost management plan to define the processes for developing and managing the project budget to ensure it is completed within the budget constraints.	▪ Interviews ▪ Communications via email	▪ PMBOK® Guide sixth edition. ▪ Relevant documentation obtained from the internet. ▪ Information from Halliburton website.
To develop a quality management plan to identify the quality requirements for the project in order to ensure results meet expectations for approval.	▪ Interviews ▪ Communications via email	▪ PMBOK® Guide sixth edition. ▪ Relevant documentation obtained from the internet. ▪ Information from Halliburton website.
To create a resource management plan to ensure that all resources are identified and managed effectively for the successful completion of the project.	▪ Interviews ▪ Communications via email	▪ PMBOK® Guide sixth edition. ▪ Relevant documentation obtained from the internet. ▪ Information from Halliburton website.

Objectives	Information sources	
	Primary	Secondary
To develop a communications management plan to ensure the timely and effecitve communication of the project status and other key information.	▪ Interviews ▪ Communications via email	▪ PMBOK® Guide sixth edition. ▪ Relevant documentation obtained from the internet.
To create a risk management plan to identify and examine risks to the successful completion of the project.	▪ Interviews ▪ Communications via email	▪ PMBOK® Guide sixth edition. ▪ Relevant documentation obtained from the internet.
To develop a procurement management plan to be used to obtain products, services or results required by the project.	▪ Interviews ▪ Communications via email	▪ PMBOK® Guide sixth edition. ▪ Relevant documentation obtained from the internet. ▪ Information from Halliburton website.
To develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder management.	▪ Interviews ▪ Communications via email	▪ PMBOK® Guide sixth edition. ▪ Relevant documentation obtained from the internet. ▪ Information from Halliburton website.

3.2 Research Methods

According to the American sociologist Earl Robert Babbie, research is a systematic inquiry to describe, explain, predict and control the observed phenomenon (Adi Bhat, 2019). Using scientific methods, research can also be defined as a careful consideration of study regarding a particular concern or a problem by using scientific methods. On the other hand, Bryman (2012) defines research method as a technique for collecting data. It includes the various procedures, schemes and algorithms used to gather data and find solution(s) to a problem.

In order to develop a project management plan, the organization in charge is analyzed. Subsequently, the project has been undertaken to confirm the importance of planning in everyday activities as a tool that will investigate, identify and analyze alternate paths toward project goal. The most viable path is chosen based on the current best practices (knowledge or theory/software) with empirical support. To achieve this, a research design is created based on qualitative research with the aim to facilitate project management maturity by developing a project management plan.

The following research methods are used for this graduation:

- Unstructured interviews
- Systematic Reviews and Research Synthesis

3.2.1 Unstructured interviews

This research method employs technique where the interviewer only has a list of topics to be covered. Also called an interview guide or aide-memoire, it usually takes place in an informal setting (Brymam, p. 470, 2012). The purpose of unstructured interviews is to explore the views, experiences and motivations on specific matters. It should provide a deeper understanding of the current status of the procurement and how to make changes.

In the elaboration of this Project Management Plan, interviews will take place, especially with the procurement specialist, in order to know first-hand their opinion and the opportunities they identify related to this proposal.

3.2.2 Analytical technique

Analytical Techniques are methods that analyze problems, facts or status in order to accurately forecast potential outcomes while factoring in project variables. They are to solve specific issues in a particular task. Unlike management methods that affect the organization as a whole, analytical techniques are both task- and time-limited thus they only affect a particular project in question (VICTOR, 2019).

Depicted in chart 12, the research methods for each specific objective are given.

Chart 12: Research Methods (Source: Compiled by author)

Objectives	Research Methods	
	Unstructured Interviews	Analytical Technique
To develop the Integration Management Plan in order to unify and coordinate the processes and project management activities.	To obtain information that will inform the scope, interviews will be conducted with the known stakeholders.	The analytical method will be employed by using facts or information from the sources identified in Chart 1 objective 1 above, to drive decision making when creating the project charter, change control, lessons learned and project closure processes.
To create a scope management plan to ensure that it includes all the work, and only the work, required to successfully complete the project.	A project scope will be decided by performing interviews with the PSLs in charge and the Procurement Specialists.	The analytical method will be employed by using facts or information from the sources identified in Chart 1 objective 2 above, to drive decision making when creating the documents, which comprise the scope management plan.
To create a time	A schedule will be developed	The analytical method will be

Objectives	Research Methods	
	Unstructured Interviews	Analytical Technique
management plan to support the development and management of a project schedule to ensure the project is completed within the time constraints.	from data observed from interviews with experts and stakeholders.	employed by using information from the sources identified in Chart 1 objective 3 above, to drive decision making when creating the documents that will comprise the time management plan.
To create a cost management plan to define the processes for developing and managing the project budget to ensure it is completed within the budget constraints.	By doing an interview with the procurement specialist and the vendors, a cost management plan will be developed.	The analytical method will be employed by using information from the sources identified in Chart 1 objective 4 above, to drive decision making when creating the documents that will comprise the cost management plan.
To develop a quality management plan to identify the quality requirements for the project in order to ensure results meet expectations for approval.	Interviews will be performed with the vendors to provide best quality products for the PSLs.	The analytical method will be employed by using information from the sources identified in Chart 1 objective 5 above, to drive decision making when creating the documents that will comprise the quality management plan.
To create a resource management plan to ensure that all resources are identified and managed	A Resource plan will be created by obtaining data from the interviews.	The analytical method will be employed by using information derived from the sources identified in Chart 1 objective 6

Objectives	Research Methods	
	Unstructured Interviews	Analytical Technique
effectively for the successful completion of the project.		above, to drive decision making when creating the documents that will comprise the resource management plan.
To develop a communications management plan to ensure the timely and effecitve communication of the project status and other key information.	By performing interviews with stakeholders, the communications management plan will be developed.	The analytical method will be employed by using information derived from the sources identified in Chart 1 objective 7 above, to drive decision making when creating the documents that will comprise the communications management plan.
To create a risk management plan to identify and examine risks to the successful completion of the project.	All possible risks will be identified and analyzed by performing interviews with PSLs and procurement specialist.	The analytical method will be employed by using information derived from the sources identified in Chart 1 objective 8 above, to drive decision making when creating the documents that will comprise the risk management plan.
To develop a procurement management plan to be used to obtain products, services or results required by the project.	Contracts with vendors will be obtained from interviews with procurement specialist.	The analytical method will be employed by using information derived from the sources identified in Chart 1 objective 9 above, to drive decision making when creating the documents that will comprise the procurement

Objectives	Research Methods	
	Unstructured Interviews	Analytical Technique
		management plan.
To develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder management.	A stakeholders management plan will be developed from data observed from the interviews.	The analytical method will be employed by using information derived from the sources identified in Chart 1 objective 10 above, to drive decision making when creating the documents that will comprise the stakeholder management plan.

3.3 Tools

Project Management tools are precisely what make managing projects easier and more effective. It helps the manager to plan, execute and control all aspects of the Project Management Process and ensures that each task is completed on time and to balance staff workload for optimal time management. Another advantage of tools in project management is that it enhances resource efficiency and ensures project scope (Renolds, 2017). For each knowledge area, the *PMBOK® Guide* sixth Ed. provides tools to be used for that specific knowledge area. Based on this information, the tools associated to each specific subject are depicted in chart 13. Here is a summary of the tools that are used in this FGP.

3.3.1 Expert Judgment

PMBOK® Guide sixth edition defines Expert Judgement as judgment provided based upon expertise in an application area, industry, etc. as appropriate for the activity being performed. Any group or person with specialized education, knowledge, skill, experience or training may provide such expertise (PMI, p.79 2017).

3.3.2 Data Gathering

This is the process of collecting and measuring information on variables of interest and can be accomplished through brainstorming, focus groups or interviews (PMI, p. 80, 2017).

3.3.3 Interactive communications

According to Project Management Institute (2013), interactive communication is communication between two parties performing a multidirectional exchange of information. It is considered the most effective way to ensure common understanding on specific topic and can include meetings, phone calls, instant messaging, etc. (PMI, p. 321, 2013).

Depicted in chart 13, the tools for each specific objective are given.

Chart 13: Tools (Source: Compiled by author)

Objectives	Tools
To develop the Integration Management Plan in order to unify and coordinate the processes and project management activities.	▪ Expert Judgement. ▪ Data Gathering. ▪ Interactive communications
To create a scope management plan to ensure that it includes all the work, and only the work, required to successfully complete the project.	▪ Expert Judgement. ▪ Data Gathering. ▪ Interactive communications
To create a time management plan to support the development and management of a project schedule to ensure the project is completed within the time constraints.	▪ Expert judgement ▪ Data Gathering. ▪ Interactive communications
To create a cost management plan to define the processes for developing and managing the project budget to ensure it is completed within the budget constraints.	▪ Expert Judgement. ▪ Data Gathering. ▪ Interactive communications

Objectives	Tools
To develop a quality management plan to identify the quality requirements for the project in order to ensure results meet expectations for approval.	▪ Expert Judgement. ▪ Data Gathering. ▪ Interactive communications
To create a resource management plan to ensure that all resources are identified and managed effectively for the successful completion of the project.	▪ Expert Judgement. ▪ Data Gathering. ▪ Interactive communications
To develop a communications management plan to ensure the timely and effecitve communication of the project status and other key information.	▪ Expert Judgement. ▪ Data Gathering. ▪ Interactive communications
To create a risk management plan to identify and examine risks to the successful completion of the project.	▪ Expert Judgement. ▪ Data Gathering. ▪ Interactive communications
To develop a procurement management plan to be used to obtain products, services or results required by the project.	▪ Expert Judgement. ▪ Data Gathering. ▪ Interactive communications
To develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder management.	▪ Expert Judgement. ▪ Data Gathering. ▪ Interactive communications

3.4 Assumptions and constraints

According to Tracy Sharp (2014), assumptions are defined as “the act of taking something for granted, or something taken for granted”. PMI says factors that, for planning purposes, are considered to be true, real or certain without proof or demonstration can be defined as assumptions. Assumptions are the expectations of the

project manager to have or easily accessible for the project. If they are not, than key project milestones may be missed, for example, late completion date, etc.

Constraints on the other hand are limitations placed upon the project that the project manager and team must work within. Constraints could have a negative effect on the project, are often under the control of the project manager, and tend to be imposed. Constraints are generally associated with scope, time and cost (triple constraint) (Angelo, 2006). The constraints and assumptions for this FGP are evolved in chart 14.

Chart 14: Assumptions and constraints (Source: Compiled by author)

Objectives	Assumptions	Constraints
To develop the Integration Management Plan in order to unify and coordinate the processes and project management activities.	▪ All the information required for the FGP will be readily available. ▪ Sufficient support will be received form the tutor. ▪ Project Scope will not be modified. ▪ A fully integrated project plan will be developed.	▪ Some project phases may not be completed on time.
To create a scope management plan to ensure that it includes all the work, and only the work, required to successfully complete the project.	▪ All the information require for the FGP will be readily available. ▪ Project Scope will be defined.	▪ The scope may change as the project progresses.
To create a time management plan to support the development and management of a project schedule to ensure the	▪ All the information require for the FGP will be readily available. ▪ A realistic time management plan will be	▪ Not enough expert judgement available to provide expert judgement.

Objectives	Assumptions	Constraints
project is completed within the time constraints.	developed.	
To create a cost management plan to define the processes for developing and managing the project budget to ensure it is completed within the budget constraints.	▪ All the information require for the FGP will be readily available. ▪ A detailed budget will be developed.	▪ Not enough time and resources available to create a detailed budget.
To develop a quality management plan to identify the quality requirements for the project in order to ensure results meet expectations for approval.	▪ All the information require for the FGP will be readily available. ▪ All stakeholder requirements will be collected and analyzed.	▪ Stakeholders requirements may change.
To create a resource management plan to ensure that all resources are identified and managed effectively for the successful completion of the project.	▪ All the information require for the FGP will be readily available. ▪ All roles and responsibilities will be identified and someone will be assigned to own those roles and responsibilities.	▪ Some resources may not be available.
To develop a communications management plan to ensure the timely and effecitve communication of the project	▪ All the information require for the FGP will be readily available. ▪ All line of command and authority will be	▪ Some communication methods may not be available.

Objectives	Assumptions	Constraints
status and other key information.	documented.	
To create a risk management plan to identify and examine risks to the successful completion of the project.	▪ All the information require for the FGP will be readily available. ▪ Maximum possible risks will be identified and controls will be provided.	▪ Some risks may occur because of other concerns.
To develop a procurement management plan to be used to obtain products, services or results required by the project.	▪ All the information require for the FGP will be readily available. ▪ Maximum possible goods and services, depending on availability, will be procured locally.	▪ Some providers may not have the required goods available locally.
To develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder management.	▪ All the information require for the FGP will be readily available. ▪ All stakeholder requirements will be identified along with their level of interest.	▪ Stakeholder requirements may change during the project.

3.5 Deliverables

Project deliverables are described as a product or service that a project produces for its customer, client or project sponsor. It is the product or service that the project delivers to its customers (Bernie Roseke, 2016).

In chart 15, there is an overview of the deliverables for each specific subject.

Chart 15: Deliverables (Source: Compiled by author)

Objectives	Deliverables
To develop the Integration Management Plan in order to unify and coordinate the processes and project management activities.	Project Management Plan Project Charter
To create a scope management plan to ensure that it includes all the work, and only the work, required to successfully complete the project.	Scope Management Plan
To create a time management plan to support the development and management of a project schedule to ensure the project is completed within the time constraints.	Time Management Plan
To create a cost management plan to define the processes for developing and managing the project budget to ensure it is completed within the budget constraints.	Cost Management Plan
To develop a quality management plan to identify the quality requirements for the project in order to ensure results meet expectations for approval.	Quality Management Plan
To create a resource management plan to ensure that all resources are identified and managed effectively for the successful completion of the project.	Resource Management Plan
To develop a communications	Communications Management Plan

Objectives	Deliverables
management plan to ensure the timely and effecitve communication of the project status and other key information.	
To create a risk management plan to identify and examine risks to the successful completion of the project.	Risk Management Plan
To develop a procurement management plan to be used to obtain products, services or results required by the project.	Procurement Management Plan
To develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder management.	Stakeholder Management plan

4. RESULTS

4.1 Project Integration Management Plan

The Project Integration Management Plan considers the Project Charter and the Project Management Plan.

4.1.1 Project Charter

For the Project Management Plan, the first process was the development of the Project Charter that formally authorized the project and provided the Project Manager with the authority to apply organizational resources. A template from the PMI database was used as a tool to develop the Project Charter.

PMBOK® Guide 6th Edition states that the key benefits of creating the project charter are that it provides a direct link between the project and the strategic objectives of the organization, creates a formal record of the project, and shows the organizational commitment to the project. The inputs, tools & techniques and outputs, retrieved from the *PMBOK® Guide* are depicted in the figure to follow hereafter.

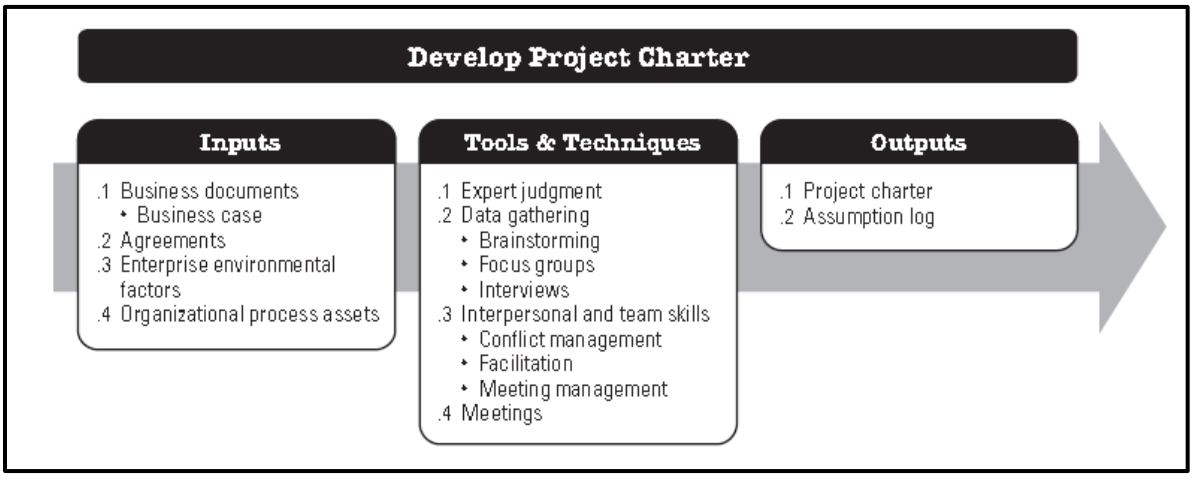


Figure 7: Develop Project Charter (Source: PMI, p. 75, 2017).

Inputs

- Business case.

  This is the business document most commonly used to create the project charter. The business case describes the necessary information from a business standpoint to determine whether the expected outcomes of the project justify the required investment and is commonly used for decision making by managers or executives above the project level (PMI, p. 77, 2017). The business case for this project has been created due to organizational needs for procurement. Please refer to appendix 4 for the business case.

- Agreements.

  Agreements are used to define initial intensions for a project. The agreements related to this project will be covered in section 8 of this chapter.

Due to company policy, not all information and data are given free to use. As such, Enterprise Environmental Factors and Organizational Process Assets contains confidential information and are not released to be used for this FGP.

Tools & Techniques

- Expert judgment was provided by expertise in the procurement area because they have the specialized education, knowledge, skill, experience or training.
- Data gathering was performed by using interviews with the different PSLs personnel to collect information about what kind of material they need for their operations. Afterwards, this information was categorized in order to choose/select the correct vendors.
- Meetings were conducted with the PSL leads to decide and finalize the correct vendors who will provide the quality materials that each PSL needs.

Output

As a result of the inputs, tools and techniques, the project charter has been developed which is shown below. It was not needed to create the assumption log as a separate document, since all assumptions were already covered in the project charter.

Chart 16: Project Charter (Source: Compiled by Author).

PROJECT CHARTER
Project Name
The development of a project management plan to facilitate procurement for Halliburton Suriname Division
Project Purpose/Justification
The implementation of the local procurement system will result in greater efficiency with regards to company resources and business processes. The PMP Project is also aligned with corporate strategy and objectives since it uses technology to improve the way the organization do business. While other alternatives and the status quo were analyzed, the PMP Project was selected for proposal in this business case because it provides the best opportunity to realize benefits in an expedited manner while also allowing for the greatest improvement in efficiency and cost reduction. Other alternatives assumed greater risk, provided less benefits, were too difficult to define, or were not suitably aligned with current corporate strategy and/or objectives.
Business Objectives
For Halliburton, Safety and Service Quality (SQ) are the most important factors to do business. In regards to this PMP project, SQ is of utmost important to meet stakeholders' requirements. As such, the following business objectives have been established with respect to the PMP project for the implementation of procurement in Halliburton Suriname: 1. To identify the material requirements for all stakeholders in order to meet their requirements so that they can deliver good quality work. 2. To identify the best vendors, by meeting the requirements of the materials needed by each PSL, to supply all needed materials. 3. To establish the contracts between vendors and the company, to define the guidelines of the service required. 4. To include vendors in SAP in order to gather and manage all the information

effectively.

5. To develop MyRequest Tool in order to provide a structure that can meet the requirements for both the vendors and the different PSLs.
6. To develop the Procurement Test to ensure that the system provides the service required and has growth potentials for now and the future.
7. To train PSLs in order to give employees the skills they need to use with the new software.
8. To launch MyRequest Tool in order to promote an effective procurement system between PSLs.

Project Description

Stakeholders

Halliburton PSLs

- Supply Chain Management (PML).
- HR & Procurement.
- WP.
- CMT.
- Sperry.
- PM.

Customer Staatsolie

- Procurement.
- Suppliers or vendors

For a complete list of vendors, please refer to Appendix 5.

Measurable Project Objectives and Success Criteria

Requirements

The local procurement system should be easily accessible to all employees so that they can request their material on their own, without wasting time to wait on someone else. It should also incorporate qualified vendors whose materials meet Halliburton standards, who has enough material in stock and can supply materials

anytime needed, due to the nature of the business.

Constraints

The project should be finished according to the schedule. The procurement system should be explained to someone locally so that when the specialists go back to their home country, the system can be modified, if needed, by locals easily.

Assumptions

Work force

- It is assumed that the PSLs will identify personnel who will be responsible to make the requisitions for purchasing materials.

Planning

- It is assumed that the PSL will handle the transportation of the materials, once the requisition has been approved, by communication with the vendors.
- It is assumed that whenever prices changes at the vendor, the responsible person for procurements will also do this modification in the system.
- It is also assumed that the buyer (PSL responsible person) will communicate with the vendor prior to creating the requisition so that he/she can explain what exactly is needed.

Preliminary Scope

The project includes to facilitate procurement for purchasing materials. The transportation cost of materials has been excluded from this project. In addition, the project has been established for materials with non-Halliburton part numbers. Anything that has a Halliburton part number should be procured through Halliburton SAP internal system and purchased through Halliburton manufacture based in the US.

Risks

a. Financial
   - Prices at the local vendors might change.
   - Damaged or low quality materials delivered by vendors.
   - Wrong item/part/materials purchased.

b. Planning regulatory demands

- Demands are not consistent with the supplied materials.
- Sound contracts with vendors.

c. Stakeholders
- Vendor unauthorized/misplaced involvement in the project.
- No sound communication between buyer (PSL) and seller (Vendor).

d. Scheduling delays
- Contract approvals with vendors might cause delays.

SAP system might cause delays when it is down due to bad internet connection or maintenance.

Project deliverables

Company internal deliverables

- Project charter.
- Procurement system (SAP and MyRequest Tool).
- Identified materials by PSLs.
- Identified vendors with high quality products.
- Contracts with vendors.
- Vendor list with contact and vendor number.
- Training to PSL.

Vendors/Suppliers deliverables

- Meeting with vendors.
- Contract with vendors.

Summary Milestone Schedule

1. Project Initiation/Kick-off	August 1, 2019
2. Project Defined	August 12, 2019
3. Feasibility Study Complete	August 15, 2019
4. Approval of Project Charter	August 26, 2019
5. Meeting with all PSLs complete	January 2nd, 2020
6. Materials list and requirements complete	January 10th, 2020

7. Meeting with vendors complete	January 20th, 2020
8. Vendor list complete	January 27th, 2020
9. Procurement system implementation start	February 3rd, 2020
10. Vendors incorporated into procurement system complete	February 6th, 2020
11. PSL responsible personnel access granted to system complete	February 11th, 2020
12. Testing of implemented procurement system	February 20th, 2020
13. Procurement system launch	February 27th, 2020
14. Training to PSL personnel complete	March 1st, 2020
15. Additional materials/vendors added to system	March 7th, 2020
16. Establish payment traffic from finance to vendors complete	March 13th, 2020
17. Final account	March 23rd, 2020
18. Project closure	March 30th, 2020

Project Budget

Item	Costs (US$)
Labor cost	$ 50,000.00
Technology (internet, computer, etc.)	$ 50,000.00
Facility	$ 90,000.00
Consumables	$ 9,000.00
Transportation	$ 10,000.00
Unforeseen costs	$ 10,000.00
Grant Total	**$ 219,000.00**

Project Approval

In order to gain project approval, a good working procurement system should be established no later than March 1st, 2020 with all of the details agreed upon the

Scope Statement and the requirements. **Project Manager** The project manager is Mr. Frank Malca Layne. The Assistant Project Managers is Mr. Dino Mohammed, will act on his behalf in his absence. Responsibilities include: Production, Coordination, Quality Control, Regulation Compliance, Reporting, Project Finances and Contract Reviews and Coordination.	
Authorization	
Approved by: Representative of Halliburton Suriname Branch	**Date:**

4.1.2 Project Management Plan

The development of the Project Management Plan is the second process in the Project Integration Management knowledge area comprised of the subsidiary plans developed during the Final Graduation Project. A template provided by UCI, was used to guide the compilation of the plan.

In addition, the Project Management Plan considers the following processes: Change Control, Lessons Learned and project closure, which are described hereafter.

4.1.2.1 Change Control Process

Change Control is a formal process that is set up to enable project teams to modify the scope of the project using specified controls and policies. Change can include anything that would impact the project's triple constraints (time, budget and scope) all of which can impact quality.

Any changes in this project can be requested by the stakeholders (PSLs, Vendors/Suppliers, Project Manager, Project Team Members, Project Sponsor). The change request will have to follow the process depicted in figure 8.

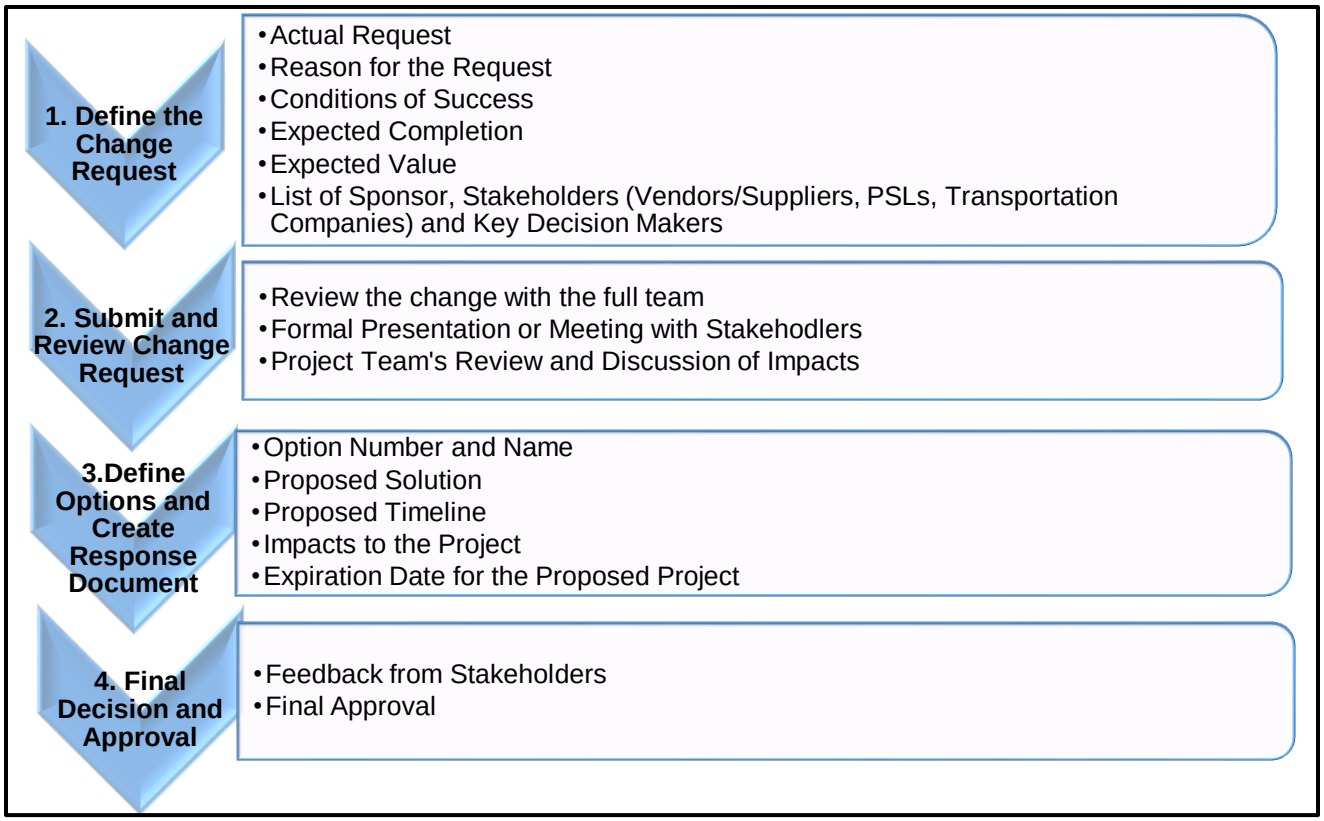


Figure 8: Change Control Process (Source: Compiled by Author).

When the company finds a problem, they can just make a change, because it may be too expensive or take too long to do. However, they will need to look at how it affects the triple constraint (time, cost, scope) and how it influences project quality.

The organization will then have to figure out if it is worth making the change. If the company evaluates the impact of the change and finds that it will not have an impact on the projects triple constraint, then they can make the change without going through the change control process. The change control process is a set of procedures that allows the organization make changes in an organized manner.

Any time the organization needs to make a change to the plan, they must start with a change request, which is the document that the person making the change request must complete. Please refer to appendix 6 for the Change Control Request Form.

Once the change is requested, it is submitted to the change control board who considers changes for approval. In addition, the request should also be submitted to the project sponsor or management for review and approval.

Finally, any change approved must be documented so the company can figure out what needs to be done, when and by whom. Putting the documented changes through change control will help to evaluate the impact and update all the necessary documents. All the approved documents are than send back to the team to put them in place. Please refer to appendix 7 for the Change Control Template.

4.1.2.2 Lessons Learned

Capturing lessons learned is an on-going effort throughout the life of the project. The project team learns from project failures as well as project successes to prepare for the current project or for identifying project management process improvements. Capturing lessons learned is good for the team, organization, existing and future projects, as they represent the company's commitment to project management excellence and the project manager's opportunity to learn from actual experiences of others (Rowe, 2006).

Lessons learned can be positive or negative which represents opportunities or threats, respectively, to the project. Any positive lessons learned in this project can be an opportunity for either the PSLs or the vendors/suppliers. Any negative lesson learned can be a threat to the company and will have to be corrected in time to meet stakeholders' requirements and complete the project in the desired span of time. Hereafter follows the process of what to do after the lessons learned, at any time in the project, have been identified.

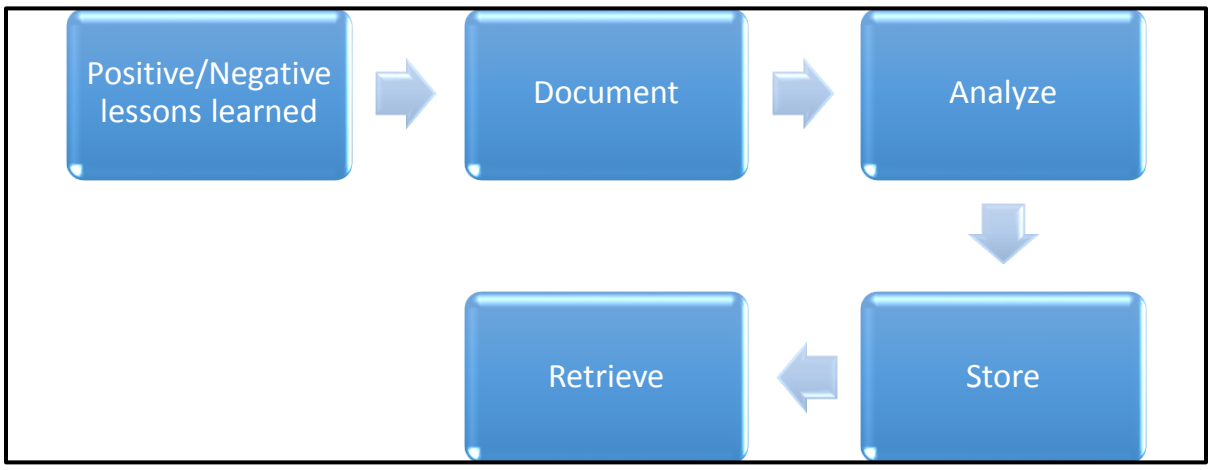


Figure 9: Lessons Learned Process (Source: Compiled by Author).

The identified lessons learned need to be documented for further analyzation by the project team in order to discover the level of impact to the project. Based on this, actions will be taken accordingly to minimize the negative impact or to increase the opportunity in the case of a positive impact. In the meantime, the document should also be stored so that anyone can retrieve it whenever the company suspect a similar lessons learned. This way there will be no room for the same error. Hereafter follows a template how to document the lessons learned.

Chart 17: Lessons Learned Log Template (Source: Compiled by Author).

Lessons Learned Log						
Project Name:			<Required>			
Project Manager Name:			<Required>			
Project Description:			<Required>			
ID	**Date Identified**	**Entered By**	**Subject**	**Situation**	**Recommendations & Comments**	**Follow-Up Needed?**

The last column, Follow-Up Needed, is highly significant to this project. After the Near Shore Project is finished, which is most likely by end November this year, the specialists from PML will go back to their home country and Halliburton Suriname will have to do all PML work on its own, meaning that all PSLs will be responsible for Supply Change Management activities related to their specific departments. As such, the lessons learned log and in specific if follow up is needed, because it is the way the PSLs will know what to do and what not to do. In addition, before the project closure, the lessons learned log will have to be reviewed to make sure that everything is in place and the projects' deliverables meets stakeholders requirements, after which the project can be closed.

4.1.2.3 Project Closure

During the final closure, the emphasis is on releasing the final deliverables to the customer (in this case the PSLs), handing over project documentation to the company, releasing project closure resources and communicating the closure of the project to all stakeholders. The last remaining step is to conduct lessons-learned studies to examine what went well and what did not, which is done on the previous paragraph. Through this type of analysis, the wisdom of experience is transferred back to the project organization, which will help future project teams (Watt, 2012, p. 31). The Project Closure Process is depicted in the figure 10, after which a Project Closeout Checklist Template has been provided. Please refer to appendix 8 for the Project Closeout Checklist Template.

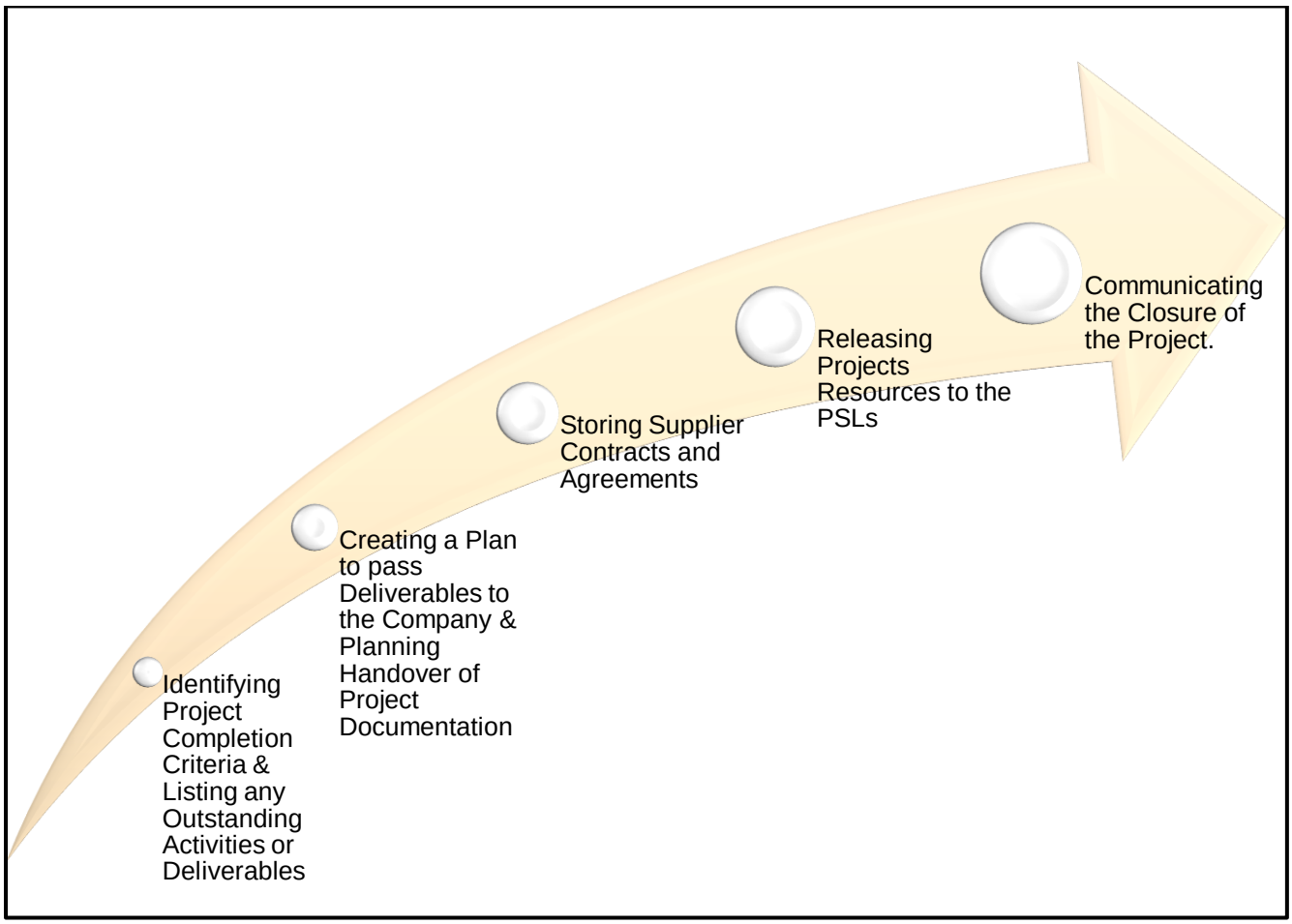


Figure 10: Project Closure Process (Source: Compiled by Author).

4.2 Project Scope Management

Scope Management is the collection of processes, which ensure that the project includes all the work required to complete it while excluding all work that is not necessary to complete it. In this case, the project is for the implementation of the Procurement System for Halliburton in Suriname, where all PSLs will be able to purchase non-Halliburton parts locally.

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. Project Scope Management

follows a five-step process: Collect Requirements, Define Scope, Create WBS, Verify Scope, and Control Scope.

The Scope Management Plan included the project scope statement, the scope definition, the Work Breakdown Structure (WBS), WBS dictionary, scope verification and the scope control measures that would guide the project management team throughout the project.

Scope Management Approach

It is important that the approach to managing the projects' scope be clearly defined and documented in detail. For this project, scope management will be the sole responsibility of the Project Manager. The scope for this project is defined by the Scope Statement, Work Breakdown Structure (WBS) and WBS Dictionary. The project manager, sponsor and stakeholders will establish and approve documentation for measuring project scope, which includes deliverable quality checklists, and work performance measurements.

Roles and Responsibilities

In order to successfully manage the project's scope it is important that all roles and responsibilities for scope management be clearly defined. This section defines the role of the Project Manager, Project Team, Stakeholders and other key persons who are involved in managing the scope of the project. It states who is responsible for scope management and who is responsible for accepting the deliverables of the project as defined by the project's scope. Any other roles in scope management is also stated in this section.

Chart 18: Scope Management Roles and Responsibilities (Source: Compiled by Author).

Name	Role	Responsibilities
Halliburton Suriname Branch	Project Sponsor	- Approve or deny scope change requests as appropriate. - Evaluate need for scope change request. - Accept project deliverables.
F. M. Layne	Project Manager	- Measure and verify project scope. - Facilitate scope change requests. - Facilitate impact assessments of scope change requests. - Organize and facilitate scheduled change control meetings. - Communicate outcomes of scope change requests. - Update project documents upon approval of all scope changes.
Assistant Project and Project Team	Team Members	- Participate in defining change resolutions. - Evaluate the need for scope changes and communicate them to the project manager as necessary.
Stakeholders	Subcontractors/Consultants, PSLs and Vendors	- Can propose scope changes. - Will execute change directives issued by Project Manager.

Proposed scope changes may be initiated by the Project Manager, Stakeholders or any member of the project team, following the process described in section 4.1.2.1. The Project Manager is responsible for the approval of scope changes that are strictly technical in nature. Whereas, the Project Sponsor is responsible for the approval of scope changes affecting time and costs parameters. Based on feedback and input from the Project Manager and Stakeholders, the Project Sponsor is responsible for the acceptance of the final project deliverables and project scope.

Project Scope Statement

The project scope statement details the project's deliverables and the work necessary to create the deliverables. Additionally, the scope statement includes what work should not be performed in order to eliminate any implied but unnecessary work, which falls

outside the project's scope. Here follows a brief explanation of the components of the Project's Scope Statement.

Chart 19: Project Scope Statement (Source: Compiled by Author).

PROJECT SCOPE STATEMENT
Project Name
The development of a project management plan to facilitate procurement for Halliburton Suriname Division
Product Scope Description
Through this project, the company wants to accomplish a sound working Procurement system for Halliburton Suriname Branch. This will eliminate unnecessary transportation costs and will be more efficient to purchase items. PSLs will be allowed to communicate their self to the local vendors in order to explain their material requirements.
Product Acceptance Criteria
The local procurement system should be easily accessible to all employees so that they can request their material on their own, without wasting time to wait on someone else. It should also incorporate qualified vendors whose materials meet Halliburton standards, who has enough material in stock and can supply materials anytime needed, due to the nature of the business.
Project Deliverables
A detailed list of deliverables the project will result in, is provided here: Company internal deliverables ▪ Procurement system (SAP and MyRequest Tool). ▪ Identified materials by PSLs. ▪ Identified vendors with high quality products. ▪ Vendor list with contact and vendor number. ▪ Training to PSL. Vendors/Suppliers deliverables ▪ Meeting with vendors.

- Contract with vendors.

Acceptance Criteria

The project deliverables will be accepted following the acceptance criteria:

- Procurement system (SAP and MyRequest Tool) should be user friendly, according to the requirements defined.
- Identified materials by PSL requirements.
- Identified vendors with high quality products only to be contracted, according to the specifications required.
- Vendor list with contact and vendor number for efficient communication.
- Software friendly/skilled personnel to be trained.
- Effective meeting to be held with vendors.
- Contracts will be based on all requirements of Halliburton.

Project Exclusions

The description of work that is not included in the project and outside of the scope.

- Communication with vendors regarding transportation of procured materials.
- Contracted items are only for PPE at vendor VSH.
- Not included in project to make one person responsible to procure items for all PSLs.

Project Constraints

- Lists limits on resources for time, money, manpower, or equipment (capital)
- The owners have requested that the project should not exceed 260k US dollars.
- The stakeholders have requested the project be completed in 3 months.

Assumptions

Describes the list of assumptions the project team and stakeholders are working under to complete the project.

Work force

- It is assumed that the PSLs will identify personnel who will be responsible to make the requisitions for purchasing materials.

Planning

- It is assumed that the PSL will handle the transportation of the materials, once the requisition has been approved, by communication with the vendors.
- It is assumed that whenever prices changes at the vendor, the responsible person for procurements will also do this modification in the system.
- It is also assumed that the buyer (PSL responsible person) will communicate with the vendor prior to creating the requisition so that he/she can explain what exactly is needed.

Scope Definition

The scope definition section details the process of developing a detailed description of the project and its deliverables. The scope for this project was defined through a comprehensive requirements collection process. First, thorough analysis of all revised project contracts and meeting minutes, vendors' and PSLs requirements, and documents relative to the industry standards were completed. From this information, the project manager and assistant project manager developed the requirements management plan, requirements documentation and the requirements traceability matrix for the specifications of the procured materials.

The project deliverables were then generated based on the requirements collection process and input from subject matter experts such as PSL leads, Procurement Specialists, Locals in logistics, Subcontractors and Governmental Regulatory Agencies. This process of expert judgment provided feedback on the most effective, safe and cost efficient ways to meet the requirements of Local Procurement System Implementation that is structurally sound and able to provide quality materials (as per company requirements) to the different PSLs in time. In addition, the company will be able to

expand their business portfolio in the coming years in Suriname; this will bring more PSLs to Suriname that on its turn will require more materials.

Requirements documentation

Requirements documentation describes how individual requirements meet the business needs for the project. Requirements may start out at a high level and become progressively more detailed as more information about the requirements is knows. Before being installed, requirements need to be ambiguous (measurable and testable), traceable, complete, consistent and acceptable to key stakeholders (PMI, p. 184, 2017).

Classification

Requirements documentation considers the following classification (PMI, p.185. 2019):

- Business requirements: these describe the higher-level needs of the organization as a whole, such as the business issues or opportunities and reasons why a project has been undertaken.
- Stakeholder requirements: these describe needs of a stakeholder or stakeholder group.
- Solution requirements: these describe features, functions and characteristics of the product, service or result that will meet the business and stakeholder requirements.
- Transition and readiness requirements: these describe temporary capabilities, such as data conversion and training requirements, needed to transition from the current as-is state to the desired future state.
- Project requirements: these describe the actions, processes or other conditions the project needs to meet. May include milestone dates, contractual obligations, constraints, etc.
- Quality requirements: these capture any condition or criteria needed to validate the successful completion of a project deliverable or fulfillment of other project requirements. May include tests, certifications, validations, etc.

Priority:

- Must have (M): must be implemented in the system.
- Should have (S): must be implemented but may wait until a second increment.
- Could have (C): could be implemented but it is not central to the project objectives.
- Wish to have (W): will not be implemented but it will be considered for a future phase.

The following chart describes the requirements.

Chart 20: Requirements Classification and Prioritization (Source: Compiled by Author).

ID	Requirement	Description	Justification and/or Comment	Classification	Priority	Raised by
1	Project Finish within 4 months	It's a requirement form the sponsor that the project should be finished in maximum 4 months	Specialist for this project needs to go back to their country due to the affect the head counts will have on Suriname revenue.	Business and Stakeholder Requirements	M	Sponsor
2	Identified Personnel per PSL be competent	The identified employee per PSL to create the requisition must have the required skills and knowledge	Due to project schedule, there is minimum time to train personnel so additional training, in case of non-compliant employee will delay project	Stakeholders, Transition & Readiness and Project Requirements	S	Project Team
3	MyRequest Tool be user friendly	The developed MyRequest tool should be user friendly and easy to work with	PSL already has a lot of workload. Adding the task to request material by them self will put more work on the PSL, so the procurement system should be easy and fast to work with it	Solution, Quality & Stakeholder Requirements	M	PSLs

ID	Requirement	Description	Justification and/or Comment	Classification	Priority	Raised by
4	Contracted items for all vendors	PSLs requires contracted items to be included in MyRequest tool for all vendors	It is easier to work with contracted items; the user just has to select the items they need, works much faster.	Stakeholder and Solution Requirements	W	PSLs
5	Vendor payment within given time constraints	Requirement by the vendors that the payment should occur within the time constraint they mentioned	Due to current economic situation of the country, chances of inflation are high so the payment shouldn't take too long	Stakeholders and Solution Requirements	S	Vendors
6	Vendor payment in US dollars	Vendors requires that they provide US$ prices so that the payment can occur in that currency	Due to current economic situation of the country, chances of inflation are high.	Stakeholders and Solution Requirements	S	Vendors
7	Material quality be based on Halliburton standards	The material quality at the vendor should meet Halliburton requirements, based on company standards and policies	For Service Quality reasons to the customer (Staatsolie) the locally purchased materials should meet Halliburton standards	Business, Stakeholders, Quality and Project Requirements	M	Sponsor & PSL

Requirements traceability matrix

The requirements traceability matrix is a grid that links product requirements from their origin to the deliverables that satisfy them.

The implementation of a traceability matrix helps ensure that each requirement adds business value by linking it to the business and project objectives. It provides a means

to track requirements throughout the project life cycle, helping to ensure that requirements approved in the requirements documentation are delivered at the end of the project. Finally, it provides a structure for managing changes to the product scope (PMI, p. 185, 2017). The requirements traceability matrix has been depicted in the following chart.

Chart 21: Requirement Traceability Matrix (Source: Compiled by Author).

ID	Requirements Description	Business Needs, Opportunities, Goals, Objectives	Project Objectives	WBS Deliverables	Product Design	Product Development
1	Project Finish within 4 months	Local procurement system implementation	Time constraints, Local procurement system implementation	All elements	MyRequest tool	MyRequest tool
2	Identified Personnel per PSL be competent	PSL responsibility to request material on its own	Time constraints, Local procurement system implementation	Training to PSLs	MyRequest tool	MyRequest tool
3	MyRequest Tool be user friendly	Procurement system be user friendly, easy to work and minimum time consuming	Time constraints, Local procurement system implementation	Vendor incorporation in SAP, MyRequest tool development and test procurement system	MyRequest tool	MyRequest tool
4	Contracted items for all vendors	Easy for PSLs to create requisitions	Time constraints, Local procurement system implementation	Vendor incorporation in SAP, MyRequest tool development and test procurement system	MyRequest tool	MyRequest tool

ID	Requirements Description	Business Needs, Opportunities, Goals, Objectives	Project Objectives	WBS Deliverables	Product Design	Product Development
5	Vendor payment within given time constraints	Company and vendor relationship	Meeting requirements of stakeholders to ensure sound procurement system	All elements	MyRequest tool	MyRequest tool
6	Vendor payment in US dollars	Company and vendor relationship	Meeting requirements of stakeholders to ensure sound procurement system	All elements	MyRequest tool	MyRequest tool
7	Material quality be based on Halliburton standards	Company and vendor relationship	Meeting requirements of stakeholders to ensure sound procurement system	All elements	MyRequest tool	MyRequest tool

Work Breakdown Structure

The Work Breakdown Structure (WBS) and Work Breakdown Structure Dictionary are key elements to effective scope management. This section discusses how the project scope is to be subdivided into smaller deliverables in the WBS and WBS Dictionary and how these smaller components are managed effectively during the life of the project. This will allow the Project Manager to more effectively manage the project's scope as the project team works on the tasks necessary for project completion.

In order to more clearly define the work necessary for project completion the WBS Dictionary is used. The WBS Dictionary includes an entry for each WBS element. The WBS Dictionary includes a detailed description of work for each element and the deliverables, budget and resource needs for that element.

The Work Breakdown Structure (WBS) has been depicted in the following figure. In addition, the WBS Dictionary is described in Chart 22.

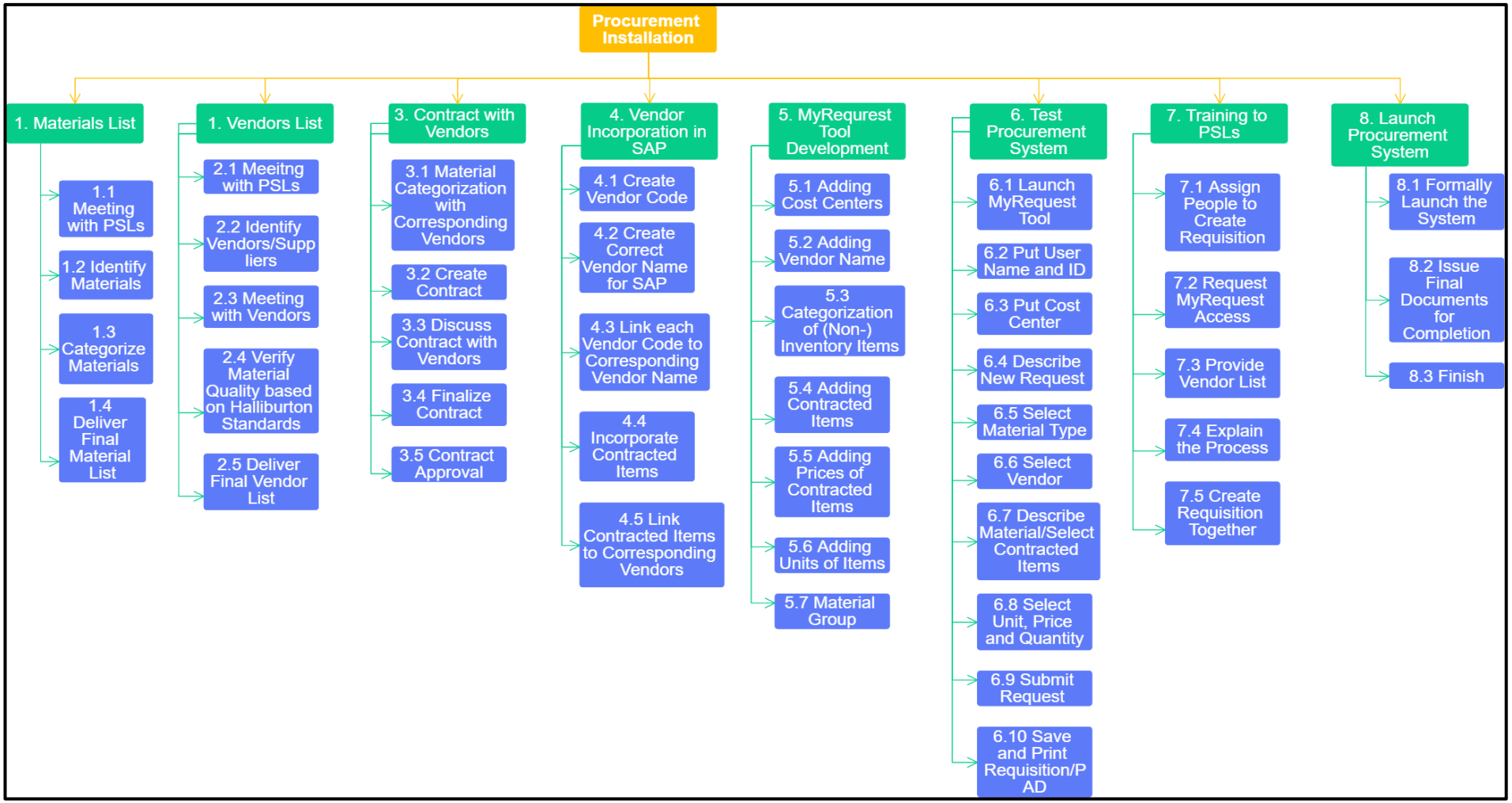


Figure 11: Work Breakdown Structure (WBS) (Source: Compiled by Author)

Chart 22: WBS Dictionary (Source: Compiled by Author).

Level	WBS Code	Element Name	Description of Work	Deliverables	Budget	Resources
3	1.1	Meeting with PSLs	Project Team to meet with PSL to create materials list	Minutes of Meeting		PSL leads Laptop Internet Relevant literature
3	1.2	Identify Materials	Create Material list per PSL based on their needs and requirements	Initial Requirements Documentation		PSL leads Laptop Internet Relevant literature Halworld
3	1.3	Categorize Materials	Categorization of identified materials (hand tools, consumables, slings, lubrication, etc.)	Categorized material list	$15,750	Laptop Internet Relevant literature Halworld
3	1.4	Deliver Final Materials List	Deliver material list to all relevant stakeholders for last review and finalize list	Complete material list		PSL leads Laptop Internet Relevant literature Halworld
3	2.1	Meeting with PSLs	Meet with PSL leads to discuss about vendors	Initial requirements documentation		PSL leads Laptop Internet Relevant literature Halworld
3	2.2	Identify Vendors/Suppliers	Project team together with PSL identifies vendors to supply identified materials	Vendor list categorized by material needs		PSL leads Laptop Internet Relevant literature

Level	WBS Code	Element Name	Description of Work	Deliverables	Budget	Resources
						Halworld
3	2.3	Meeting with Vendors	Project team to meet with vendors in order to talk about material needs and explain Halliburton requirements	Input for contract with vendors	$20,375.0	Laptop Transportation Vendor Project team
3	2.4	Verify Materials Quality Based on Halliburton Standards	At each, verify the quality of the identified material, should meet Halliburton standards	Quality requirements		Laptop Transportation Vendor Project team Relevant Literature
3	2.5	Deliver Final Vendor List	Send vendor list to all relevant stakeholder for final review and deliver vendor list	Final vendor list delivery		PSL leads Project Team Internet Laptop Vendor list
3	3.1	Categorize Identified Materials with Correct Vendors	Link the materials with the respective vendors	Material-vendor list compilation		PSL leads Project Team Internet Laptop Vendor list Material list
3	3.2	Create Contract	Contract to be created for each vendor	Contractual agreements		Project Manager/PML Specialist Laptops Internet Relevant documentation
3	3.3	Discuss Contract	Created contract to be	Contractual		Project Manager/PML

Level	WBS Code	Element Name	Description of Work	Deliverables	Budget	Resources
		with Vendors	discussed with vendors to be in one line	agreements	$27,375.0	Specialist Laptops Vendors Transportation
3	3.4	Finalize Contract	Perform last adjustments to contract and finalize	Finalized contract, ready for approval		Project Manager/PML Specialist Laptops Vendors
3	3.5	Contract Approval	Submit contracts to HR for approval	Approved contracts		Project Manager HR Internet Finalized Contracts
3	4.1	Create Vendor Code	Vendor codes to be created in SAP	Vendor codes	$33,375.0	Project Team Internet Laptops SAP Software Vendor List
3	4.2	Create Correct Vendor Name for SAP	Vendor names to be created in SAP	Vendor names		Project Team Internet Laptops SAP Software Vendor List
3	4.3	Link Each Vendor Code to Respective Vendor Name	Vendor code to be linked to respective vendor in SAP	Vendor code-name in SAP		Project Team Internet Laptops SAP Software Vendor List
3	4.4	Incorporate Contracted Items	All contracted materials from materials list to be	Contracted items in SAP		Project Team Internet

Level	WBS Code	Element Name	Description of Work	Deliverables	Budget	Resources
			incorporated in SAP			Laptops SAP Software Vendor List Materials List
3	4.5	Link Contracted Items to Respective Vendors	Contracted items to be linked to corresponding vendors in SAP	Contracted items linked with vendor in SAP		Project Team Internet Laptops SAP Software Vendor List Materials List
3	5.1	Adding Cost Center	Add all PSL cost centers in MyRequest Tool (SAP)	Cost Center added	$37,375.0	Project Team Internet Laptops SAP Software
3	5.2	Adding Vendor Name	Vendor name to be added in MyRequest Tool	Vendor name added		Project Team Internet Laptops SAP Software Vendor List
3	5.3	Adding Vendor Code	Vendor code to be added in MyRequest Tool	Vendor code added		Project Team Internet Laptops SAP Software Vendor List
3	5.4	Categorization of Inventory and Non-Inventory Items	Items to be categorized as inventory or non-inventory items in MyRequest Tool	Categorized items		Project Team Internet Laptops SAP Software Material List

Level	WBS Code	Element Name	Description of Work	Deliverables	Budget	Resources
3	5.5	Adding Contracted Items	Add contracted items in MyRequest Tool	Contracted items added		Project Team Internet Laptops SAP Software
3	5.6	Adding Prices of Each Contracted Items	Add price of contracted items in MyRequest Tool	Material Price		Project Team Internet Laptops SAP Software Material List
3	5.7	Adding Units of Each Items	Add units of each items	Materials Units		Project Team Internet Laptops SAP Software
3	5.8	Material Group	Create material group and link materials to respective group	Material Group		Project Team Internet Laptops SAP Software
3	6.1	Launch MyRequest Tool	Review and finalize MyRequest tool to launch	Developed MyRequest tool		Project Team Internet Laptops SAP Software
3	6.2	Put User Name and ID	Launch MyRequest tool and insert user name and ID	MyRequest tool test		Project Team Internet Laptops SAP Software
3	6.3	Put Cost Center	Insert a cost center	MyRequest tool test		Project Team Internet Laptops SAP Software

Level	WBS Code	Element Name	Description of Work	Deliverables	Budget	Resources
3	6.4	Describe New Request	Insert to be purchased material	MyRequest tool test	$47,375.0	Project Team Internet Laptops SAP Software
3	6.5	Select Material Type	Material type to be selected in MyRequest tool	MyRequest tool test		Project Team Internet Laptops SAP Software
3	6.6	Select Vendor	Vendor to be selected in MyRequest tool	MyRequest tool test		Project Team Internet Laptops SAP Software
3	6.7	Describe Material/ Select Contracted Item	Select contracted item or describe material group	MyRequest tool test		Project Team Internet Laptops SAP Software
3	6.8	Select Unit, Price and Quantity	Unit, price and quantity of each material to be selected	MyRequest tool test		Project Team Internet Laptops SAP Software
3	6.9	Submit Request	Final review of information and submit	MyRequest tool test		Project Team Internet Laptops SAP Software
3	6.10	Save and Print Requisition/PAD	Save and print the created requisition (PAD)	MyRequest tool test		Project Team Internet Laptops SAP Software
3	7.1	Assign People to	Each PSL needs to assign	Responsible		PSL Lead

Level	WBS Code	Element Name	Description of Work	Deliverables	Budget	Resources
		Create Requisition	someone to create requisitions	person		Project Team
3	7.2	Request MyRequest Tool Access	Request access for identified person per PSL	Personnel Training	$30,000	Project Team Internet Laptops SAP Software Identified PSL Personnel
3	7.3	Provide Vendor List	Provide vendor list to identified personnel	Personnel Training		Project Team Internet Laptops SAP Software Identified PSL Personnel
3	7.4	Explain the Process	Explain the MyRequest tool process and how to work with it	Personnel Training		Project Team Internet Laptops SAP Software Identified PSL Personnel
3	7.5	Create Requisition Together	Create a requisition together to test the skills of the employee	Personnel Training		Project Team Internet Laptops SAP Software Identified PSL Personnel
3	8.1	Formally Launch the System	Review and adjust where needed and formally launch the system	Final Procurement System		Project Team Internet Laptops

Level	WBS Code	Element Name	Description of Work	Deliverables	Budget	Resources
					$7,375.0	SAP Software
3	8.2	Issue Final Documents for Completion	Final project documents to be issued	Project documents		Project Manager Project Team Relevant Stakeholders
3	8.3	Finish	Local Procurement System Delivery	Local Procurement System		Project Manager Project Team Relevant Stakeholders

Scope Verification

Scope verification discusses how the deliverables will be verified against the original scope and how the deliverables from the project will be formally accepted.

The deliverables for the project should be formally accepted and signed off/ on by the customer throughout the lifecycle of the project and not held back as a single deliverable at the end of the project. As this project progresses, the Project Manager will verify interim project deliverables against the original scope as defined in the scope statement, WBS and WBS dictionary. Once the Project Manager verifies that the scope meets the requirements defined in the project plan, the Project Manager and Sponsor will meet for formal acceptance of the deliverable. During this meeting, the Project Manager will present the deliverable to the Project Sponsor for formal acceptance. The Project Sponsor will accept the deliverable by signing a project deliverable acceptance document. This will ensure that project work remains within scope of the project on a consistent basis throughout the lifecycle of the project.

Scope Control

Scope control is the process of monitoring the status of the scope of the project. The Project Manager and the project team will work cooperate to control 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 supervise the project team and the progression of the project to ensure that the scope control process is followed.

If a change to the project is needed, a 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 order. The Project Manager

will then review the suggested change to the scope of the project. The Project Manager 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 and Project Sponsor to review the change request further and perform an impact assessment of the change. If the change request receives approval from the Project Manager and Sponsor, the Project Manager will then formally submit the change request to the Project Sponsor who will then formally accept the change by signing the change order. Upon acceptance of the scope change by the Project Manager and Project Sponsor, the Project Manager will update all project documents and communicate the scope directive to all project members and stakeholders. Please refer to figure 8 in section 4.1.2.1 for the change control process.

4.3 Project Time Management

Time Management is essentially the ability to organize and plan the time spent on activities in a day. The result of good time management is increased effectiveness and productivity. It is a key aspect of project management and involves skills such as planning, setting goals and prioritizing for a better performance. A lack of effective time management can have a negative impact on a project in the long run, since time is one of the three triple constraints and any deviation from the schedule affects the cost and scope of a project. In most cases, time has truly proven to be money. Ineffective time management can also increase stress and frustration during the project and among the team members. Worst-case scenario: a burnout. Time Management includes:

- Effective planning
- Setting goals and objectives
- Setting deadlines
- Delegation of responsibilities
- Prioritizing activities as per their importance

- Spending the right time on the right activity

Time Management Plan is the process of establishing the policies, procedures and documentation for planning, developing, managing, executing and controlling the project schedule. The key benefit of this process is that it provides guidance and direction on how the project schedule will be managed throughout the project. This process is performed once or at predefined points in the project (PMI, p. 179, 2017).

Tools and Techniques to be used in the Time Management Plan

Initial project plan and project deliverables will be used as tools for the time management process. Effective time management is about proactively planning how the time will be spend. The 3-step approach described here is a simple but highly effective mechanism to enhance productivity and effectiveness:

- To do lists
- Weekly Review
- Time Blocking

Utilization of these time management techniques and tools, mentioned hereafter, provides the solid foundation for a time management system. As stated in chapter 3, the following tools are used to develop the Time Management Plan:

- Expert judgement
- Data Gathering.
- Interactive communications

In the Supply Chain Management area, there are many experts in the company. Specifically for this project, experts from Panama and Trinidad were identified to support in the Project Management Plan process; in addition, to execute the project some experts were supporting Suriname Operations. These experts were contacted to help creating the contracts with the vendors/suppliers. In addition, there were some issues when developing the local procurement system, so the

experts were contacted to support and produce solutions to solve issues in short time. Regarding the Time Management Plan, these experts were also contacted to help developing a sound Time Management Plan where all elements from the WBS were in the schedule as shown below. The Data Gathering technique and Interactive Communications technique were used to gather information from the PSLs and local procurement people regarding the following:

- Vendors/Supplier i.e. how fast they can provide information
- PSLs i.e. how fast each PSL can assign an employee to work together with the PML team
- HR information i.e. how fast they can read and approve contracts
- Finance i.e. who is responsible for payments to vendors and how fast they can support, etc.

The clear identification of project activities is the foundational step in the planning and scheduling process. This component of the process is critical to ensure that the project deliverables are achieved in a timely manner through allowing for the decomposition of the project into manageable parts to which resources can be applied. The implementation of the local procurement system project is divided into 8 work packages:

- Materials list
- Vendors list
- Contract with vendors
- Incorporation of vendor in SAP
- MyRequest tool development
- Test procurement system
- Training to PSLs
- Launch procurement system

These work packages are further decomposed into the activities listed below which is an important contribution to the creation of the project implementation schedule.

Chart 23: Activity List Chart Including Predecessors List & Activities Duration (Source: Compiled by Author).

ID	Description	Predecessors	Optimistic duration	Most likely duration	Pessimistic duration	Estimated duration	Start Date
1.1	Meeting with PSLs	N/A	2	3	6	3.33	2-Jan-20
1.2	Identify Materials	1.1	2	3	6	3.33	6-Jan-20
1.3	Categorize Materials	1.2	0.5	1	4	1.42	9-Jan-20
1.4	Deliver Final Materials List	1.3	3	4	7	4.33	10-Jan-20
2.1	Meeting with PSLs	1.3	1	2	5	2.33	15-Jan-20
2.2	Identify Vendors/Suppliers	2.1	2	3	6	3.33	17-Jan-20
2.3	Meeting with Vendors	2.2	3	4	7	4.33	22-Jan-20
2.4	Verify Materials Quality Based on Halliburton Standards	1.4, 2.3	5	6	9	6.33	28-Jan-20
2.5	Deliver Final Vendor List	2.4	4	5	8	5.33	31-Jan-20
3.1	Categorize Identified Materials with Correct Vendors	1.4, 2.5	5	6	9	6.33	7-Feb-20
3.2	Create Contract	3.1	3	4	7	4.33	17-Feb-20
3.3	Discuss Contract with Vendors	3.2	4	5	8	5.33	21-Feb-20
3.4	Finalize Contract	3.3	3	4	7	4.33	28-Feb-20
3.5	Contract Approval	3.4	2	3	6	3.33	5-Mar-20
4.1	Create Vendor Code	2.5, 3.5	4	5	8	5.33	10-Mar-20
4.2	Create Correct Vendor Name for SAP	4.1	4	5	8	5.33	17-Mar-20
4.3	Link Each Vendor Code to Respective Vendor Name	4.2	3	4	7	4.33	24-Mar-20
4.4	Incorporate Contracted Items	4.3	1	2	5	2.33	30-Mar-20
4.5	Link Contracted Items to Respective Vendors	4.4	1	2	5	2.33	1-Apr-20
5.1	Adding Cost Center	3.5, 4.5	1	2	5	2.33	3-Apr-20
5.2	Adding Vendor Name	5.1	1	2	5	2.33	7-Apr-20
5.3	Adding Vendor Code	5.2	1	2	5	2.33	9-Apr-20
5.4	Categorization of Inventory and Non-Inventory Items	5.3	3	4	7	4.33	13-Apr-20

ID	Description	Predecessors	Optimistic duration	Most likely duration	Pessimistic duration	Estimated duration	Start Date
5.5	Adding Contracted Items	5.4	3	4	7	4.33	17-Apr-20
5.6	Adding Prices of Each Contracted Items	5.5	2	3	6	3.33	23-Apr-20
5.7	Adding Units of Each Items	5.6	2	3	6	3.33	28-Apr-20
5.8	Material Group	5.7	1	2	5	2.33	1-May-20
6.1	Launch MyRequest Tool	4.5, 5.8	0.25	0.5	3.5	0.96	5-May-20
6.2	Put User Name and ID	6.1	0.25	0.25	3.25	0.75	5-May-20
6.3	Put Cost Center	6.2	0.25	0.25	3.25	0.75	5-May-20
6.4	Describe New Request	6.3	0.25	0.25	3.25	0.75	6-May-20
6.5	Select Material Type	6.4	0.25	0.25	3.25	0.75	6-May-20
6.6	Select Vendor	6.5	0.25	0.25	3.25	0.75	6-May-20
6.7	Describe Material/ Select Contracted Item	6.6	0.25	0.25	3.25	0.75	6-May-20
6.8	Select Unit, Price and Quantity	6.7	0.25	0.25	3.25	0.75	7-May-20
6.9	Submit Request	6.8	0.25	0.25	3.25	0.75	7-May-20
6.10	Save and Print Requisition/PAD	6.9	0.25	0.5	3.5	0.96	7-May-20
7.1	Assign People to Create Requisition	6.10	1	1	4	1.50	8-May-20
7.2	Request MyRequest Tool Access	7.1	1	2	5	2.33	11-May-20
7.3	Provide Vendor List	7.2	0.25	0.5	3.5	0.96	13-May-20
7.4	Explain the Process	7.3	1	2	5	2.33	13-May-20
7.5	Create Requisition Together	7.4	0.25	0.5	3.5	0.96	15-May-20
8.1	Formally Launch the System	3.5, 4.5, 5.8, 6.10, 7.5	1	1	4	1.50	18-May-20
8.2	Isssue Final Documents for Completion	8.1	1	2	5	2.33	19-May-20
8.3	Finish	8.2	1	1	4	1.50	21-May-20

Activity resources are estimated using WBS as input and bottom-up technique along with Three-Point Estimating in which the Programme Evaluation Review Technique (PERT) is used to roll up the estimate. PERT is used to determine the duration of activities and is based on the following formula:

$$PERT = (O + 4ML + P)/6$$

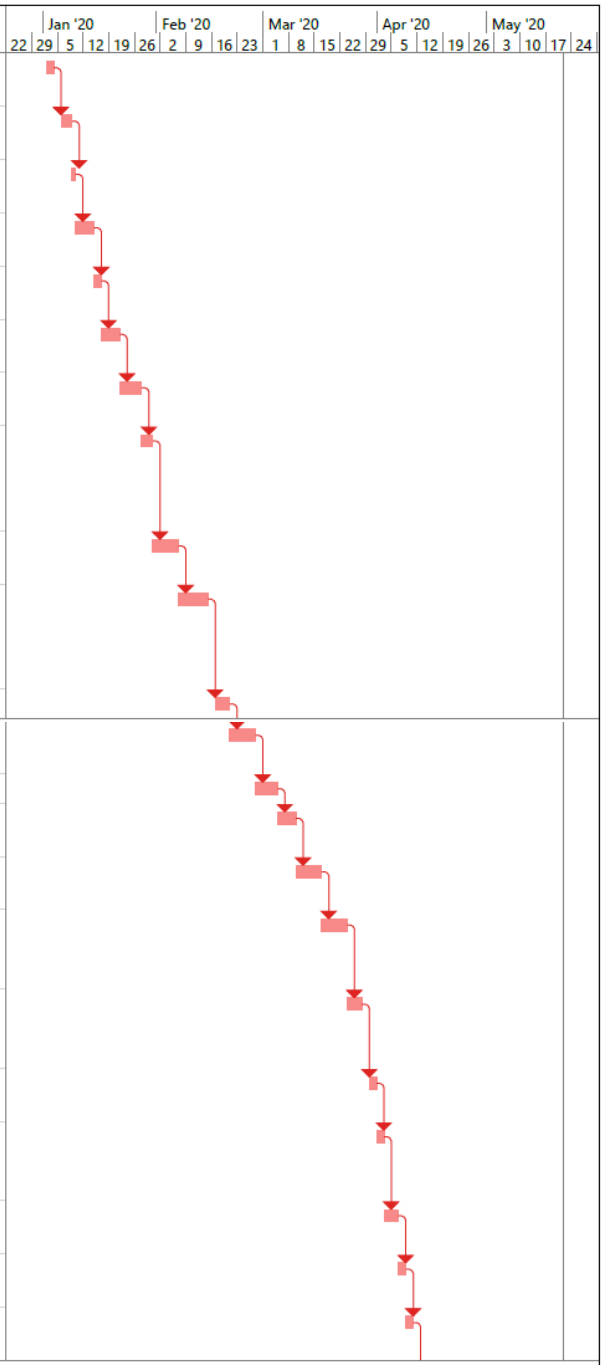
Where: O is the Optimistic duration
ML is the Most Likely duration and
P is the Pessimistic duration

The premise is that all estimates are forecasted with some uncertainty. A weighted average of the expected range of durations, work or costs is a better predictor than a single most likely estimate. Project estimators tend to be overly optimistic. Using the PERT formula, the calculation may provide a result that is statistically more accurate (PMI, p. 30, 2011).

Project Schedule

The project schedule has been developed by using Microsoft project and is depicted in the following figure.

ID	Task Mode	Task Name	Duration	Start	Finish
1		1.1 Meeting with PSLs	2 days	Thu 1/2/20	Fri 1/3/20
2		1.2 Identify Materials	3 days	Mon 1/6/20	Wed 1/8/20
3		1.3 Categorize Materials	1 day	Thu 1/9/20	Thu 1/9/20
4		1.4 Deliver Final Materials List	3 days	Fri 1/10/20	Tue 1/14/20
5		2.1 Meeting with PSLs	2 days	Wed 1/15/20	Thu 1/16/20
6		2.2 Identify Vensords/Suppliers	3 days	Fri 1/17/20	Tue 1/21/20
7		2.3 Meeting with Vendors	4 days	Wed 1/22/20	Mon 1/27/20
8		2.4 Verify Materials Quality Based on Halliburton Standards	3 days	Tue 1/28/20	Thu 1/30/20
9		2.5 Deliver Final Vendor List	5 days	Fri 1/31/20	Thu 2/6/20
10		3.1 Categorize Identified Materials with Correct Vendors	6 days	Fri 2/7/20	Fri 2/14/20
11		3.2 Create Contract	4 days	Mon 2/17/20	Thu 2/20/20
12		3.3 Discuss Contract with Vendors	5 days	Fri 2/21/20	Thu 2/27/20
13		3.4 Finalize Contract	4 days	Fri 2/28/20	Wed 3/4/20
14		3.5 Contract Approval	3 days	Thu 3/5/20	Mon 3/9/20
15		4.1 Create Vendor Code	5 days	Tue 3/10/20	Mon 3/16/20
16		4.2 Create Correct Vendor Name for SAP	5 days	Tue 3/17/20	Mon 3/23/20
17		4.3 Link Each Vendor Code to Respective Vendor Name	4 days	Tue 3/24/20	Fri 3/27/20
18		4.4 Incorporate Contracted Items	2 days	Mon 3/30/20	Tue 3/31/20
19		4.5 Link Contracted Items to Respective Vendors	2 days	Wed 4/1/20	Thu 4/2/20
20		5.1 Adding Cost Center	2 days	Fri 4/3/20	Mon 4/6/20
21		5.2 Adding Vendor Name	2 days	Tue 4/7/20	Wed 4/8/20
22		5.3 Adding Vendor Code	2 days	Thu 4/9/20	Fri 4/10/20



23		5.4 Categorizing of Inventory and Non-Inventory Items	4 days	Mon 4/13/20	Thu 4/16/20
24		5.5 Adding Contracted Items	4 days	Fri 4/17/20	Wed 4/22/20
25		5.6 Adding Prices of Each Contracted Items	3 days	Thu 4/23/20	Mon 4/27/20
26		5.7 Adding Units of Each Items	3 days	Tue 4/28/20	Thu 4/30/20
27		5.8 Material Group	2 days	Fri 5/1/20	Mon 5/4/20
28		6.1 Launch MyRequest Tool	0.5 days	Tue 5/5/20	Tue 5/5/20
29		6.2 Put User Name and ID	0.25 days	Tue 5/5/20	Tue 5/5/20
30		6.3 Put Cost Center	0.25 days	Tue 5/5/20	Tue 5/5/20
31		6.4 Describe New Request	0.25 days	Wed 5/6/20	Wed 5/6/20
32		6.5 Select Material Type	0.25 days	Wed 5/6/20	Wed 5/6/20
33		6.6 Select Vendor	0.25 days	Wed 5/6/20	Wed 5/6/20
34		6.7 Describe Material/Select Contracted Items	0.25 days	Wed 5/6/20	Wed 5/6/20
35		6.8 Select Unit, Price and Quantity	0.25 days	Thu 5/7/20	Thu 5/7/20
36		6.9 Submit Request	0.25 days	Thu 5/7/20	Thu 5/7/20
37		6.10 Save and Print Requisition/PAD	0.5 days	Thu 5/7/20	Thu 5/7/20
38		7.1 Assign People to Create Requisition	1 day	Fri 5/8/20	Fri 5/8/20
39		7.2 Request MyRequest Tool Access	2 days	Mon 5/11/20	Tue 5/12/20
40		7.3 Provide Vendor List	0.5 days	Wed 5/13/20	Wed 5/13/20
41		7.4 Explain the Process	2 days	Wed 5/13/20	Fri 5/15/20
42		7.5 Create Requisition Together	0.5 days	Fri 5/15/20	Fri 5/15/20
43		8.1 Formally Launch the System	1 day	Mon 5/18/20	Mon 5/18/20
44		8.2 Issue Fianl Documents for Completion	2 days	Tue 5/19/20	Wed 5/20/20
45		8.3 Finish	1 day	Thu 5/21/20	Thu 5/21/20

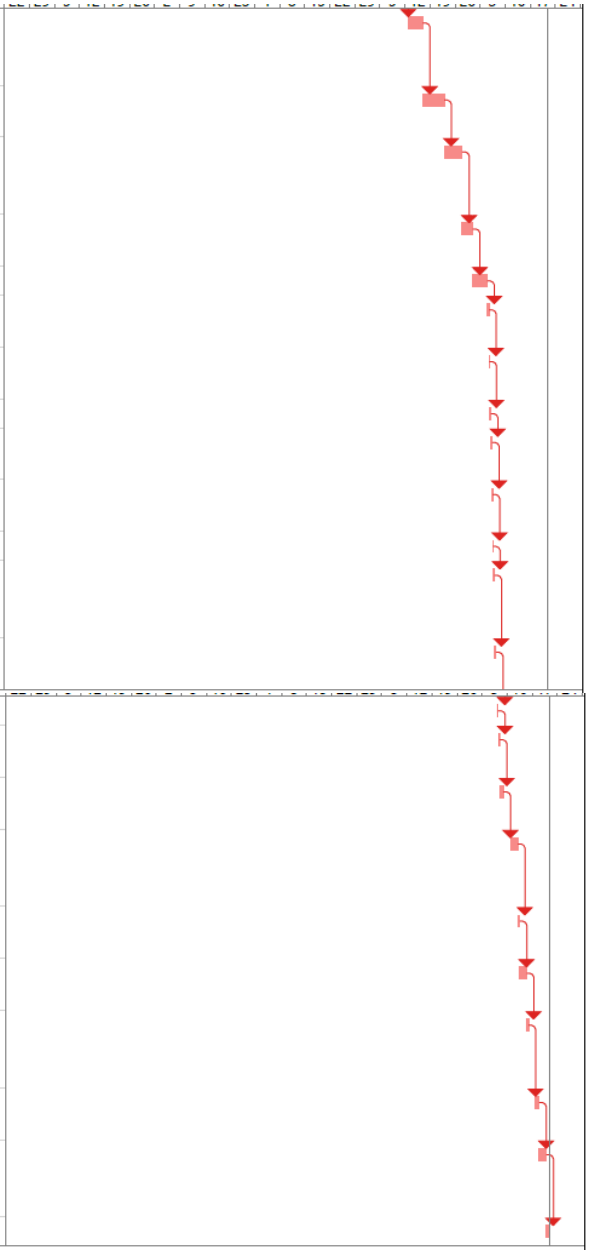


Figure 12: Project Schedule (Source: Compiled by Author).

Schedule Monitoring

When a project is under way, Gantt Charts help to monitor whether the project is on schedule. If it is not, it allows you to pinpoint the remedial action necessary to put it back on schedule. An essential concept behind project planning is that some activities are dependent on other activities being completed first. Progress reports will be submitted by the Project Manager to the Sponsor on a weekly basis and a meeting will be held on that level also on a bi-monthly basis. Initial project plan and project deliverables will be used as tools for the time management process. To monitor whether the project is on schedule or not, the Gantt Chart (shown below) will be used.

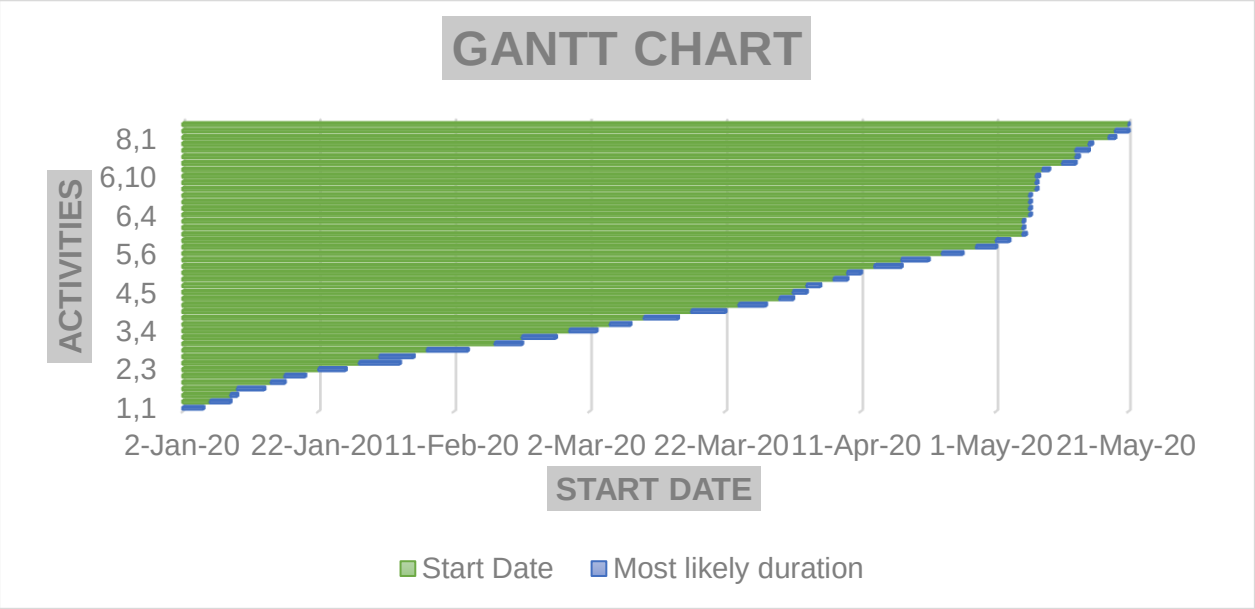


Figure 13: Gantt chart (Source: Compiled by Author).

Schedule Metrics and Reporting

In order to measure project performance, several metrics will be used to capture schedule performance for the Procurement System Installation Project. The following metrics will be compiled and reported by the Project Manager:

- Schedule Performance Index (SPI) will be reported monthly and is the project's EV/PV (Earned Value/Planned Value)

- Control thresholds for SPI are:
    - Yellow: within +/- 20% must be reported to the Project Sponsor. If it is determined that there is no effect on the project's schedule baseline then there may be no further action required.
    - Red: greater than +/- 20% must be reported to the Project Sponsor. Corrective measures must be taken to move the project back to an acceptable performance level.

Chart 24: Schedule Metrics (Source: Compiled by Author).

Earned Value Metric	Frequency of Reporting	Yellow	Red
SPI	Monthly	0.8≤SPI≤1.2	SPI<0.8 or SPI>1.2

- Schedule Variance (SV) will be reported monthly and is the project's PV subtracted from EV.

One chart will be created for each of the above metrics. The Project Manager will present these charts to the Project Sponsor at the Monthly Project Status Meeting.

Schedule Control Measures

If the Procurement System Installation Project exceeds its thresholds at any time for its SPI, corrective measures will be considered and implemented in order to bring the project back into an acceptable range of performance. The Project Manager and Team will consider all control measures, which will result in correcting the project performance. A detailed analysis of all control measures will be presented to the Project Sponsor. The analysis will consist of:

- General description of the control measure
- Personnel involved
- Timeline to implement
- Issues or concerns regarding implementation
- Expected effect on project performance

All control measures will be reviewed by the Project Sponsor. Upon approval from the Project Sponsor, the Project Manager will lead the implementation of the authorized control measure. The Project Manager must also complete any change requests required in accordance with the project's change control process.

In some isolated circumstances, it may be necessary to re-baseline a project's schedule. Although every effort will be taken to avoid this, however, if necessary, only the Project Sponsor may authorize this action.

Schedule Change Management

Change can include anything that would impact the project's schedule all of which can impact quality. Any changes in this project can be requested by the stakeholders (PSLs, Vendors/Suppliers, Project Manager, Project Team Members, Project Sponsor). The change request will have to follow the process depicted in figure 8.

When the company finds a problem, they can just make a change, because it may be too expensive or take too long to do. However, they will need to look at how it affects the schedule and how it influences project quality.

The organization will then have to figure out if it is worthwhile making the change. If the company evaluates the impact of the change and finds that it will not have an impact on the projects schedule, then they can make the change without going through the change control process. The change control process is a set of procedures that lets the organization make changes in an organized manner. Any time the organization needs to make a change to the schedule, they must start with a change request, which is the

document that the person making the change request must complete. Please refer to appendix 6 for the Change Control Request Form.

Once the change is requested, it is submitted to the change control board who considers changes for approval. In addition, the request should also be submitted to the project sponsor or management for review and approval.

Finally, any change approved must be documented so the company can figure out what needs to be done, when and by whom. Putting the documented changes through change control will help to evaluate the impact and update all the necessary documents. All the approved documents are than send back to the team to put them in place. Please refer to appendix 7 for the Change Control Template.

4.4 Project Cost Management

Cost Management includes processes required to complete the project within the approved budget. With its processes, this knowledge area aims to determine the required budget to complete the project and then aims to monitor and control the project costs to meet the determined project budget. The major output of this knowledge area is the project budget, which is shown below. After the budget is determined, cost management will keep on measuring and monitoring the cost performance of the project to meet the agreed budget. The importance of Cost Management Plan is that it shows how to manage expenses and budget of a project, to monitor and to control the status of the project and measures budget performance.

The Plan Cost Management Process is the first process of this knowledge area in the process, how to determine budget, estimate costs and manage the expenses throughout the project are planned. The Cost Management Plan for this project is not done in very detail because the main focus in the project is to install the procurement system, which in this case is the software SAP and there are no costs associated to the software since the software is already owned by the company. The major costs are shown hereafter.

The project is an internal company's project so there are minimum external costs. Based on the information gathered from Expert Judgement, Data Gathering Technique and Interactive Communication, the cost management plan is created, which is shown hereafter.

4.4.1 Purpose

The purpose of this cost management plan is to define the methodology by which costs associated with the Procurement System Installation Project will be managed. This is necessary to ensure the successful completion of the project within the allotted budget constraints. There are several cost components associated with this project as well as many metrics, cost variance considerations, and reporting which this plan will outline. To complete this project successfully, all key project members and stakeholders must adhere to and work within this cost management plan and the overall project plan it supports

4.4.2 Scope

The cost management plan for the Procurement System Installation Project includes many internal and external cost components. All metrics and variance analysis must be applied to these cost components throughout the project lifecycle. These components include:

Internal

- Project Management/project team resources
- Recruiting/relocating and hiring for additional staffing
- Capital equipment
- Software
- Insurance

External

- Construction costs

- Insurance
- Transportation costs

4.4.3 Cost Management Roles and Responsibilities

It is important to set expectations for roles and responsibilities in all areas of a project plan but particularly in the area of cost management. All team members and stakeholders must have a clear understanding of the roles they and others play in determining project budgets, allocation of funds, authorization for additional funding, and where the responsibility for each lies.

4.4.3.1 Project Sponsor

The Project Sponsor for the Procurement System Installation Project is the PML Manager for Halliburton Suriname, Trinidad and Guyana, Mr. Silochan, who is responsible for the approval of the Procurement System Installation Project's cost management plan. Additionally, Mr. Silochan is responsible for approving the project's budget and is the approving authority for any additional funding that may be needed. He will report project budget and funding status directly to the HR Finance Lead, Ms. Tomlin.

4.4.3.2 Project Manager

The Project Manager for the Procurement System Installation Project is Mr. F. Layne. Mr. Layne is responsible for the day-to-day management of project funds. Furthermore, he is responsible for the development of an internal Work Breakdown Structure (WBS), which covers all work to be performed by the operations group. In addition, he is authorized to execute the expenditure of project funds as necessary in accordance with the cost management plan and allocated project budget. Mr. Layne may not authorize the use of any additional funding without prior approval from the Project Sponsor. Mr.

Layne is required to establish metrics and variance analysis tools in order to provide status updates once a month to the Project Sponsor.

4.4.3.3 Project Team

The project team is responsible for executing assigned work in accordance with the cost management plan. They are also required to assist the Project Manager in the implementation of metrics and variance analysis tools to ensure all project deliverables are performed within the allocated budget constraints.

4.4.3.4 Contractor Support

The contractor providing facility and related support for the Procurement System Installation Project is responsible for providing an initial project cost estimate, which includes all costs associated to facilitate expats in the company's current building. Additionally, the contractor shall provide a WBS, which includes all construction work packages and their associated costs. This WBS will not be included in this thesis since it is not important for this project, but might be important for future projects of the company.

4.4.4 Cost Management Approach

4.4.4.1 Cost Planning and Estimating

Once the needs of the Procurement System Installation Project have been determined, the project team will finalize the resource and staffing requirements, which are necessary for the successful completion of the project. Since this is an internal company's project, there is no need for a detailed cost planning, also because of the fact that the project is mostly related to an internal companies' software SAP. The main costs, based on expert judgment, are depicted in the table hereafter. It should be mentioned that this is just an estimated cost, since the company is very strict in providing confidential information. Once the project budget is approved, the Project

Manager will compare the allocation for each task against the overall budget and adjust allocations as necessary to comply with the project budget. Once all allocations have been reviewed and approved by the project manager, the project cost will be baselined. The project cost baseline may only be changed with authorization by the Project Sponsor.

Chart 25: Cost Estimating (Source: Compiled by Author).

Item	Costs (US$)
Labor cost	$ 50,000.00
Technology (internet, computer, etc.)	$ 50,000.00
Facility	$ 90,000.00
Consumables	$ 9,000.00
Transportation	$ 10,000.00
Unforeseen costs	$ 10,000.00
Grant Total Estimated	**$ 219,000.00**

Contingency Reserve and Management Reserve

Risks occur in every project and as a project manager, it is your responsibility to manage them as they occur. To manage these risks, you will use the contingency reserve and management reserve, which provide you with a cushion against the risks and are part of the project's budget (Circle, 2019). The Contingency Reserve has been decided to be 10% of the estimated cost per item and is shown below.

Chart 26: Contingency Reserve (Source: Compiled by Author).

Item	Costs (US$)	Contingency Reserve
Labor cost	$ 50,000.00	$5,000.00
Technology (internet, computer, etc.)	$ 50,000.00	$5,000.00
Facility	$ 90,000.00	$9,000.00

Item	Costs (US$)	Contingency Reserve
Consumables	$ 9,000.00	$900.00
Transportation	$ 10,000.00	$1,000.00
Unforeseen costs	$ 10,000.00	$1,000.00
Grant Total Estimated	**$ 219,000.00**	$5,000.00

The total Contingency Reserve is $21,900.00. The Management Reserve has been decided to be 5% of the project-estimated cost, which is $10,950.00.

Cost Baseline.

According to *PMBOK Guide 6th Ed.* cost baseline is a time-phased budget that is used as a basis against which to measure, monitor and control overall cost performance on the project. The cost baseline is that part of the project baseline that handles the amount of money the project is predicted to cost and on the other side when that money will be spent. Cost baseline is established from the estimated costs of individual activities or work packages and thus has been calculated using the Project Cost Estimates plus Contingency Reserves. Adding up this gives a Cost Baseline of $240,900.00.

It is important that Project Managers involve stakeholders in the Cost Management Plan in order to achieve delivery on cost and time but also to maximize benefit for the client and his stakeholders. Not all stakeholders have the same interest in the project, in terms of Cost Management. In addition, the relevance to Cost Management Plan for each stakeholder is different but some may overlap also. An overview of the stakeholder involvement to cost management has been depicted in Chart 26.

Chart 27: Stakeholder Involvement to Cost Management (Source: Compiled by Author).

No.	Stakeholder	Interest in Project	Relevance to Cost Management Plan
1.	Halliburton Suriname Branch	Sponsoring Organization, Supplier of funds.	Sponsoring Organization, Supplier of Funds.
2.	Project Manager	Responsible for overall project administration and delivery.	Responsible for overall project administration and delivery. Oversight of implementation of Cost Management Plan.
3.	Supply Change Management Department	Responsible to achieve determined project deliverables.	Executing department provides data/information and develops the procurement system.
4.	Technical Advisors	Provides technical guidance and analysis.	Provides technical guidance and analysis.
5.	Project Team	Responsible for the execution of the project.	Responsible for the execution of the project and the implementation of the Cost Management Plan.
6.	Halliburton PSLs in Suriname	Ultimate clients, responsible to assign people to create requisitions and provide material requirements.	Responsible to provide information and assign people to work with project team.
7.	Vendors,	Responsible to provide materials on	Local suppliers of

No.	Stakeholder	Interest in Project	Relevance to Cost Management Plan
	Material Supplier	Halliburton standards.	material needs provide analogous price estimates and quality goods and services required.
8.	Staatsolie	Seeking for high quality service.	None.
9.	Halliburton Suriname Employees	Responsible to provide material requirements and create requisitions.	Responsible to take more responsibility regarding purchasing materials.
10.	Human Resources Department	Provide funds, approve contracts and pay vendors/suppliers.	Department responsible to assign the budget and release the funds as per need.
11.	Vendors, Transport Companies	Should be available for transportation of purchased materials.	Local transport companies provide analogous price estimates of transportation costs.

4.4.4.2 Cost Tracking

All project team members will record their work associated with the Procurement System Installation Project on the appropriate. Before close of business on the final business day of each month, the Project Manager will collect all of the timesheets and calculate the labor costs associated with each cost account. Additionally, any invoices associated with project capital equipment or other materials, licensing, or insurance will

be copied by the receiving department each month and a copy will be provided to the Project Manager.

The Project Manager will calculate actual costs for all cost categories and compare these actual costs to the projected baseline costs on a monthly basis. These comparisons will be used to generate the data for all metrics and status reports as well as variance analysis.

4.4.4.3 Cost Metrics and Reporting

In order to measure project performance, several metrics will be used to capture cost and schedule performance for the Procurement System Installation Project. The following metrics will be compiled and reported by the Project Manager:

- Cost Performance Index (CPI) will be reported monthly and is the project's EV/AC (Earned Value/Actual Cost)
- Control thresholds for CPI:
    - Yellow: within +/- 20% must be reported to the Project Sponsor. If it is determined that there is no effect on the project's cost baseline then there may be no further action required.
    - Red: greater than +/- 20% must be reported to the Project Sponsor. Corrective measures must be taken to move the project back to an acceptable performance level.

Chart 28: Cost Metrics (Source: Compiled by Author).

Earned Value Metric	Frequency of Reporting	Yellow	Red
CPI	Monthly	0.8≤CPI≤1.2	CPI<0.8 or CPI>1.2

- Cost Variance (CV) will be reported monthly and is the project's AC subtracted from EV

One chart will be created for each of the above metrics. The Project Manager will present these charts to the Project Sponsor at the Monthly Project Status Meeting.

4.4.4.4 Cost Control Measures

If the Procurement System Installation Project exceeds its thresholds at any time for its CPI, corrective measures will be considered and implemented in order to bring the project back into an acceptable range of performance. The Project Manager and Team will consider all control measures, which will result in correcting the project performance. A detailed analysis of all control measures will be presented to the Project Sponsor. The analyses will consist of:

- General description of the control measure
- Personnel involved
- Timeline to implement
- Issues or concerns regarding implementation
- Expected effect on project performance

All control measures will be reviewed by the Project Sponsor. Upon approval from the Project Sponsor, the Project Manager will lead the implementation of the authorized control measure. The Project Manager must also complete any change requests required in accordance with the project's change control process.

In some isolated circumstances, it may be necessary to re-baseline a project's costs. Although every effort will be taken to avoid this, however, if necessary, only the Project Sponsor may authorize this action.

4.5 Project Quality Management

Quality management is the process for ensuring that all project activities indispensable to design, plan and implement the project are effective and efficient with respect to the purpose of the objective and its performance. Based on information gathered form expert judgement, data gathering and interactive communications, the following quality management plan has been developed.

4.5.1 Introduction

4.5.1.1 Purpose of the Project Quality Management Plan

The Project Quality Management Plan documents the necessary information required to effectively manage project quality from project planning to delivery. It defines a project's quality policies, procedures, criteria for and areas of application, and roles, responsibilities and authorities.

The Project Quality Management Plan is created during the Planning Phase of the project. Its intended audience is the project manager, project team, project sponsor and any senior leader whose support is needed to carry out the plan.

4.5.2 Project Quality Management Overview

4.5.2.1 Organization, Responsibilities, and Interfaces

For Halliburton, Safety and Service Quality are the most important keys. Service quality means to deliver high quality services to its customers, in this case to Staatsolie. However, to deliver good service quality, the company needs to have good quality of internal processes also in order to meet stakeholders' requirements. As such, even in the procurement department the organization strives for good quality products. Some of the responsibilities with respect to quality include the following:

- Quality mentoring and coaching
    - Finding the root cause of quality issues

  - Working on product quality improvements through preventive and corrective actions
  - Leading continuous improvement activities

- Quality audits
  - Working with suppliers on quality related tasks, audits and incidents
  - Handling supplier audits, data collection and analysis and quality related items, including issues and changes

In the chart below, the organization roles and responsibilities with respect to quality are provided.

Chart 29: Organization Roles & Responsibilities with respect to Quality (Source: Compiled by Author).

Name	Role	Quality Responsibility
Mr. Layne	Project Manager	Quality mentoring & coaching
Mr. Silochan	Team Lead	Quality audits

4.5.2.2 Tools, Environment, and Interfaces

Benchmarking is simply a quality standard reference that is used for the current project. This may be a benchmarking used within the performing organization, or one that is used across a specific industry. It involves comparing actual or planned practices to those of comparable projects to identify best practices (FME, 2014), generate ideas for improvement and provide a basis for measuring performance. Quality audits are structured, independent reviews to determine whether project activities comply with organizational and project policies, processes and procedures.

The audit should:

- Identify where the best practices being implemented
- Identify where they are not being used
- Share best practices proven in similar projects
- Help the project team to implement them
- Assure the project sponsor that work is being done in line with accepted best practices.

Environment – the conditions, such as location, time, temperature and culture in which the process operates.

Chart 30 covers a list of quality tools that will be used to measure project quality and level of conformance to define quality standards/metrics.

Chart 30: Overview of tools to be used for Quality Management (Source: Compiled by Author).

Tool	Description
Benchmarking	Industry recognized benchmarks
Audits	Company policies and standards

4.5.3 Project Quality Management

At the highest of levels, Quality Management involves planning, doing, checking, and acting to improve project quality standards. PMI PMBOK breaks the practice of Quality Management into three process groups: Quality Planning (QP), Quality Assurance (QA) and Quality Control (QC). The following sections define how this project will apply each of these practice groups to define, monitor and control quality standards.

4.5.3.1 Quality Planning

Part of defining quality involves developing a quality plan and a quality checklist that will be used during the project. Once the project has defined the quality standards and

quality characteristics, it will create a project quality plan that describes all the quality definitions and standards relevant to the project.

Define Project Quality

Quality management is not an event – it is a process, a consistently high quality product or service that cannot be produced by a defective process. Quality management is a repetitive cycle of measuring quality, updating processes, measuring, updating processes until the desired quality is achieved. The key factors related to quality for the Procurement Implementation System Project have been depicted in the chart hereafter.

Chart 31: Quality Factors (Source: Compiled by Author).

Group of Factor	Factor	Factor Definition	Quality Objective
Facility	Power/Internet outage	Will require rework of unsaved work	Project Delay
Labor	Labor productivity	Laziness of workers will cause delay of work schedule	Project Delay
	Shortage of technical personnel (skilled labor)	Will require more time to have the work done properly	Project Delay
Equipment	Equipment availability and failure	Laptops/Computers might fail	Project Delay
PSLs	Poor communication	Poor communication/reporting of material requirements will cause misunderstanding of project deliverables	Project Delay and not meeting stakeholders requirements
	Shortage of technical personnel (skilled labor)	Will require more time to learn to work with the procurement system	Project Delay
	Contract approval	Contractual agreement and	Project Delay and not

Group of Factor	Factor	Factor Definition	Quality Objective
		approval by HR might be delayed	meeting stakeholders requirements
	SAP/MyRequest system down	IT department works from time to time on the system and during that time there is no access to the system	Project delay

Measure Project Quality

Identified desired metrics and related monitoring processes for which to measure quality standard are depicted in the table below.

Chart 32: Quality Metrics Overview (Source: Compiled by Author).

Factor	Metrics	Metric Definition	Expected Outcome/Result
Power/Internet outage	Redundancy, meeting	Have back for power available. Conduct meetings with Internet provider to eliminate outages.	Power back up in place and internet provider will ensure for continuous internet.
Labor productivity	Meeting, training, motivation performance review	Train personnel to improve performance. Motivate unhappy workers through bonus, awards, etc. to improve productivity. Leaders has to review the performance of their team to see what issues they have.	Skilled employees to improve performance. Motivated employees to work efficiently and deliver the work as per schedule. Employee performance on track.
Shortage of technical personnel (skilled labor)	Training	Personnel must be trained with MyRequest tool and SAP requisitions in order to have the knowledge to work efficiently.	Skilled employees to improve performance.

Factor	Metrics	Metric Definition	Expected Outcome/Result
Equipment availability and failure	Meeting, training, redundancy	Meeting with IT department to have back-up machines available. Training to personnel to solve small IT issues.	Good working equipment always available to ensure project is on track.
Poor communication	Meeting, training	Employees must be trained in communication and reporting skills to avoid poor communication	Skilled employees to improve communication.
Shortage of technical personnel (skilled labor)	Training	Personnel must be trained with MyRequest tool and SAP requisitions in order to have the knowledge to work efficiently.	Skilled employees to improve performance.
Contract approval	Reminders, meeting	Send reminders to approvers and conduct meetings to better explain the contract.	Contract approval on time to avoid project delay.
SAP/MyRequest system down	Meeting	Conduct meeting with IT department to bring the system down during non-working hours.	SAP/MyRequest system available during working hours to avoid project delay.

4.5.3.2 Quality Assurance

Assurance is the activity of providing evidence to create confidence among all stakeholders that the quality-related activities are being performed effectively and that all planned actions are being done to provide adequate confidence that a product or service will satisfy the stated requirements for quality. Quality assurance is done not only to the products and services delivered by the project, but also to the process and procedures used to manage the project, that includes the way the project uses the tools, techniques and methodologies to manage scope, schedule and quality. Quality assurance also includes the project meets the company's standards. Quality audits will be performed by the sponsor and PML manager to see if the project meet stakeholder's requirements. There is not too much to do about quality for the SAP software or the MyRequest tool

because it is a ready-made system. This project is to implement the software for Suriname operations, which means that either the system will work to create requisitions, or it will not. It is very clear that the aforementioned options show that the system will definitely not work partially.

4.5.4 Quality Control

Quality control involves activities used to evaluate whether the product or service meets quality requirements that are specified for the project. Quality control is very crucial in project management because it ensures that everything is within the scope of the project planning. In order to implement quality control, it is necessary to use the right inputs. Information from project management plan, quality metrics, quality checklist, work performance data, approved change requests as well as deliverables are necessary. The control quality is used to create quality control measurements, validated changes, verified deliverables, work performance information and change requests.

Key terms:

1. Assess: to evaluate processes/ procedures and provide assessment results and recommendations.
2. Capture: to record (measurements, action items, meeting minutes, lessons learned).
3. Develop: to create or author quality or project documents.
4. Participate: to be a contributing member with defined roles and responsibilities.
5. Review: to extract for informational purposes and use as a potential input into activity planning.

The table below is a template and will be used for the quality control process.

Chart 33: Quality Control (Source: Compiled by Author).

Deliverable	Requirement	Manage and Control activities	Frequency	Responsible
Assess	Competent PM	Manage:	Bi-monthly	PM
		Control:	Bi-monthly	PM
Capture	Reports, attendance sheets, Meeting notes/points	Manage:	Bi-monthly	PM, Leaders
		Control:	Bi-monthly	PM, Leaders
Develop	Competent/skilled people, all documents based on companies policies	Manage:	Bi-monthly	PM, key Stakeholders
		Control:	Bi-monthly	PM, key Stakeholders
Participate	Discipline, top performance	Manage:	Bi-monthly	PM, Leaders
		Control:	Bi-monthly	PM, Leaders
Review	Stick to companies policies, COBC and honor companies' values	Manage:	Bi-monthly	PM, Leaders
		Control:	Bi-monthly	PM, Leaders

4.6 Project Resource Management

The project team consists of individuals with assigned roles and responsibilities who work collectively to achieve a shared project goal. The project manager should invest suitable effort in acquiring, managing, motivating and empowering the project team. There is a distinction between the skills and competencies needed for the project manager to manage team resources versus physical resources. Physical resources include equipment, materials, facilities, and infrastructure. Team resources or personnel refer to the human resources (PMI, p. 346, 2017).

Identified human resources for this project are the PSL leads, PML specialist, PML manager/sponsor, project team and the vendors/suppliers.

Other resources are the following, but not limited to, SAP platform, Halliburton facility, laptops/desktops, etc.; however, the organization only needs to buy five monitors.

4.6.1 Introduction

Resources management is an important part of the Procurement System Implementation Project. The resources management plan is a tool, which will aid in the management of this project's human and material/equipment resource activities throughout the project until closure.

The resources management plan includes:

- Roles and responsibilities of team members throughout the project
- Project organization charts
- Staffing management plan to include:
    a. How resources will be acquired
    b. Timeline for resources/skill sets
    c. Training required to develop skills
    d. How performance reviews will be conducted
    e. Recognition and rewards system

The purpose of the resources management plan is to achieve project success by ensuring the appropriate resources are acquired with the necessary skills, resources are trained if any gaps in skills are identified, team-building strategies are clearly defined, and team activities are effectively managed.

4.6.2 Roles and Responsibilities

The roles and responsibilities for the Procurement System Implementation Project are essential to project success. All team members must clearly understand their roles and responsibilities in order to successfully perform their portion of the project. For the Procurement System Implementation Project the following project team roles and responsibilities have been established:

Project Manager (PM): responsible for the overall success of the Procurement System Implementation Project. The PM must authorize and approve all project expenditures. The PM is also responsible for approving and making sure that work activities meet established acceptability criteria and fall within acceptable variances. The PM will be responsible for reporting project status in accordance with the communications management plan. The PM will evaluate the performance of all project team members and communicate their performance to functional managers. The PM is also responsible for acquiring human and material resources for the project through coordination with functional managers. The PM must possess the following skills: leadership/management, budgeting, scheduling, and effective communication.

Procurement Specialist (PS): responsible for gathering coding requirements for the Procurement System Implementation Project. The PS is responsible for all upgrade design, coding, and testing of the procurement system. The PS will be responsible for timely status reporting to the PM as required by the communications management plan. The PS may neither authorize any project expenditures nor allocate any resources

without PM approval. PS performance will be managed by the PM and communicated to the project Sponsor. PS must be proficient in SAP.

Functional Manager (FM): While not partaking in the project team, the functional manager is responsible for providing resources for the project in accordance with the project-staffing plan. The functional manager is responsible for working with the PM to determine skill sets required and approving resource assignments. The FM is also responsible for conducting performance appraisals of assigned resources based, in part, on the PM's feedback regarding project performance. The FM is also responsible to provide an adequate facility and materials equipment/laptops/desktops/internet) to the project team so that they can perform their designed task.

PSL Leads: Are responsible to create material list as per company requirements and assigns at least one person who will be trained to create requisition in order to purchase all materials needed.

Vendors: They are responsible for providing quality materials, as per company requirements, to the PSLs. The vendors are also responsible for having the materials in stock and delivering to the PSLs in time.

4.6.3 Project Organizational Charts

The following RACI chart shows the relationship between project tasks and team members. Any proposed changes to project responsibilities must be reviewed and approved by the project manager. Changes will be proposed in accordance with the project's change control process. As changes are made all project documents will be updated and redistributed accordingly.

Chart 34: RACI Chart (Source: Compiled by Author).

	Project Manager	***Procurement Specialist***	***Functional Manager***	***PSL Leads***	***Vendors***
Requirements Gathering	A	R	C	I	I
Creating material list	A	R	I	C	I
Creating Vendor List	A	R	I	C	C
Procurement System Testing	A	R	I	I	I
Implementation	A	C	C	C	I
Conduct Training	A	R	C	C	I

Key:

R – Responsible for completing the work

A – Accountable for ensuring task completion/sign off

C – Consulted before any decisions are made

I – Informed of when an action/decision has been made

4.6.4 Staffing Management

Staff Acquisition:

For the Procurement System Implementation Project, the project staff will consist entirely of internal resources. There will be no outsourcing/contracting performed within the

scope of this project. The Project Manager will negotiate with functional and department managers in order to identify and assign resources in accordance with the project organizational structure. All resources must be approved by the appropriate functional/department manager before the resource may begin any project work. The project team will be re-located for this project in Suriname and all resources will have to be managed accordingly.

Resource Calendars:

The Procurement System Implementation Project will last for three and a half months. All resources are required before the project can begin. After project completion, the project manager and team will go back to their home country and provide support from distance if need be.

Training:

There is currently no training scheduled with regard to the Procurement System Implementation Project, since the organization has adequate staff with required skill sets. However, if training requirements are identified, funding will be provided from the project reserve.

Performance Reviews:

The project manager will review each team member's assigned work activities at the onset of the project and communicate all expectations of work to be performed. The project manager will then evaluate team members throughout the project to score his or her performance and how effectively they are completing their assigned work. Prior to releasing project resources, the project manager will meet with the appropriate functional manager and provide feedback on employee project performance. The functional managers will then perform a formal performance review on each team member.

Recognition and Rewards:

Although the scope of this project does not allow ample time to provide cross training or potential for monetary rewards, there are several planned recognition and reward items for project team members.

- Upon successful completion of the Procurement System Implementation Project, a dinner will be held with all employees who have worked on the project.
- Upon successful completion of the project, any team member who has satisfactorily completed all assigned work packages on time will receive a certificate of gratitude from the functional manager.
- Team members who have successfully completed all of their assigned tasks will have their photograph taken for inclusion in the company newsletter.

4.7 Project Communication Management

To ensure that information communicated about the project during the project's lifecycle will be disseminated to the appropriate parties at the correct time, a brief Communications Management Plan is needed to successfully complete the project. The plan details how each stakeholder would receive information from members of the project team, the frequency of communication, the information that would be communicated to them and the person responsible for ensuring that the correct information was received by the communication sent.

An interview was conducted with the Project Sponsor and PML specialist to ascertain the communication types and delivery methods previously used by the company. Chart 35 shows the stakeholder's list. The information gathered, along with a communications requirements analysis completed by the Assistant Project Manager, are included in the Communication Matrix[1], depicted in chart 36. The communication milestones has been depicted in chart 37.

[1] Due to company policy, it is not allowed to provide email address and phone numbers from employees to third parties. That is why the matrix will not include these information.

Chart 35: Stakeholders list (Source: Compiled by Author)

No.	Stakeholder
1.	Halliburton Suriname Branch
2.	Project Manager
3.	Supply Change Management Department
4.	Technical Advisors
5.	Project Team
6.	Halliburton PSLs in Suriname
7.	Vendors, Material Supplier
8.	Staatsolie
9.	Halliburton Suriname Employees
10.	Human Resources Department
11.	Vendors, Transport Companies

Chart 36: Project Communication Matrix (Source: Compiled by Author).

COMMUNICATION MANAGEMENT PLAN/PROJECT COMMUNICATION MATRIX						
Reason	Target	Description Purpose	Frequency	Owner	Distribution Vehicle	Internal/ External
Status Report	All Stakeholders	One page communication of project progress and deliverable status	Weekly	Project Manager	Email	Internal
Funding	Stakeholder ID 1, 2, 3, 4 & 10	Status of project's funds	Weekly	Project Owner	Skype Meeting	Internal
Risk planning	Stakeholders 1-6	Identify possible risks with vendors/suppliers	1 time, predefined	Project Team	Meeting in person	Internal
Scope Changes	Stakeholders 1-6	Analyze requests about possible scope changes	Monthly	Project Manager	Meeting in person	Internal
Team Morale	Stakeholders 1-6 & 9-10	Motivate the team to keep working in a good environment	Monthly	Project Manager	Meeting in person/Email	Internal
Material List	Stakeholders 2, 5 & 6	Create material list per PSL	1 time, predefined	Project Team	Meeting in person/Skype Meeting/Email	Internal
Vendor List	Stakeholders 1-6	Create vendor list together with PSLs	1 time, predefined	Project Team	Meeting in person/Skype Meeting/Email	Internal
Contract Review	All Stakeholders	Review contract for possible errors prior to final approval	1 time, predefined	Project Manager	Meeting in person/Skype Meeting/Email	Internal

COMMUNICATION MANAGEMENT PLAN/PROJECT COMMUNICATION MATRIX						
Reason	Target	Description Purpose	Frequency	Owner	Distribution Vehicle	Internal/ External
Training to PSLs	Stakeholders 2, 5, 6 & 9	Train PSL responsible person to work with MyRequest tool	1 time, predefined	Project Team	In person	Internal
Vendor Meeting	Stakeholders 2 & 11	Meet vendors to explain material requirements and create contract	1 time, predefined	Project Manager	Meeting in person/Skype Meeting/Email	External

Chart 37: Communication Milestones (Source: Compiled by Author).

COMMUNICATION MILESTONES AND RESPONSIBLE PERSON				
Reason	**Milestone**	**Description** **Purpose**	**Date**	**Responsible**
Status Report	Project progress and deliverable status communicated	One page communication of project progress and deliverable status	Every month	Project Manager
Funding	Overview of project's funds	Status of project's funds	Every month	Project Owner
Risk planning	Identified risks	Identify possible risks with vendors/suppliers	31st January 2020	Project Team
Scope Changes	Requests of scope changes submitted	Analyze requests about possible scope changes	1st April 2020	Project Manager
Team Morale	Motivated team	Motivate the team to keep working in a good environment	Every week	Project Manager
Material List	Material list	Create material list per PSL	10th January 2020	Project Team
Vendor List	Vendor list	Create vendor list together with PSLs	31st January 2020	Project Team
Contract Review	Finalized contracts	Review contract for possible errors prior to final approval	5th March 2020	Project Manager
Training to PSLs	Trained PSL personnel	Train PSL responsible person to work with MyRequest tool	15th May 2020	Project Team
Vendor Meeting	Material requirements communicated to vendors	Meet vendors to explain material requirements and create contract	31st January 2020	Project Manager

Monitoring Communication

It is the task of the project manager to control the flow of the communication and the information shared in the communication. Monitor communication ensures the correct information to the proper parties at the right time follows and enforces the communication management plan and ensures optimal information flow among the parties. Effective communication is central to building relationships through understanding and managing the expectations of stakeholders, especially those stakeholders who have been identified as key or important. According to PMBOK® Guide, the process consists of two parts:

- Monitoring communication to compare the actual work done on communications with what is set out in the communications management plan.
- Controlling communications so that if a variance between the actual communications and the planned communications is discovered, the source of the variance is determined and a change request is made to resolve it. The change proposed may be in the communications themselves or in the communications plan, with possible changes to the project documents.

The output of this process are:

- Work performance information. The goal here is to compare how the communications on the project are actually performed and compare it with the results that were planned in the communications management plan. This comparison is the work performance information, which should be analyzed by the project team to get their feedback and that of the stakeholders regarding the effectiveness of the communications.
- Change requests. The change may be to communications to put them more in line with what's in the communications management plan, or it may be to the plan itself if the original plan turned out to be either unrealistic or if the stakeholders have changed their requirements with regards to those communications.

- Project management plan updates. This covers updates of the communications management plan and stakeholder engagement plan.
- Project documents update. This covers updated issue log, lessons learned register and stakeholder register.

Communication Escalations

When you run a small business, you have to contend with consumer queries and complaints that may pertain to such issues as faulty products or service breaks. You must develop an action plan so that you can handle such matters in a timely and efficient manner. The plan must include procedures for communicating and escalating issues up through the hierarchy of resolution staff and managers so that problems are quickly solved by appropriately trained members of staff (John, 2019). The approach used for the communication escalation process has been depicted in figure 14 and described as follows:

- Entry Point. Any issues observed by the PSLs when creating requisitions will have to be reported to the procurement administrative person, who acts as the Entry Point for this process. The procurement administrative person will be in charge to solve this issue at first hand. The procurement specialist and project team should provide the Entry Point with some basic training in issue resolution. This way the company can save time and money if it equip the Entry Point employees with the knowledge and resources to handle minor issues. The more issues these employees can resolve, the more free time the technical support specialist and managers have to concentrate on more critical activities.
- Expectations. If the Entry Point employee needs to involve another department or manager, then the employee must provide the PSL in charge with a resolution turnaround time. The Entry Point employee must document all of the information that the responsible PSL provides and relay that information to the next employee in the communication chain.
- Escalation. The Entry Point employee will be provided with several escalation routes, since different types of issues require different types of resolutions. Critical service or support issues that involve major/urgent tasks of some PSLs should take priority over other problems. These issues should be directed to the advanced technical support team, in this case the procurement specialist, who

have the authority to resolve the problem. The minor technical issues should be referred to less skilled technical support representatives.

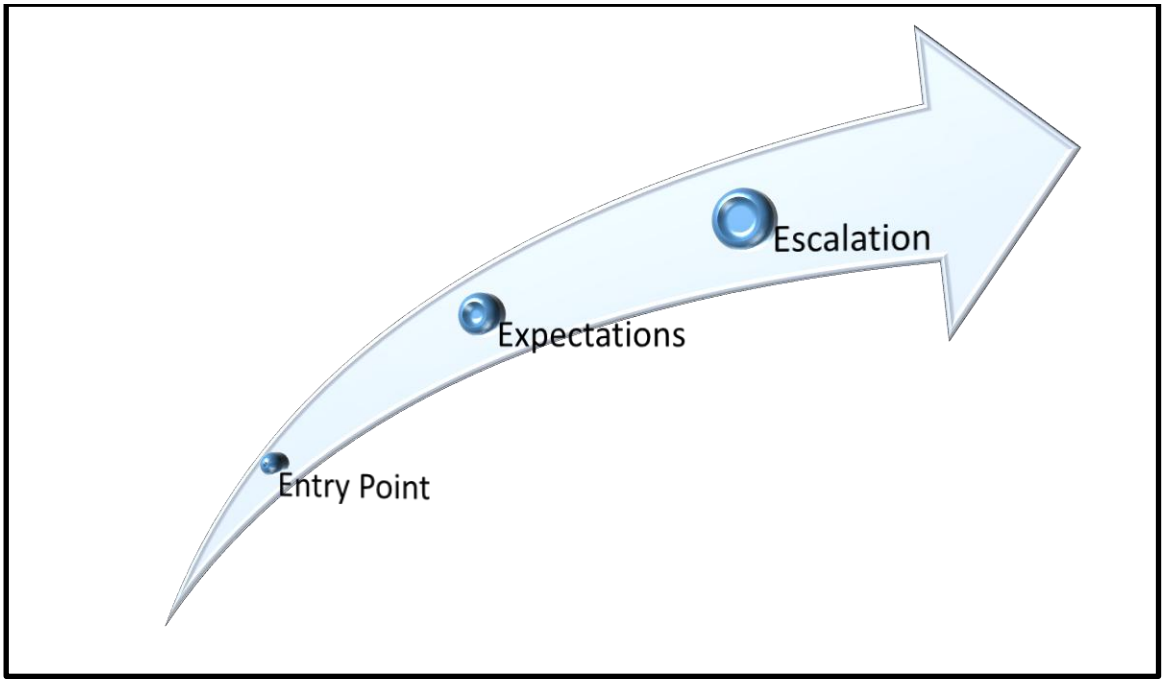


Figure 14: Communication Escalation Process (Source: Compiled by Author).

4.8 Project Risk Management

4.8.1 Purpose of the Risk Management Plan

A risk is an event or condition that, if it occurs, could have a positive or negative effect on a project's objectives. Risk Management is the process of identifying, assessing, responding to, monitoring, and reporting risks.

This Risk Management Plan defines how risks associated with the Procurement Implementation System project will be identified, analyzed, and managed. It outlines how risk management activities will be performed, recorded, and monitored throughout the lifecycle of the project. The Risk Management Plan is created by the project manager in

the Planning Phase of the Procurement Implementation System project and is monitored and updated throughout the project.

The intended audience of this document is the project team, project sponsor and management.

4.8.2 RISK MANAGEMENT PROCEDURE

4.8.2.1 Process

The project manager working with the project team and project sponsors will ensure that risks are actively identified, analyzed, and managed throughout the life of the project. Risks will be identified as early as possible in the project so as to minimize their impact. The steps for accomplishing this are outlined in the following sections. The project manager and PML manager will serve as the Risk Manager for this project.

4.8.2.2 Risk Identification

Risk identification will involve the project team, appropriate stakeholders, and will include an evaluation of factors, organizational culture and the project management plan including the project scope. Careful attention will be given to the project deliverables, assumptions, constraints, WBS, cost/effort estimates, resource plan, and other key project documents.

A Risk Management Log will be generated and updated as needed and will be stored electronically in the project library located in the Halliburton Suriname folder/drive.

4.8.2.3 Risk Analysis

All risks identified will be assessed to identify the range of possible project outcomes. Qualification will be used to determine which risks are the top risks to pursue and respond to and which risks can be ignored.

4.8.2.4 Qualitative Risk Analysis

The probability and impact of occurrence for each identified risk will be assessed by the project manager with input from the project team using the following approach.

Probability

- High – Greater than 70% probability of occurrence
- Medium – Between 30% and 70% probability of occurrence
- Low – Below 30% probability of occurrence

Impact

- High – Risk that has the potential to greatly impact project cost, project schedule or performance
- Medium – Risk that has the potential to slightly impact project cost, project schedule or performance
- Low – Risk that has relatively little impact on cost, schedule or performance

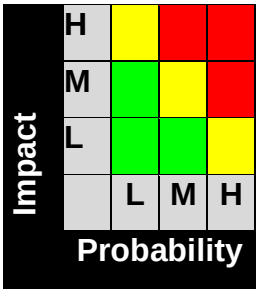


Figure 15: Probability/Impact Matrix (Source: Compiled by author)

Risks that fall within the RED and YELLOW zones will have risk response planning which may include both a risk mitigation and a risk contingency plan.

4.8.2.5 Quantitative Risk Analysis

Analysis of risk events that have been prioritized using the qualitative risk analysis process and their affect on project activities will be estimated, a numerical rating applied to each risk based on this analysis, and then documented in this section of the risk management plan.

4.8.3 Risk Response Planning

Each major risk (those falling in the Red & Yellow zones) will be assigned to a project team member for monitoring purposes to ensure that the risk will not “fall through the cracks”. For each major risk, one of the following approaches will be selected to address it:

- **Avoid** – eliminate the threat by eliminating the cause
- **Mitigate** – Identify ways to reduce the probability or the impact of the risk
- **Accept** – Nothing will be done
- **Transfer** – Make another party responsible for the risk (buy insurance, outsourcing,etc.)

For each risk that will be mitigated, the project team will identify ways to prevent the risk from occurring or reduce its impact or probability of occurring. This may include prototyping, adding tasks to the project schedule, adding resources, etc. For each major risk that is to be mitigated or that is accepted, a course of action will be outlined for the event that the risk does materialize in order to minimize its impact.

4.8.4 Risk Monitoring, Controlling and Reporting

The level of risk on a project will be tracked, monitored and reported throughout the project lifecycle.

A “Top 10 Risk List” will be maintained by the project team and will be reported as a component of the project status reporting process for this project.

All project change requests will be analyzed for their possible impact to the project risks. Management will be notified of important changes to risk status as a component to the Executive Project Status Report.

To identify the project risks, the Risk Management Plan, Cost Management Plan, Schedule Management Plan, Quality Management Plan, Resource Management Plan, Scope Baseline, Activity Cost and Duration Estimates, Stakeholder Register and Procurement Documents were used as inputs to the process. The tools and techniques employed were expert judgement, data gathering and interviews. The register below is the output from this process. However, there are a few elements that have been added to the chart below, as it will be used during project execution to control risks.

Chart 38: Risk Register (Source: Compiled by Author).

Risk ID	Risk Description	Category	Date	Status	Responsible Individual	Probable Cause of Risk	Prevention Strategy	Trigger Event	Contingency Plan	Contingency Plan Activation Date	Planned Resolution Date	Risk Close Sate	Comments
1	Change of material prices	Financial	25/10/2019	Open	Project Manager								
2	Material Quality not as per requirement	Financial	25/10/2019	Open	Project Team								
3	Incorrect material purchase	Financial	25/10/2019	Open	Project Team								
4	Demand by PSL not consistent for material requirement	Planning Regulatory Demands	25/10/2019	Open	Project Team								

Risk ID	Risk Description	Category	Date	Status	Responsible Individual	Probable Cause of Risk	Prevention Strategy	Trigger Event	Contingency Plan	Contingency Plan Activation Date	Planned Resolution Date	Risk Close Sate	Comments
5	Contracts with vendors	Planning Regulatory Demands	25/10/2019	Open	Project Manager								
6	Vendor involvement unauthorized or misplaced	Stakeholders	25/10/2019	Open	Project Manager								
7	Communication errors between buyer and seller	Stakeholders	25/10/2019	Open	Project Team								
8	Contract Approvals	Scheduling Delays	25/10/2019	Open	Project Manager								

Risk ID	Risk Description	Category	Date	Status	Responsible Individual	Probable Cause of Risk	Prevention Strategy	Trigger Event	Contingency Plan	Contingency Plan Activation Date	Planned Resolution Date	Risk Close Sate	Comments
9	SAP Software down	Scheduling Delays	25/10/2019	Open	Project Team								
10	Non-compliant vendors	Scheduling Delays	25/10/2019	Open	Project Team								
11	Non-compliant PSL responsible person identified	Scheduling Delays	25/10/2019	Open	Project Team								

In addition, to detailing a list of identified risks and risk responses, the risk register will be used to capture information regarding how each risk is prioritized by combining its probability of occurrence and impact, which are both aspects of Qualitative Risk Analysis.

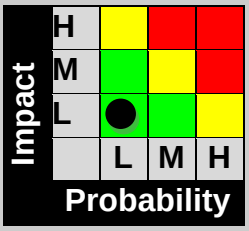
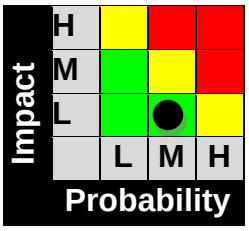
To perform the Qualitative Risk Analysis, the Risk Management Plan, Risk Register and Scope Baseline were used. The tools and techniques used during this process were risk probability and impact assessment, risk urgency assessment and expert judgment. In addition, the 3x3 probability and impact matrix, as stated before, was employed to prioritize each risk for planning risk responses.

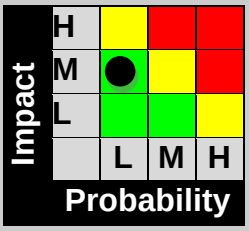
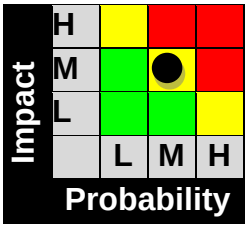
Based on the probability of each risk occurring and its possible impact on the project, a black circle is placed in the expected risk position. The red zone represents high risks, the yellow moderate risks and green zone low risks.

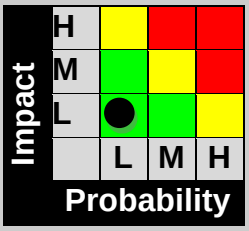
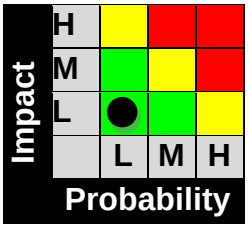
To determine which risks can be categorized as having a high, medium or low probability of occurrence and having a high, medium or low impact on the project, a meeting was conducted with the PML specialist from Panama, the PSL leads and the administrative person based in Suriname.

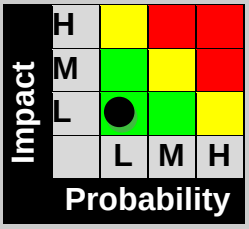
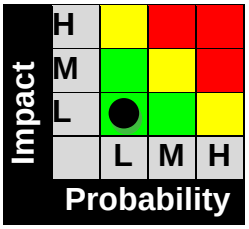
Chart 39: Risk Matrix (Source: Compiled by Author).

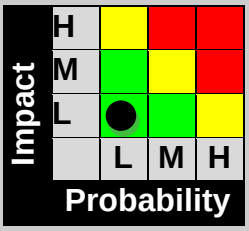
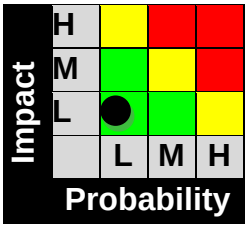
Project Name: Procurement Implementation System	
Risk ID #1: Change of Material Prices	
Description of Risk Event:	Prevention Strategies:
Prices of material might change at the vendor due to economic situation of the country.	Procurement Contracts must be Firm Fixed Price (FFP).
Probable Cause:	Risk Response/Contingency Plans:
Inflation.	Risk Response: Avoid/Mitigate Contingency Plan: Contact vendors and meet regarding contract terms and agreements.
Risk Matrix:	Triggers Events:

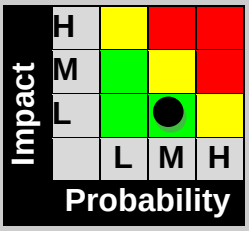
Project Name: Procurement Implementation System	
	Increase in purchase price of items being procured
Risk ID #2: Material Quality not as per Requirement	
Description of Risk Event:	Prevention Strategies:
The quality of the to be purchased material is not as per requirements and/or Halliburton standards.	Sound communication to vendors regarding requirements.
Probable Cause:	Risk Response/Contingency Plans:
Ineffective Stakeholder Management.	Risk response: Avoid/Mitigate Contingency Plan: Contact identified vendors and meet regarding material quality.
Risk Matrix:	Triggers Events:
	Material not as per requirements.
Risk ID #3: Incorrect Material Purchased	
Description of Risk Event:	Prevention Strategies:
The purchased material was incorrect.	Good explanation to vendor of what is needed.
Probable Cause:	Risk Response/Contingency Plans:
Human Error.	Risk Response: Avoid/Mitigate Contingency Plan: PSLs needs to provide good description of materials needed. PSLs need to identify an experienced person who knows about materials requirements.
Risk Matrix:	Triggers Events:

Project Name: Procurement Implementation System	
	Material purchased was not eligible for job, impact on service quality.
Risk ID #4: Material demand by PSL not consistent	
Description of Risk Event:	Prevention Strategies:
The demand by the PSL for items to be purchased changes.	Material list to be made by experts.
Probable Cause:	Risk Response/Contingency Plans:
Human Error.	Risk Response: Mitigate/Accept/Transfer Contingency Plan: PSLs needs to provide good description of materials needed. PSLs need to identify an experienced person who knows about materials requirements.
Risk Matrix:	Triggers Events:
	Changes in material demand by PSL.
Risk ID #5: Contracts with Vendors	
Description of Risk Event:	Prevention Strategies:
Contracts with vendors might have some error, which are identified after contract approval.	Contract should be understood very well by all parties and approver should have some legal knowledge.
Probable Cause:	Risk Response/Contingency Plans:
Human Error.	Risk Response: Mitigate/Transfer
Risk Matrix:	Triggers Events:

Project Name: Procurement Implementation System	
	Contractual issues.
Risk ID #6: Vendor Involvement Unauthorized or Misplaced	
Description of Risk Event:	Prevention Strategies:
Vendor selling items not as per requirement. Transport companies don't deliver materials in time.	Discuss and include vendor expected involvement in project agreement, review often and detail consequences of non-conformance.
Probable Cause:	Risk Response/Contingency Plans:
Ineffective Stakeholder Management.	Risk Response: Mitigate/Transfer Contingency Plan: To review contracts with sponsor and if damages or delays result from their actions, contract conditions will be reinforced.
Risk Matrix:	Triggers Events:
	Vendor changing demanded service; they are not authorized to do so.
Risk ID #7: Communication Errors Between Buyer and Seller	
Description of Risk Event:	Prevention Strategies:
No sound communication between buyer and seller regarding material demand.	Discuss with PSLs to provide material requirement in contract, review often and detail consequences of non-conformance.
Probable Cause:	Risk Response/Contingency Plans:
Human Error.	Risk Response: Mitigate Contingency Plan: training to PSL how to provide material requirements to

Project Name: Procurement Implementation System	
	vendors.
Risk Matrix:	Triggers Events:
	Buyer (PSL) has not communicated in a sound manner the material demand.
Risk ID #8: Contract Approvals	
Description of Risk Event:	Prevention Strategies:
Approved contract has errors.	Good communication between parties, involve people with legal knowledge.
Probable Cause:	Risk Response/Contingency Plans:
Human Error.	Risk Response: Transfer Contingency Plan: to review contract with experts, meet vendors and negotiate.
Risk Matrix:	Triggers Events:
	Approved contracts have some errors, which are identified afterwards.
Risk ID #9: SAP Software Down	
Description of Risk Event:	Prevention Strategies:
SAP Software down due to possible maintenance by IT department.	Meet with IT department and request to bring SAP system down during non-working hours.
Probable Cause:	Risk Response/Contingency Plans:
IT	Risk Response: Mitigate Contingency Plan: nothing.
Risk Matrix:	Triggers Events:

Project Name: Procurement Implementation System	
	SAP system down due to IT related issues.
Risk ID #10: Non-compliant Vendors	
Description of Risk Event:	Prevention Strategies:
Vendors are not compliant to deliver material as per Halliburton standards.	Good explanation of Halliburton requirements/policies/standards to the vendors.
Probable Cause:	Risk Response/Contingency Plans:
Ineffective Stakeholder Management.	Risk Response: Mitigate/Transfer Contingency Plan: short time solution is to choose for another vendor in case of emergency. In the other case, meet with vendor to negotiate and/or change from vendor.
Risk Matrix:	Triggers Events:
	Vendors are not complaint as per Halliburton requirements.
Risk ID #11: Non-compliant PSL Responsible Person Identified	
Description of Risk Event:	Prevention Strategies:
The PSL responsible person is not the right person to purchase items or doesn't has the technical skills regarding material requirements.	Train personnel or choose the right person.
Probable Cause:	Risk Response/Contingency Plans:
Human Error.	Risk Response: Avoid/Mitigate
Risk Matrix:	Triggers Events:

Project Name: Procurement Implementation System	
	Identified responsible person is not compliant to purchase items.

Roles and Responsibilities of Risk Management Committee

This section covers the roles and responsibilities related to risk management, after which the RACI chart will be provided.

Roles:

- To assess the Company's risk profile and key areas of risk in particular.
- To recommend the Project Sponsor and adoption of risk assessment and rating procedures.
- To articulate the Company's policy for the oversight and management of business risks.
- To examine and determine the sufficiency of the Company's internal processes for reporting on and managing key risk areas.
- To assess and recommend the Project Sponsor acceptable levels of risk.
- To develop and implement a risk management framework and internal control system.
- To review management's response to the Company's auditors' recommendations those are adopted.
- To report trends on the Company's risk profile, reports on specific risks and the status of the risk management process.

Responsibilities:

- To define the risk appetite of the organization.
- To exercise oversight of management's responsibilities, and review the risk profile of the organization to ensure that risk is not higher than the risk appetite determined by the board.
- To ensure that the Company is taking appropriate measures to achieve prudent balance between risk and reward in both ongoing and new business activities.
- To review and assess the quality, integrity and effectiveness of the risk management systems and ensure that the risk policies and strategies are effectively managed.
- To review and assess the nature, role, responsibility and authority of the risk management function within the Company and outline the scope of risk management work.
- To ensure that the Company has implemented an effective ongoing process to identify risk, to measure its potential impact against a broad set of assumptions and then to activate what is necessary to pro-actively manage these risks, and to decide the Company's appetite or tolerance for risk.
- To ensure that a systematic, documented assessment of the process and outcomes surrounding key risks is undertaken at least annually for the purpose of making its public statement on risk management including internal control.
- To oversee formal reviews of activities associated with the effectiveness of risk management and internal control process. A comprehensive system of control should be established to ensure that risks are mitigated and that the Company's objectives are attained.
- To review processes and procedures to ensure the effectiveness of internal systems of control so that decision-making capability and accuracy of reporting and financial results are always maintained at an optimal level.

- To provide an independent and objective oversight and view of the information presented by the management on corporate accountability and specifically associated risk, also taking account of reports by the Audit Committee to the Project Sponsor on all categories of identified risks facing by the Company.
- To review the risk bearing capacity of the Company in light of its reserves, insurance coverage, guarantee funds or other such financial structures.
- To ensure that the risk awareness culture is pervasive throughout the organization.
- To review issues raised by Internal Audit that impact the risk management framework.

Chart 40: RACI Chart, Roles & Responsibilities in Risk Management. (Source: Compiled by author)

Roles & Responsibilities (A-Accountable, R-Responsible, C-Consulted, I-Informed)	Project Manager	Project Sponsor	Procurement PSL	All other PSLs	Vendors	Finance
Risk Planning	**A**	**C**	**R**			**I**
Risk Identification	**A**	**I**	**R**	**C**		
Risk Analysis	**A**	**C**	**R**			
Quantitative Risk Analysis	**A**	**C**	**R**			
Risk Response Planning and Action Plan Development	**A**	**C**	**R**	**I**	**I**	**I**
Risk Monitoring and Control	**A/R**	**C**	**R/C**	**I**	**I**	
Lessons Learned Documentation	**C**	**I**	**C**	**I**	**I**	

4.9 Project Procurement Management

Project Procurement Management was conducted after Project Cost, Time and Resource Management. To develop the Procurement Management Plan, a template was used. As stated in the *PMBOK® GUIDE*, the requirements documentation, risk register, stakeholder register and project charter were the inputs used in the process. The tools and techniques, as stated in chapter 3, were expert judgment, data gathering and interactive interviews with the Project Manager.

The plan, shown hereafter, detailed how procurement would be addressed by the project team throughout the lifecycle of the project. It detailed the procurement roles and responsibilities, procurement requirements, vendor identification & selection, vendor management and contract agreements.

As Procurement Management in integral to the success of the project, and subject to financial and scheduling constraints, it was imperative that all items being purchased by the project team were done efficiently and effectively, thus providing enough time for delivery, within budget and of an acceptable standard of quality. Since this project is an internal company's project, there was not too much to do about procurement, because it was said by the sponsor to use maximum in-house materials in order to minimize costs. Hereafter the Procurement Management Plan is shown.

4.9.1 Purpose

The purpose of the Procurement Management Plan is to define procurement parameters for the Procurement Implementation System project in order to ensure its successful completion. Procurement is a deliberate process, which involves many internal departments as well as external vendors. This Procurement Management Plan has been created to provide a framework in which all procurement actions will be managed across all of the parties involved.

4.9.2 Procurement Roles and Responsibilities

To facilitate effective procurement management, the following roles and responsibilities have been established for all procurement actions for the Procurement Implementation Program.

Chart 41: Procurement Roles & Responsibilities (Source: Compiled by Author).

Role	Responsibilities
Project Sponsor	• Approve Procurement Management Plan • Approve vendor selection • Approve all contracts prior to award • Approve any procurement action in excess of $20,000
Project manager	• Provide oversight for all procurement actions • Approve procurement actions under $20,000 • Develop procurement requirements • Manage vendor selection process • Measure vendor performance • Closing out vendor contracts
Contracting Department Director	• Assist procurement actions by submitting requests for proposal (RFPs) to identified vendors • Develop vendor contract • Assist in measuring vendor performance
Information Technology (IT) Director	• Assist in vendor identification and selection • Assist in development of procurement requirements
Project team	• Assist in development of procurement requirements • Assist in evaluating vendors

4.9.3 Procurement Requirements

There are several items, which must be procured in order to successfully complete the Procurement Implementation System project. The following list has been created to

indicate the necessary items, the deliverable each item supports, and the date the item is required to meet the deliverable in accordance with the project schedule.

Chart 42: Procurement Requirements (Source: Compiled by Author).

Procurement Need	Deliverable(s) Supported	Required Delivery Date
5 each 32" monitors	Complete IT testing configuration	16th December 2019
Facility for specialists from other countries	Overall project	16th December 2019
Transportation arrangements and apartment for specialists	Overall project	16th December 2019

4.9.4 Vendor Identification and Selection

This section outlines the process through which vendors will be identified and selected to fulfill the procurement requirements for the Procurement Implementation System project. The project team will identify vendors based on which existing and new vendors are able to meet the procurement requirements outlined above.

The sponsor and project manager will use the following selection criteria to make their vendor selection:

- Vendor most capable of meeting required delivery dates for procurement requirements
- Past performance of the vendor (if applicable)
- Cost of procurement items
- Quality assurance measures

Once the vendor(s) has/have been selected and approved by the Project Sponsor, the Project Manager will work with the Contracting Department Director, or designated representative, to draft and finalize the necessary contract(s) with the vendor(s). Once

all contracts are complete, the Project Manager will begin the vendor management phase of the procurement process.

4.9.5 Vendor Management

The Project Manager is responsible for vendor management and will work with the Contracting Department Director to oversee vendor performance for the Procurement Implementation System project. The Project Manager will measure the ongoing performance of each selected vendor as it applies to the requirements stated in their respective contracts. In order to ensure acceptable vendor performance, service level agreements (SLAs) will be included in the contracts which must be met by the vendors. SLAs for vendor performance include:

- Delivery of item(s) on or before date as agreed upon in the contract
- Delivery of item(s) at or below cost as agreed upon in the contract
- Acceptable performance/quality of item as agreed upon in the contract

Failure of a vendor to adhere to these SLAs will result in the Contracting Department submitting a formal dispute as appropriate.

4.9.6 Contract Requirements

All contracts associated with the Procurement Implementation System project will be firm-fixed price. The Contracting Department Director is responsible for ensuring that each contract complies with internal corporate guidelines and policies. The Project Manager is responsible for ensuring all SLAs and performance criteria and expectations are clearly listed in the contract(s) prior to award. The Project Sponsor will review and approve all contracts prior to award.

4.10 Project Stakeholder Management

Project Stakeholder Management was the last process to be conducted by the initiation process group. Most of the stakeholders are from Halliburton itself, in-home, and they know the advantage of the project to their work. Therefore, it is a good practice to do it in order to encourage stakeholders involvement and for project success purposes.

Identify Stakeholders

In this section, a listing of relevant stakeholders, who are individuals or groups who, in any way, are perceived to be affected, can affect or are affected by the Procurement System Implementation Project. In order to develop an effective plan for managing stakeholders, they first need to be clearly identified and assessed. Stakeholders will be identified by performing a stakeholder analysis in which potential stakeholders and relevant information (interest) are gathered, documented and analyzed. Additionally, their relevant information is documented and analyzed to allow for the adequate and appropriate engagement of each person, organization or group throughout the project life cycle, which is called as “Interest in Project”. The identified stakeholders are shown in the table hereafter. Vendors are material suppliers and transport companies, for which a complete list of is shown in Appendix 5.

A criteria has been established for the identification of stakeholders and so anyone who meets at least one (1) component of the criteria will be deemed a stakeholder worthy of inclusion into the stakeholder register. As stakeholders are identified, interdependencies may arise and that will be recorded for adequate management. To avoid potential project delays or inconveniences, no stakeholders will be omitted from the stakeholder register due to their perceived irrelevance to various project processes. The following criteria has been used for the stakeholder identification:

1. Person or organization directly or indirectly affected by the project;

2. Person or organization in a position to influence the project;
3. Person or organization able to impact project resource availability i.e. human, finance, physical resources;
4. Person or organization with specialized capabilities, skills or services necessary for project success;
5. Person or organization that can potentially benefit from project execution; and
6. Person or organization able to resist and obstruct project changes.

As this is a living document, new stakeholders may be identified at any point in the project life cycle. In those instances, the Project Manager will record these individuals or groups and immediately conduct the stakeholder analysis process so as to allow for sound project execution. The working team initially involved in stakeholder identification will then receive immediate communication on the list additions and of the intention for their engagement. Existing stakeholder will also be engaged for their assistance in the identification of other stakeholders who may have been inadvertently omitted in prior planning activities.

Chart 43: Identified Stakeholders (Source: Compiled by Author).

No.	Stakeholder	Interest in Project
1.	Halliburton Suriname Branch	Sponsoring Organization, Supplier of funds.
2.	Project Manager	Responsible for overall project administration and delivery.
3.	Supply Change Management Department	Responsible to achieve determined project deliverables.
4.	Technical Advisors	Provides technical guidance and analysis.
5.	Project Team	Responsible for the execution of the project.
6.	Halliburton PSLs in Suriname	Ultimate clients, responsible to assign people to create requisitions and provide material requirements.

No.	Stakeholder	Interest in Project
7.	Vendors, Material Supplier	Responsible to provide materials on Halliburton standards.
8.	Staatsolie	Seeking for high quality service.
9.	Halliburton Suriname Employees	Responsible to provide material requirements and create requisitions.
10.	Human Resources Department	Provide funds, approve contracts and pay vendors/suppliers.
11.	Vendors, Transport Companies	Should be available for transportation of purchased materials.

Power/Interest Classification

On completion of the stakeholder register, a power/interest grid will be populated to allow for a practical representation of the ranking or categorization of programme stakeholders. Stakeholder quadrant and identification number assignments will be made herein and reflected within its corresponding quadrant along the stakeholder matrix. For ease of reference, the matrix will be analogized against the mathematical 'coordinate plane'. For the purpose of this proposal, POWER refers to the level of authority the individual or group has over the programme, whereas INTEREST refers to the level of concern the individual or group has for the programme. INFLUENCE refers to the level of capacity the individual or group has over the programme and IMPACT refers to the level of impression/effect the individual or group has over the programme. Stakeholders are hence assigned to one (1) of four (4) groupings, namely:

- High Interest/High Power – also known as Key Stakeholders, are most affected by project works. They have considerable influence over the project and so communication to this group needs to be well organized, timed and regularly issued. They need to be the most satisfied, well-engaged and managed closely.

- High Power/Low Interest – also known as Important Stakeholders but do not need to be bombarded with project communication. They prefer to be kept comfortably engaged and are satisfied with messages communicated to them intermittently.
- Low Power/High Interest – also known as Affected Players, should be leapt up to speed on programme matters.
- Low Power/Low Interest – also known as Potential Players, need to be monitored but not bothered with unnecessary project communication.

Based on the above information, the stakeholder matrix has been depicted in chart 44.

Chart 44: Stakeholder Matrix (Source: Compiled by Author).

Stakeholder	**Impact (low, medium, high)**	**Interest (low, medium, high)**	**Power (low, medium, high)**	**Influence (low, medium, high)**
Halliburton Suriname Branch	Very High	Very High	Very High	Very High
Project Manager	Very High	Very High	Very High	Very High
Supply Change Management Department	Very High	High	Very High	Very High
Technical Advisors	Medium	High	Low	High
Project Team	High	High	High	Very High
Halliburton PSLs in Suriname	Medium	Very High	Low	Very High
Vendors, Material Supplier	High	Very High	Very High	Very High
Staatsolie	Low	Low	Low	Low
Halliburton Suriname Employees	Low	High	Low	High

Stakeholder	Impact (low, medium, high)	Interest (low, medium, high)	Power (low, medium, high)	Influence (low, medium, high)
Human Resources Department	Medium	Medium	Medium	Medium
Vendors, Transport Companies	Medium	Low	Medium	High

Stakeholder Prioritization

Without a prioritization plan, the project stakeholders who complain the most are likely to get the most attention. This is not a strategic way to allocate time. The project manager should not allow the stakeholders to dictate how much time is spent with them. Instead, the project manager must make crisp decisions on how much time to invest in each stakeholders.

With a prioritization plan, the project manager will understand how to deploy their time. The stakeholder prioritization considers the following scoring criteria:

10 Much more important
5 More important
1 Equally important
1/5 Less important
1/10 Much less important

In chart 45, the prioritization matrix, also known as L-Shaped Matrix, has been depicted.

Chart 45: L-Shape Matrix (Source: Compiled by Author).

Stakeholder Prioritization	Halliburton Suriname Branch				Project Manager	Supply Change Management Department	Technical Advisors	Project Team	Halliburton PSLs in Suriname	Vendors, Material Supplier	Staatsolie	Halliburton Suriname	Human Resources Department	Vendors, Transport	Row Total	Relative Decimal Value
Halliburton Suriname Branch					5	1	1	1	1	10	10	1	1	5	36	0.12
Project Manager	1/5					1	5	1	5	10	10	10	5	10	57.20	0.19
Supply Change Management Department	1				1		5	1	5	10	10	10	5	10	58	0.19
Technical Advisors	1				1/5	1/5		1	1/5	1	5	5	1/5	5	17.80	0.06
Project Team	1				1	1	1		10	10	10	10	1	5	50	0.16
Halliburton PSLs in Suriname	1				1/5	1/5	5	1/10		1	10	1	1	1	20.50	0.07
Vendors, Material Supplier	1/10				1/10	1/10	1	1/10	1		5	1	1	1	10.4	0.03
Staatsolie	1/10				1/10	1/10	1/5	1/10	1/10	1/5		1/10	1/10	1/5	1.30	0.004

Stakeholder Prioritization	Halliburton Suriname Branch				Project Manager	Supply Change Management Department	Technical Advisors	Project Team	Halliburton PSLs in Suriname	Vendors, Material Supplier	Staatsolie	Halliburton Suriname	Human Resources Department	Vendors, Transport	Row Total	Decimal Relative Value
Halliburton Suriname Employees	1				1/10	1/10	1/5	1/10	1	1	10		1/5	1	14.70	0.05
Human Resources Department	1				1/5	1/5	5	1	1	1	10	5		5	29.40	0.1
Vendors, Transport Companies	1/5				1/10	1/10	1/5	1/5	1	1	5	1	1/5		8.90	0.03
														Total	304.20	

Plan Stakeholder Engagement

Plan Stakeholder Engagement is the process of developing the appropriate management strategies to effectively engage stakeholders throughout the project life cycle. The key benefits of this project is that it provides a clear actionable plan to interact with project stakeholders to support the project's interests. Stakeholder Engagement is more than improving communication and requires more than managing a team. Current level of stakeholder engagement needs to be compared to planned level required for project success. The engagement level of stakeholders can be classified as:

- Unaware - Unaware of project and potential impacts
- Resistant – Aware of project and potential impacts and resistant to change
- Neutral – Aware of project yet neither supportive nor resistant
- Supportive – aware of project and potential impacts and supportive of change
- Leading – Aware of project and potential impacts and actively engaged in ensuring project success

Chart 46: Stakeholder Engagement Assessment Matrix (Source: Compiled by Author).

Stakeholder	Unaware	Resistant	Neutral	Supportive	Leading

Manage Stakeholder Engagement

In this section, the Project Manager will work assiduously with his team to increase programme support and minimize associated resistance from stakeholders through the development of trusted relationships. Matters arising during this time will be handled expeditiously and conflict resolution techniques will also be applied.

Additionally, stakeholder engagement and management will be systematically fostered throughout the project life cycle.

Manage Stakeholder Engagement is the process of communicating and working with stakeholders to meet their needs and addressing issues as they occur. The key benefit of this process is that it allows project manager to increase support and minimize resistance, significantly increasing changes of achieving project success.

The key stakeholders of the Procurement System Implementation project will be closely managed. They will be fully engaged about and involved in the project. much effort will be put into ensuring their satisfaction with project and this relationship will be regularly monitored to ensure a sustained stakeholder relationship.
The Affected players must be kept adequately informed. They will be engaged to ensure that no major concerns are left unresolved as they are very helpful with project details and planning.

The Potential players though classified as low priority, must be monitored with minimal and controlled levels of engagement so as not to bore them with excessive communication about the Procurement System Implementation.

The subsequent communication plan and aforementioned strategies will govern communication with all programme stakeholders so as to sustain and ultimately heighten the chances of project success. These stakeholders will be engaged appropriately and issue logs will be used to collect record and resolve concerns expressed by stakeholders. The members of the Project Team will be integral to this component of the management strategy as the primary contact to stakeholders. The proposed plan for engagement is captured below.

Chart 47: Manage Stakeholder Engagement Strategy (Source: Compiled by Author).

No.	Position	Power (High (H) vs. Low (L))	Interest (High (H) vs. Low (L))	Strategy
1.	Halliburton Suriname Branch	H	H	• Sponsoring Organization, Supplier of funds. • Solicits ideas and feedback on the project. • Addresses concerns raised and incorporates ideas suggested.
2.	Project Manager	H	H	• Responsible for overall project administration and delivery. • Solicits ideas and feedback on the project. • Addresses concerns raised and incorporates ideas suggested. • Records and addresses matters of concern as they are identified. • Communicates outcomes regularly
3.	Supply Change Management Department	H	H	• Responsible to achieve determined project deliverables. • Records and addresses matters of concern as they are identified. • Communicates outcomes regularly • Solicits ideas and feedback on the project.
4.	Technical Advisors	L	L	• Provides technical guidance and analysis. • Solicits ideas and feedback on the project. • Addresses concerns raised and incorporates

No.	Position	Power (High (H) vs. Low (L))	Interest (High (H) vs. Low (L))	Strategy
				ideas suggested.
5.	Project Team	H	H	• Responsible for the execution of the project. • Solicits ideas and feedback on the project. • Addresses concerns raised and incorporates ideas suggested. • Records and addresses matters of concern as they are identified. • Communicates outcomes regularly
6.	Halliburton PSLs in Suriname	L	H	• Ultimate clients, responsible to assign people to create requisitions and provide material requirements. • Solicits ideas and feedback on the project. • Records and addresses matters of concern as they are identified.
7.	Vendors, Material Supplier	L	L	• Responsible to provide materials on Halliburton standards. • Solicits ideas and feedback on the project. • Records and addresses matters of concern as they are identified.
8.	Staatsolie	L	L	• Seeking for high quality service. • Solicits ideas and feedback on the project.

No.	Position	Power (High (H) vs. Low (L))	Interest (High (H) vs. Low (L))	Strategy
9.	Halliburton Suriname Employees	L	L	• Responsible to provide material requirements and create requisitions. • Solicits ideas and feedback on the project.
10.	Human Resources Department	L	L	• Provide funds, approve contracts and pay vendors/suppliers. • Solicits ideas and feedback on the project.
11.	Vendors, Transport Companies	L	L	• Should be available for transportation of purchased materials. • Solicits ideas and feedback on the project. • Records and addresses matters of concern as they are identified.

Monitor Stakeholder Engagement

In this section, stakeholder relationships will be monitored for the timely and appropriate strategic application of preventative and/or corrective stakeholder engagement practices. Monitor Stakeholder Engagement is the process of monitoring overall stakeholder relationships and adjusting strategies and plans for engaging stakeholders. The key benefit of this process is that it will maintain or increase the efficiency and effectiveness of stakeholder engagement activities as project evolves and its environment changes.

Stakeholder engagement should be continuously monitored. During this phase, the Project Team and Project Manager are critical players, both individually and or in group settings, particularly in the exchange and analysis of various project related information. The dynamics of the project can signify that stakeholders (at any point in the project life cycle) may move between quadrants for one several reasons and as such will need to be engaged appropriately so that the adequate response is applied.

The Procurement specialist with responsibility for the coordination of the procurement implementation system will monitor and, if necessary, activate the control mechanism for stakeholder engagement at any point of the project life cycle.

The procurement specialist is expected to have a close working relationship with the stakeholders due to intermittent interactions that would likely happen between them in the process of project execution. By doing so, a general and current sense of interest and power levels should be easily detectable. Should a stakeholder be identified as moving within quadrants, the officer will record the stakeholders name, role within the project, time of change specifications and the rationale for movement. This information will immediately be sent electronically and expressed by the Procurement specialist to the Project Manager. The Project Manager will use this information to adequately reassign stakeholders within quadrants and for the adequate and timely strategic engagement of each of them. This will be further

facilitated through the use of the formal Change Request. The official changes once adopted by the Project Sponsor will be reflected within a revised stakeholder register and will highlight the new ranking and proposed communication approach for respective stakeholders. The amended stakeholder register will then be circulated by the Project Manager to all Project Team Members. This phase is paramount to the process as unidentified and or mal-adjusted placements may result in project conflicts or subpar interactions.

5 CONCLUSIONS

1. The Project Management Plan was created to be used as a developmental tool for the Procurement System Implementation Project Management Team and will be the introduction to project management aspects for Halliburton Suriname employees. Since it conception, the organization has developed several projects following internal procedures. Therefore, this PMP represents a milestone regarding to the project management approach, methodology, strategy, and decision-making processes that will guide the company projects from now on. In addition, the Project Charter was developed for an effective project management.

2. The Scope Management Plan was developed to manage the project scope in a sound way. This project focuses on the development of a Procurement system for Halliburton Suriname Branch. The WBS, along with the other tools developed, have helped the organization to define and organize the work required in order to accomplish the project goal. Therefore, this plan will help the project management team to be focused on the deliverables stablished, avoiding or minimize scope creep.

3. The Schedule Management Plan was created in order to adequately identify and orchestrate each project activity to ensure the project's completion within the time constraints. In addition, it will seek to ensure that building processes are planned and time in such a way that waste generated by rework is eliminated. For this purpose, experts were contacted to help developing a sound Time Management Plan where all elements from the WBS were in the schedule, considering relevant information from the PSLs and local procurement people. By ensuring that activities are sequenced and well defined, the project is likely to be completed on time.

4. The Cost Management Plan defines the baseline for what the project is expected to cost. By implementing an effective cost management, the budget

should be brought under control. Since Halliburton is a worldwide company, the Cost Management Plan will give the company an idea on how much this project costs so that it can be used as a basis whenever another country wants to implement the procurement system.

5. Having the Quality Management Plan in place will help a sound development of the Procurement System in Suriname. This plan will assist in assuring existing standards are met and provides the framework to obtain feedback from stakeholders. This means that it will help the PSLs to manage their purchases and to communicate themselves with the vendors in order to explain what material they need while meeting stakeholder's requirements and acceptance criteria.

6. To address specific number six, the Resource Management Plan, all resources required to complete the project were identified and classified to manage the resources in an effective and efficient way. The resource management plan includes human resources and material/equipment resources and adheres to all the requirements of the company in such a way that the stakeholders can experience economic prosperity in the sense that resources will be available for the PSLs to purchase quality material at good prices locally. PSLs will save money since most of the purchases will be done locally. In the past purchases were done from other countries and PSLs were spending lots of money for transportations.

7. Relevant, accurate and consistent information must be communicated to the appropriate audiences in a timely manner. Therefore, it was necessary to develop the Communications Management Plan that allows for open and clear lines of communication between the project team and all stakeholders. For previous projects, lack of communication and record keeping has made proper project execution a challenge and at time resulted in deliverables that do not satisfy with the business need. Therefore, this plan will ensure that the correct information is disseminated in a timely manner through the appropriate channels.

8. The identified risks for this project have a degree of probability of occurrence and are likely to have an impact on one or more project objectives. Therefore, the severity of the impact was used to determine the type of risk strategies to be used as well as the contingencies to be added to the project budget. The development of the Risk Management Plan will be a means of forcing stakeholders to pay attention to any risks to lessen the possibility of delay and increase the likelihood of a successful project. Considering the Procurement Management System will increase the company efficiency; the Risk Management Plan intends to prevent higher costs and time overruns during the project execution.

9. The Procurement Management Plan establish how procurement would be addressed throughout the lifecycle of the project. This plan is necessary to ensure transparency and fairness in the procurement of goods and services required for the Procurement System Implementation. The plan provides guidance so all stakeholder needs are taken into consideration and ensure transparency in decision-making. Although procurement management has been used for years at Halliburton Suriname Division, the *PMBOK® GUIDE* 6th Edition provided a set of good project management practices used by the project team to develop a more thorough project management plan and to improve the way the company will manage a project as important as the procurement system implementation project.

10. The Stakeholder Management Plan gives a comprehensive overview of all stakeholders for this project so that effective stakeholder management can be done during the project execution. Most of the stakeholders are from Halliburton itself, in-home, and they know the advantage of the project to their work. However, it is a good practice to do it in order to encourage stakeholder's involvement for project success purposes.

6 RECOMMENDATIONS

1. Halliburton Suriname Division should employ formal Project Management methods to increase the likelihood of project success in any area. Therefore, the organization should develop standard project management initiation and planning documents prior to execution of projects in any PSLs/area.

2. All projects managed by Halliburton Suriname Division should be headed by a project management team, using developed standard project planning documents tailored for the respective project. Therefore, it is recommended to include training sessions related to *PMBOK® GUIDE* 6th Edition set of good project management practices, in order to promote a better comprehension and stakeholders engagement. The author of this PMP could develop these training sessions.

3. The Procurement PSLs' project management team should exercise care and caution during the development of each subsidiary plan of the Project Management Plan to ensure that all planning subsets for each knowledge area or respective application area are thorough and accurate. In addition, they should also utilize a document management and storage system, to organize and store all documents created for future use and review.

4. Even though the PMP includes the Risk Management Plan, Halliburton Suriname Division and the Procurement PSL could invest in additional tools required to complete quantitative risk analyses for this and other projects executed by the company.

5. The project management team of Halliburton should consider the use of the planning process and templates created during the development of the Project Management Plan for the Procurement System Implementation Project, as a basis for implementing a methodology to be used by the company for future projects of similar relevance.

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8 APPENDICES

Appendix 1: FGP Charter

PROJECT CHARTER	
Date	**Project Name**
Issue date: May 18, 2019	The development of a project management plan to facilitate procurement for Halliburton Suriname Division
Knowledge areas / processes	**Applicacion Area (Sector / Activity)**
Knowledge areas: Project Integration Management, Project Scope Management, Project Cost Management, Project Schedule Management, Project Quality Management, Project Resource Management, Project Communications Management, Project Risk Management, Project Procurement Management, Project Stakeholder Management **Process groups:** Initiation, Plan, Execution, Monitor and Control and Closing	Supply Chain Management
Start date	**Finish date**
Is the same as the issue date	December 15th, 2019
Project Objectives (general and specific)	
General objective: To create a Project Management Plan, framed within the standards of the Project Management Institute, to manage the implementation of procurement needs for Halliburton Suriname Branch. **Specific objectives:** 1. To develop the Integration Management Plan in order to unify and coordinate the processes and project management activities 2. To create a scope management plan to ensure that it includes all the work, and only the work, required to successfully complete the project.	

3. To create a time management plan to support the development and management of a project schedule to ensure the project is completed within the time constraints.
4. To create a cost management plan to define the processes for developing and managing the project budget to ensure it is completed within the budget constraints.
5. To develop a quality management plan to identify the quality requirements for the project in order to ensure results meet expectations for approval.
6. To create a resource management plan to ensure that all resources are identified and managed effectively for the successful completion of the project.
7. To develop a communications management plan to ensure the timely and effecitve communication of the project status and other key information.
8. To create a risk management plan to identify and examine risks to the successful completion of the project.
9. To develop a procurement management plan to be used to obtain products, services or results required by the project.
10. To develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder management.

Project purpose or justification (merit and expected results)

Halliburton has been operating is Suriname since the 1980"s for the state owned oil and gas company called Staatsolie. Since then until early last year, Halliburton Suriname Branch consists only for 2 PSL's namely Cemeting and Wireline and Perforating. It was quite a small business with only these two PSL's, so we were getting support from Trinidad for HR and Procurement matters. However, it was taking long to purchase items and due to the nature of the operation we sometimes need items urgently, so this was an issue at all times. The issue was the delivery time and also the high costs (transportation costs).

Staatsolie recently started with the Near Shore Drilling Project. After tendering with Service Companies, Halliburton obtained the whole package to operate on the West Castor (Near Shore) Rig. This means that now we have more PSL's of Halliburton in Suriname. In addition to the Cementing and Wireline & Perforating PSLs, now we have also acquired Sperry, PM and other PSLs. The operation has become much bigger now which means we need to incorporate Procurement locally for the sake of easiness and to lower the transportation costs.

The project to develop the Project Management Plan for the implementation of Procurements is required to effectively create the documents that will be used by the

Project Management Team during the executing, monitoring and controlling and closing processes. Procurement, now also based in Suriname, has identified a couple of (local) vendors to work with in order to get items easily in a timely manner and with lower transportation costs. This makes it much more easier for the PSLs, who are responsible to create the request for items that they need.

The project manager and project managent team understand the importance of the planning process and the project management plan, to the successful completion of the project. During this project, the project manager will plan to develop the subsidiaries of the project management plan for the implementation of procurement to meet time, cost, schedule and quality constratints.

Procurement, now also based in Suriname, has identified a couple of (local) vendors to work with in order to get items easily in a timely manner and with lower transportation costs. Therefore, in order to increase the successful installation of procurements locally for Halliburton Suriname Branch, the Project Manager will seek to develop the Project Management Plan by detailing the management of all critical aspects of the project.

The research proposal will explore the Project Management Institute's (PMI) guide to create a Project Management Plan, providing justification for the decisions made while developing the project's integration, scope, time, cost, quality, human resources, communication, risk, procurement and stakeholder management plans.

The subsidiary documents will guide the Project Management Team during the executing, monitoring and controlling and closing processes. In addition, they will facilitate the procurement processes/procedures to effectively and efficiently manage procurements for Halliburton Suriname Branch, especially for the Near Shore Drilling Project, with(in) a reasonable timeframe, with desirable quality and within budget.

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

Project Management Plan that will serve as a guide for initiating, planning, executing, monitoring and control and closing of Project to integrate local procurement for Halliburton Suriname Division. The plan will consist of all of the subsidiary documents of a Project Management Plan.

Assumptions

- Review and feedback of the project deliverables will be done in a timely and supportive manner.

- The student will be required to stick to the WBS and the project schedule.

Constraints

- Time (3 months)
- Scope: uncertainty regarding whether the scope is beyond the required time to finish the project
- Cost: the student is uncertain about the costs associated to the project.

Preliminary risks

- If student submissions are late, grades standing are forfeited.
- If the schedule for milestone completion is not adhered to, the project management plan may not be completed in three months.
- If the support by the supervisor is not prompt, the project management plan may not be completed in a timely manner.
- If the project charter is not followed throughout the project, the student might step aside impacting the WBS and causing late submission of the deliverables.

Budget

Not defined yet.

Milestones and dates

Milestone	Start date	End date
FGP Seminar	May 14th, 2019	June 16th, 2019
Tutoring process	June 17th, 2019	September 17th, 2019
Reading by Reviewers	September 18th, 2019	October 11th, 2019
Adjustement	October 12th, 2019	October 30th, 2019
Presentation to Board of Examiners	November 1st, 2019	November 10th, 2019

Relevant historical Information

Founded in 1919, Halliburton is one of the world's largest providers of products and services to the energy industry. With 60,000 employees, representing 140 nationalities in more than 80 countries, the company helps its customers maximize value through the lifecycle of the resevoir – from locating hydrcarbons and managing geological data, to drilling and formation evaluation, well construction and completion, and optimizing production throughout the life of the asset. Halliburton comprises 14 product service lines (PSLs). The PSLs operate in two divisions: Drilling and Evaluation, and Completion and Production. In addition, the companies Consulting and Project Management PSL works across both divisions and is the spearhead of our integrated-services strategy. Its financial results are included in the Drilling and Evaluation Division. PSLs are primarily responsible and accountable for strategy, technology

development, process development, people development and capital allocation.

Halliburton took the initial step toward becoming a worldwide company in 1926. In the 1980s, Staatsolie (the government owned company) contracted Halliburton in Suriname to provide logging & perforating and cementing services. The business was quite small, around 25 employees working in the two PSLs Wireline & Perforating and Cementing. Due to the size of the business, it was economically not profitable to install procurement locally in Suriname. Having installed procurement means to have at least one more headcount which, in the end, will affect the revenue. This means that procurement was managed all the time from Halliburton Trinidad Branch. Even HR activities for Suriname are done from Trinidad. Coming back to procurement, it was taking time to receive an item in Suriname. Due to the nature of the business, the company sometimes require some items very urgently. Moreover, this was always an issue, because the organization depends on Trinidad, how fast/slow they work, etc. In addition, it was also hitting the revenue because of the transportation costs.

Early this year Staatsolie increased their operation with the Near Shore Drilling Project (NSDP). After tendering with different service companies, Staatsolie chose for Halliburton to work with on the West Castor Rig (the Rig at Near Shore). Halliburton obtained the complete package of Drilling, Cementing and Logging. This increased the activities of Halliburton Suriname and the business became much bigger than it was till last year. In addition to the PSLs Wireline & Perforating (WP) and Cementing (CMT), now Halliburton Suriname consists of Sperry, PML (Supply Chain Management) and Project Management. Due to the size of the business, it was now required to install local procurement to easily and effectively deal with vendors.

Stakeholders

Direct stakeholders:

- Global School of Project Management, UCI
- Student, Shekhar Sewratan
- FGP Professor
- Reviewers
- Board of examiners

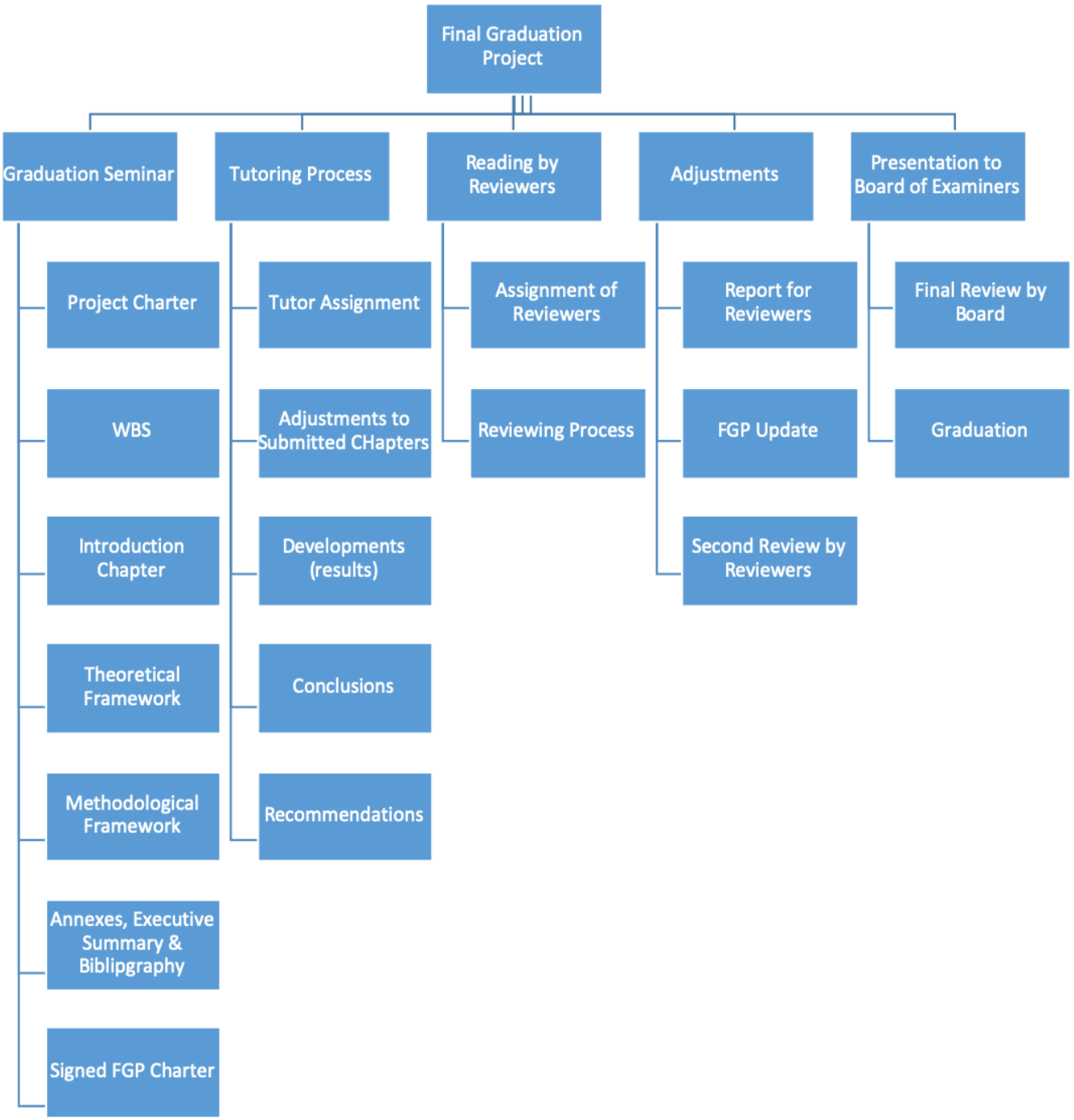
Indirect stakeholders:

- Academic Assistant
- Halliburton Suriname Division

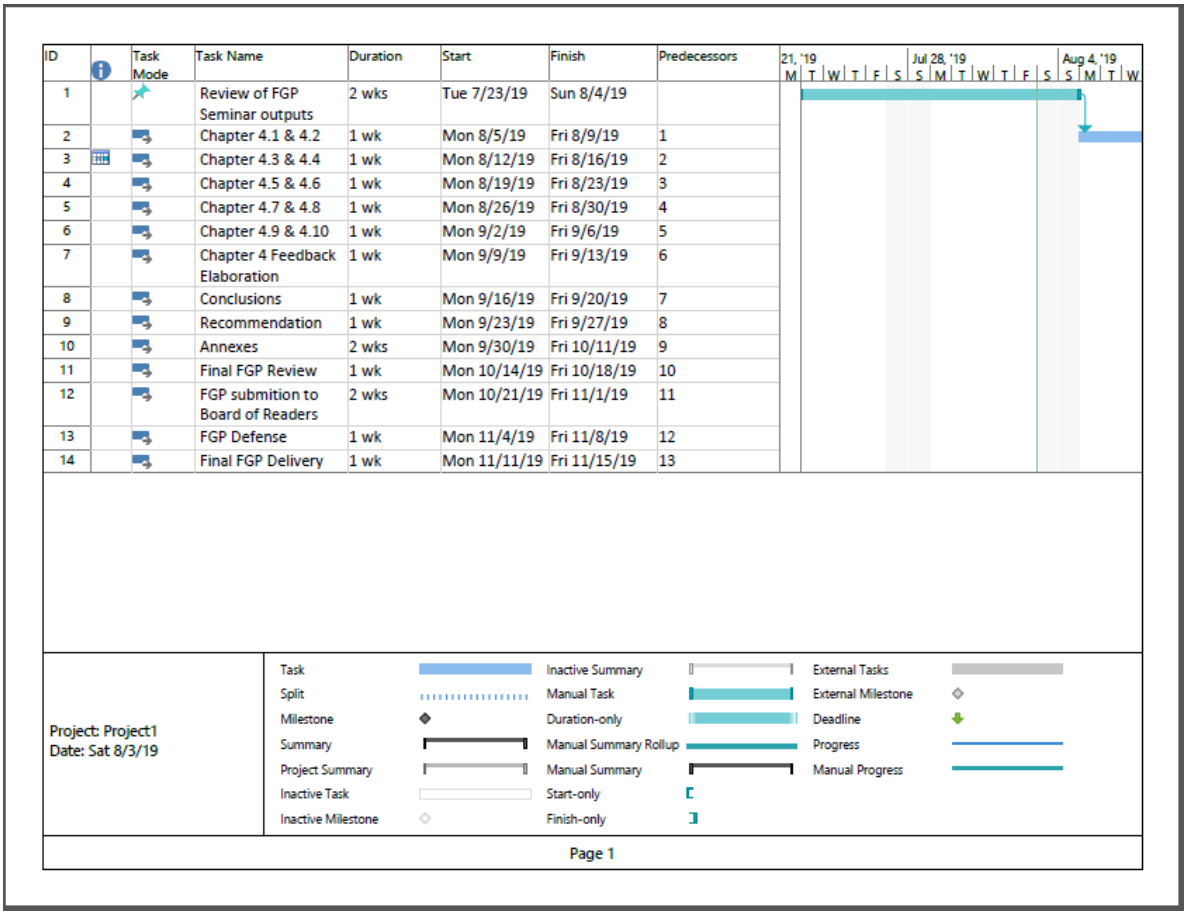
Project Manager:	**Signature:**

Shekhar Sewratan	
Authorized by:	**Signature:**

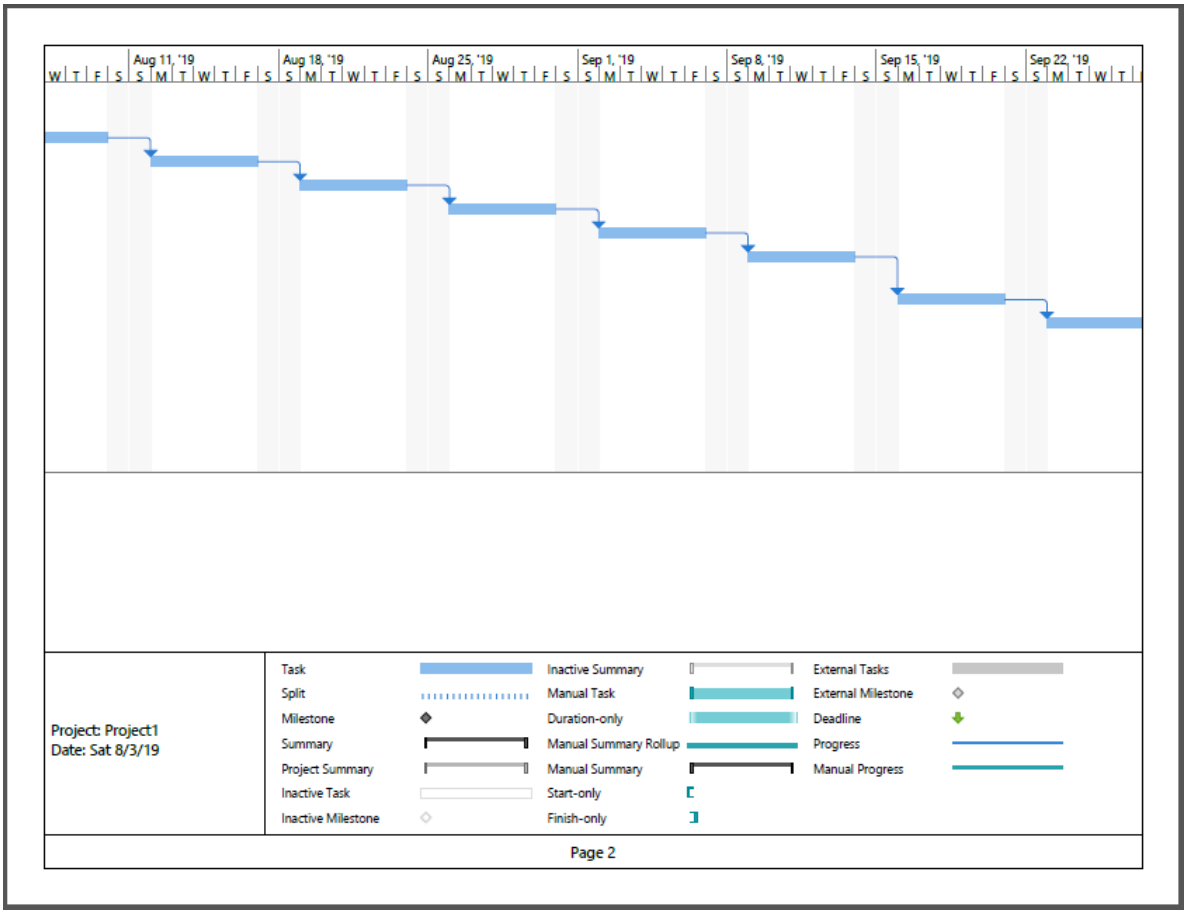
Appendix 2: FGP WBS



Appendix 3: FGP Schedule



ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
1		Review of FGP Seminar outputs	2 wks	Tue 7/23/19	Sun 8/4/19	
2		Chapter 4.1 & 4.2	1 wk	Mon 8/5/19	Fri 8/9/19	1
3		Chapter 4.3 & 4.4	1 wk	Mon 8/12/19	Fri 8/16/19	2
4		Chapter 4.5 & 4.6	1 wk	Mon 8/19/19	Fri 8/23/19	3
5		Chapter 4.7 & 4.8	1 wk	Mon 8/26/19	Fri 8/30/19	4
6		Chapter 4.9 & 4.10	1 wk	Mon 9/2/19	Fri 9/6/19	5
7		Chapter 4 Feedback Elaboration	1 wk	Mon 9/9/19	Fri 9/13/19	6
8		Conclusions	1 wk	Mon 9/16/19	Fri 9/20/19	7
9		Recommendation	1 wk	Mon 9/23/19	Fri 9/27/19	8
10		Annexes	2 wks	Mon 9/30/19	Fri 10/11/19	9
11		Final FGP Review	1 wk	Mon 10/14/19	Fri 10/18/19	10
12		FGP submition to Board of Readers	2 wks	Mon 10/21/19	Fri 11/1/19	11
13		FGP Defense	1 wk	Mon 11/4/19	Fri 11/8/19	12
14		Final FGP Delivery	1 wk	Mon 11/11/19	Fri 11/15/19	13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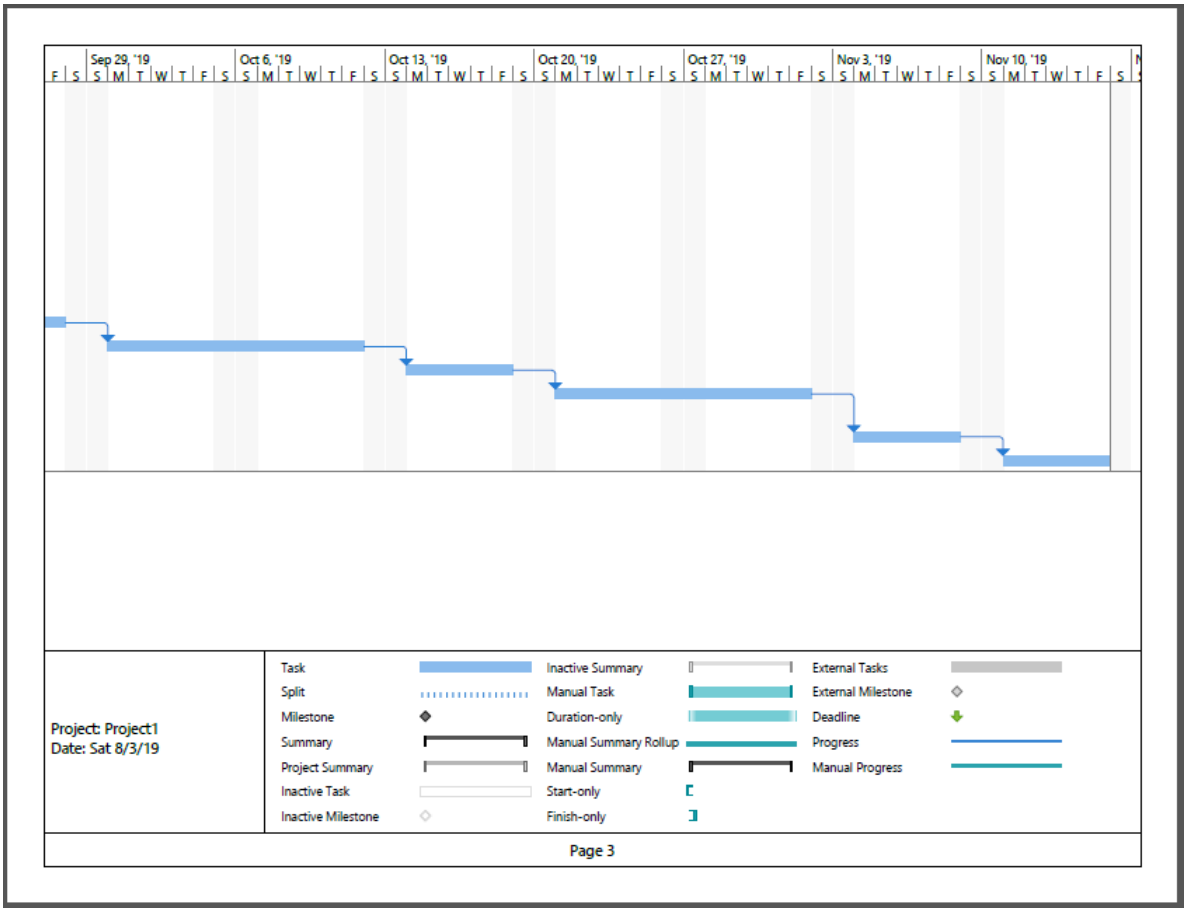
Aug 18, '19
Aug 25, '19
Sep 1, '19
Sep 8, '19
Sep 15, '19
Sep 22, '19
Project: Project1
Date: Sat 8/3/19
Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Progress
Manual Progress
Page 2


Sep 29, '19
Oct 6, '19
Oct 13, '19
Oct 20, '19
Oct 27, '19
Nov 3, '19
Nov 10, '19
Project: Project1
Date: Sat 8/3/19
Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Progress
Manual Progress
Page 3

Appendix 4: Business Case

BUSINESS CASE

ProjectManagementDocs.com

BUSINESS CASE

THE DEVELOPMENT OF A PROJECT MANAGEMENT PLAN TO FACILITATE PROCUREMENT

HALLIBURTON SURINAME DIVISION

MALEBATRUMSTRAAT 1-4

PARAMARIBO

SEPTEMBER 2019

1. Executive Summary

This business case outlines how the Project Management Plan will address current business concerns, the benefits of the project, and recommendations and justification of the project. The business case also discusses detailed project goals, performance measures, assumptions, constraints, and alternative options.

1.1 Issue

As a result of an expanding business, Halliburton Suriname has to implement local procurement to save time and costs. As the organization continues to increase the business which causes more material needs, the administration of the workforce has become more difficult. Until now, almost the entire procurement and resource management have been done via Trinidad Operations. As the workforce expands in numbers and area, the procurement system has become inadequate to effectively manage it. This inadequacy is manifested in higher costs and increased time of delivery for the procured materials. In order to upgrade the effective management of the companies administration, reduce costs, and improve transportation time, Halliburton must move to implement local procurements. By doing so, employees in different PSL's will assume a greater role in managing their purchasing issues, have access to purchasing platforms, and the company can manage its administration from one central and common platform.

1.2 Anticipated Outcomes

Moving to a local procurement system will enable Halliburton Suriname to manage its business needs and vendor relations in a seamless and consolidated manner. This technology migration will reduce overhead costs associated with the large transit times to manage these tasks. Local procurement system will have more autonomy to manage the business needs. The company will also benefit from more timely and accurate financial reporting as a result of the regional managers' ability to enter and continuously update their financial metrics. The implementation of the local procurement system will reduce procurement errors, improve delivery

time, reduce transportation costs and is available for any employee from any PSL who needs to purchase materials to complete their tasks.

1.3 Recommendation

Various options and alternatives were analyzed to determine the best way to leverage procurement to improve the business processes and reduce the transportation costs within current Halliburton procurement system. The approach described herein allows the company to meet their corporate objectives of continuously improving efficiency, reducing costs, and delivering high service quality to their customer. The recommended PMP will methodically migrate the data and functions of the current procurement system to the improved procurement system in order to preserve data integrity and allow adequate time to train all employees and managers on their responsibilities and respective administrative functions. The local procurement system will allow employees to communicate themselves with the vendor in order to explain what material (prescription) they need and also the employees will be able to create PADs or PO's their selves. Some of the ways that this implementation will achieve its desired results are:

- Employees will be able to call vendors to explain what exactly they need to complete their tasks and create the purchase orders by themselves.
- List of contracted items for some vendors will be available for employees to make their purchase orders easily.
- Locally procured items will available for direct delivery, if vendor has in stock.

1.4 Justification

The implementation of the local procurement system will result in greater efficiency with regards to company resources and business processes. The PMP Project is also aligned with corporate strategy and objectives since it uses technology to improve the way the company do business. While other alternatives and the status quo were analyzed, the PMP Project was selected for proposal in this business

case because it provides the best opportunity to realize benefits in an expedited manner while also allowing for the greatest improvement in efficiency and cost reduction. Other alternatives assumed greater risk, provided less benefits, were too difficult to define, or were not suitably aligned with current corporate strategy and/or objectives.

2. Business Case Analysis Team

The following individuals comprise the business case analysis team. They are responsible for the analysis and creation of the PMP Project business case.

Role	Description	Name/Title
Project Manager	Manages the business case and project team	Frank Malca Layne
Software Support	Provides all software support for the project	Vishnu Rambharose

3. Problem Definition

3.1 Problem Statement

Halliburton has been operating in Suriname since the 1980”s for the state owned oil and gas company called Staatsolie. Since then until early last year Halliburton Suriname Branch consists only of 2 PSL’s namely Cemeting and Wireline and Perforating. It was quite a small business with only these two PSL’s so the company was getting support from Trinidad for HR and Procurement matters. However, it was taking long to purchase items and due to the nature of the operation the company sometimes needs items urgently, so this was an issue at all times.

The issue was the delivery time and also the high costs (transportation costs). Staatsolie recently started with the Near Shore Drilling Project. After tendering with Service Companies, Halliburton obtained the whole package to operate on the West Castor (Near Shore) Rig. This means that now the organization has more

PSL's of Halliburton in Suriname. In addition to the Cementing and Wireline & Perforating PSLs, now the company has also acquired Sperry, PM and other PSLs. The operation has become much bigger now which means the company needs to incorporate Procurement locally for the sake of easiness and to lower the transportation costs.

3.2 Organizational Impact

The project to develop the Project Management Plan for the implementation of Procurements is required to effectively create the documents that will be used by the Project Management Team during the executing, monitoring and controlling and closing processes. Procurement, now also based in Suriname, has identified a couple of (local) vendors to work with in order to get items easily in a timely manner and with lower transportation costs. This makes it much more easier for the PSLs, who are responsible for creating the request for items that they need.

3.3 Procurement Migration

The following is a high-level overview of the phased approach:

Phase I: identify business needs with all the PSLs, what type of material they need for their specific jobs.

Phase II: identify local vendors who are able to supply the needs for the business.

Phase III: develop the contract with the suppliers/vendors.

Phase IV: add the supplier/vendor to the SAP or MyRequest system.

*for the rest of the contents of the business case, please refer to the project charter of this FGP that already has the information.

Appendix 5: Complete List of Vendors/Suppliers

Vendor	Name	E-Mail
1040540	WEATHERFORD COLOMBIA LIMITED	olga.villegas@la.weatherford.com
1040540	WEATHERFORD COLOMBIA LIMITED	sandra.zambrano@la.weatherford.com
1040540	WEATHERFORD COLOMBIA LIMITED	Pablo.Grazziano@LA.Weatherford.com
1059021	GULF ENGINEERING SERVICES LTD	vgopeesingh@gulfengtt.com
1059021	GULF ENGINEERING SERVICES LTD	accounting@gulfengtt.com
1059099	ANNMARIE'S CAR HIRE & COURIER SERVI	annmariemcaesar@gmail.com
1059160	PROCESS COMPONENTS	nadias@procomtt.com
1059240	SOUTHERN SUPPLIES LTD	leanna@ssltt.com
1059270	THE WIZZ COMPUTERS LIMITED	susan.ramroop@thewizzcomputers.com
1059283	TRINIDAD INSPECTION SERVICES	pauln@tistt.com
1059283	TRINIDAD INSPECTION SERVICES	nalini.ganess@tistt.com
1059285	TRINIDAD CEMENT LTD	soniab@tclgroup.com
1059285	TRINIDAD CEMENT LTD	andirak@tcl.co.tt
1074691	TASSAROLI	cobranzas@tassaroli.com.ar
1074691	TASSAROLI	sgoyeneche@tassaroli.com.ar
1074691	TASSAROLI	cobranzas@tassaroli.com.ar
1079460	DUMORE ENTERPRISES LTD	denell.jonas@dumore.net
1079460	DUMORE ENTERPRISES LTD	roddy.jodhan@dumore.net
1079460	DUMORE ENTERPRISES LTD	sharon.rojan@dumore.net
1079460	DUMORE ENTERPRISES LTD	rajiv.ramessar@dumore.net
1134666	DERRICK CORPORATION	customerservice@derrickequipment.com
1134666	DERRICK CORPORATION	mhaist@derrick.com
1148114	STRATUM RESERVOIR (ISOTECH), LLC	Wingstrom@isotechlabs.com
1148114	STRATUM RESERVOIR (ISOTECH), LLC	drook@isotechlabs.com
1148114	STRATUM RESERVOIR	mail@isotechlabs.com

Vendor	Name	E-Mail
	(ISOTECH), LLC	
1161353	ELEMENT MATERIAL TECHNOLOGY	marylynn.noel@element.com
1161353	ELEMENT MATERIAL TECHNOLOGY	Trevor.judice@element.com
1161353	ELEMENT MATERIAL TECHNOLOGY	Marylynn.noel@element.com
1166401	RICHARD RENTAL'S LIMITED	richard2542@hotmail.com
1166462	TIGER TANKS TRINIDAD UNLIMITED	denis.latiff@tigertankstrinidad.com
1170154	MEGO AFEK SA DE CV	luis.huerta@mego-afek.com
1170154	MEGO AFEK SA DE CV	nestor.hernandez@mego-afek.com
1170154	MEGO AFEK SA DE CV	administracion@mego-afek.com
1171888	OWEN OIL TOOLS LP	chuck.klimo@corelab.com
1187310	N KHAN TECHNICAL SERVICES	nkhantechnicalservices@gmail.com
1199963	JOHNPAC INC	sbourque@johnpac.com
1199963	JOHNPAC INC	vlejeune@johnpac.com
1204699	TOP CO CEMENTING PRODUCTS DE MEXICO	gonzalo.tronco@top-co.ca
1204699	TOP CO CEMENTING PRODUCTS DE MEXICO	irina.hernandez@rubicon-oilfield.com
1207405	HH CABELL	
1207406	PARA RENT A CAR NV (AVIS)	
1207408	DHL	
1219072	ALEXIOS N V	
1222307	BDO ABRAHAMSRAIJMANN AND PARTNERS	anouschka.nabibaks@bdo.sr
1222350	SADILO	sadilo1@hotmail.com
1225084	BYRON LTD	byron@byronltd.co.uk
1225084	BYRON LTD	byron@byronltd.co.uk
1234237	STAATSOLIE MAATSCHAPPIJ SURINAME	
1242311	DIGICEL SURINAME N V	
1243062	BARCODES INC	jjacobs@barcodesinc.com
1243346	MARRIOT COURTYARD HOTEL	priscella.dragt@courtyard.com
1243346	MARRIOT COURTYARD HOTEL	rusty.rabusa@courtyard.com

Vendor	Name	E-Mail
1245503	BBP SALES LLC	rrogers@bbpsales.com
1245503	BBP SALES LLC	accounting@bbpsales.com
1245503	BBP SALES LLC	bbp@bbpsales.com
1245503	BBP SALES LLC	bbp@bbpsales.com
1246203	ECOTOX ENVIRONMENTAL SERVICES LTD	msd@ecotoxes.com
1246380	MEGO AFEK USA LLC	margarita.bermudez@mego-afek.com
1246380	MEGO AFEK USA LLC	sales@mego-afek.com
1251965	H J STAUBLE LIMITED	jeffrey@hjstauble.com
1256604	RW OUTFITTERS LTD	DSeecharan@ial-trinidad.com
1256604	RW OUTFITTERS LTD	VBoodoosingh@rwoutfitters.com
1258301	CONVERGINT TECHNOLOGIES LLC	ACHRemit@convergint.com
1259460	FERNANDES AUTOHANDEL N V	m.brahim@fernandesautomotive.com
1267317	U S GEOSUPPLY INC	sales@usgeosupply.com
1269269	PROFESSIONAL INSPECTION SERVICES	RUDY@PISL.CO.TT
1270107	KVR ENERGY LIMITED	SHIVA.MAHADEO@KVREL.COM
1272594	TIGER RENTALS (GUYANA) INC	DENIS.LATIFF@TIGERTANKSTRINIDAD.COM
1273234	ECM LIMITED	MIRZAD.ALI@WARREN-ECM.COM
1273779	TRINIDAD INSPECTION SERVICES INC	PAULN@TISTT.COM
1274495	OFFICE ELECTRONICS NV	
1274619	THE HARDWARE DEPOT	SALES@HARDWAREDEPOTGY.COM
1274626	JOHN ZIEL PAINTS NV	
1274739	DARASINGH GHARBARAN	
1274749	AUMAMI CONSULTING	AUMAMI.CONSULTING@GMAIL.COM
1274750	GARAGE RISHI	RISHI-RAM-TNP@HOTMAIL.COM
1274886	STICHTING J & M MEDICAL MALL	DRS_MS_LALJI@HOTMAIL.COM
1274979	CARIBBEAN HEAVY EQUIPMENT	RTAWJOERAM@CHEEC.NET
1275020	SAFETY CENTER NV	SAFETYCENTER@QSCNV.COM
1275021	MEINDERTSMA SURINAME NV	CONTACT@MEINDERTSMASURNV.COM
1275031	DIHALS SUPERMARKT	DIHALN@YAHOO.COM
1275037	VK OFFICE SUPPLIES NV	MARKETING@VKOFFICESUPPLIESNV.COM
1275044	S C C LATHE &	SAMKERTO@LIVE.COM

Vendor	Name	E-Mail
	CONSTRUCTION NV	
1275060	PRICOS MACHINSHOP	SHOP@PRICOS.SR
1275170	INDUTEC SYSTEMS NV	CHW@INDUTECSYSTEMS.COM
1275381	CASL TECHNIEK NV	NRAMLAKHAN@CASL-GROUP.COM
1275410	HOOVER FERGUSON (TRINIDAD) LIMITED	GLYN.WALTERS@HOOVERFERGUSON.COM
1275448	NV VSH TRADING	NSABAJO@VSHUNITED.COM
1275466	INGENIEURSBUREAU VAN DIJK SURINAME	JOHN@VDS.SR
1275525	ANALYSER SERVICES TRINIDAD LTD	IBO@ANALYSERSERVICES.COM
1275572	KJJ TRANSPORT NV	KJJ-TSP@YAHOO.COM
1275928	SARA MARIA M MANGAL NV	SARAMARIANV@YAHOO.COM
1276274	FRANKS INTERNATIONAL TRINIDAD	YORK.MCCAULEY@FRANKSINTL.COM
1276289	ANFIELD SERVICES LTD	MICHAEL@ANFIELDTT.COM
1276295	ELECTRICAL ENTERPRISES LTD	
1276300	SD GROEP NV	HRTERBORG@SR.NET
1276351	FUGRO TRINIDAD LTD	TRINIDADOPERATIONS@FUGRO.COM
1276415	ASSURIA SCHADEVERZEKERING NV	CORPORATE.SPECIALACCOUNTS@ASSURIA.SR
1276605	SURINAME CENTRALE AMBULANCE DIENST	SURCAD.INFO@GMAIL.COM
1276664	CKC MACHINEHANDEL SURMAC N V	SHERAIDIE.BABOERAM@SUMACCAT.SR
1276712	RAJENS BOUWMARKT	RAJENSBOUWMARKT@OUTLOOK.COM
1276961	RAMPS LOGISTICS LTD	
1277001	NV LIONS GATE	BATISTA@SR.NET
1277251	AFFTRON INTERNATIONAL NV	SALES@AFFTRON.COM
1277255	ARIESTA VASTGOED NV	
1277415	CKC HOTELMAATSCHAPPIJ NV	RESERVATIONS@KRASNAPOLSKY.SR
1277836	PROFESSIONAL INSPECTION SERVICES	RUDY@PISL.CO.TT
1277844	CONTACTPUNT SURINAME	
1277864	ZENOBIA BOTTLING COMPANY NV	INFO@ZENOBIABOTTLING.COM

Vendor	Name	E-Mail
1277879	BAROID TRINIDAD SERVICES LIMITED	
1277900	HSDS SURINAME NV	PAVAN@HSDS.SR
1277923	MINES SERVICES SURINAME NV	JASON@MINESSERVICES.SR
1278114	CARIBBEAN CONTAINER INC	
1278153	AABECE GRAPHICS & SIGNS	GAIL@AABECEGRAPHICS.COM
2008134	NATIONAL OILWELL VARCO LP	Steven.Kubeczka@nov.com
2008134	NATIONAL OILWELL VARCO LP	debbie.daily@nov.com
2008720	LUDLUM MEASUREMENTS INC	service@ludlums.com
5009542	LUDLUM MEASUREMENTS INC	AR@LUDLUMS.COM
5009542	LUDLUM MEASUREMENTS INC	ar@ludlums.com
5050103	ELEMENT MATERIALS TECHNOLOGY	carsonja.jones@Element.com
5050103	ELEMENT MATERIALS TECHNOLOGY	receivables.us@element.com
5082768	TASSAROLI S A	cobranzas@tassaroli.com.ar
5082768	TASSAROLI S A	cobranzas@tassaroli.com.ar
5087227	NATIONAL OILWELL VARCO L P	NOVARremittance@nov.com
5092266	VARCO CANADA ULC	TR-CAN-Credit-EFT-Paymentdetail@nov.com
5092266	VARCO CANADA ULC	carl.hartt@nov.com
5092266	VARCO CANADA ULC	elmar-canada@nov.com
5105320	NATIONAL OILWELL DHT LP	anita.kirk@nov.com
5105320	NATIONAL OILWELL DHT LP	OT-USA-ARRemittance@nov.com
5122238	KAMER VAN KOOPHANDEL EN FABRIEKEN	CHAMBER2@SR.NET
5123577	RAJENS BOUWMARKT	
5124432	HET NATIONAAL LEGER	

Appendix 6: Change Request Form Template

Change Request Form Template			
Project Name	Name of project		
Requested By	Name of requestor	Date	Date request was raised
Request No	Request Number	Name of Request	Brief name of request
Change Description	Description of the change		
Change Reason	Give the justification for the change		
Impact of change	Specify the impact of the change in terms of cost impact, budget impact, schedule impact, and impact on other projects.		
Proposed Action	Does the project manager propose this change is accepted/rejected and why		
Status	In review	Approved	Rejected
Approval Date	The date the change was approved or rejected		
Approved By	Who approved the change (usually the project manager or project sponsor)		

Appendix 7: Change Control Form Template

Change Control Form

Section A		
Project		Change Number
Controlled Item		Item Version
Identification of Aspect to be Change	For Document, give section number/page number. For Software, give Module, Screen or Report Name.	
Change Details <Include indication of importance and urgency>		
Requester of Change <Print name>		Date raised
Section B		
Investigator of Change		
Impact <Give details of other items affected>		
Investigation Outcome <Reject/Action at no cost/Action at cost>	Suggested Priority <High / Medium / Low>	Date <Investigated>
Section C		
Implementer		Date Scheduled
Section D		
Change Implemented	Signature	Date
Implementer		
Project Manager		

Appendix 8: Project Closeout Checklist Template

Post Implementation Review (PIR)	
Has a Lessons Learned exercise been conducted to capture the positive as well as negative lessons from the project?	☐
Has Lessons Learned input been received in the key project areas?	☐
Has input been documented as received in the Lessons Learned exercise and provided to the project manager?	☐
Have the users of the final deliverables been surveyed to validate their satisfaction?	☐
Was feedback solicited from a diverse audience?	☐
Has a plan been implemented to measure the achievement of the project objectives and proposed benefits?	☐
Did the delivered scope include all the original business, technical and operational requirements, plus approved change orders?	☐
Were the project costs reviewed to check for success in meeting cost targets?	☐
Were project schedules reviewed to check for success in meeting delivery schedules?	☐
Are the causes of significant variances to scope, schedule, or cost documented in the Lessons Learned and stored?	☐
Is the Post Implementation Review readily available for others to review?	☐
Does the project's deliverables meet the requirements according to the requirements documentation and the requirements traceability matrix?	☐
Has the Post Implementation Review been submitted to the Project Management Center of Excellence (PMCoE)?	☐
Staffing Transfer / Release	
Is the Staffing Transfer / Release approach approved by Human Resources?	☐
Are employees informed about options?	☐
Have all project staff been released or reassigned?	☐
Is information posted about transfers?	☐
Has systems and product knowledge been transferred to the maintenance and operations staff?	
Are all staff employment files updated?	☐
Contract Closeout and Financial Closure	
Have vendors and staff been notified of financial closing date?	☐
Has each contract been audited to verify acceptance and delivery?	☐
Have all acceptance criteria been met prior to final payment to contractors?	☐

Have all contract records been included in the project archives?	☐
Have all project invoices and financial obligations been resolved?	☐
Have all project assets (hardware, software, applications, tools, and facilities) been transferred or disposed?	☐
Have the procedures for retaining the financial records been implemented?	☐
Project Archive	
Have the hardcopy documents been stored or archived according to project documentation standards?	☐
Are any hardcopy documents that would be useful for future projects available through the Project Library?	☐
Does the folder structure used to store electronic documents meet project documentation standards?	☐
Does the archive contain an index file describing the documents in the archive?	☐
Does the maintenance team have access to all the documents that could help them maintain the project's deliverables?	☐
Have the "Lessons Learned" documents been stored in a Lessons Learned electronic library?	☐
Procurement	
Is the Procurement Plan finalized?	☐
Have Procurement Staff been identified and assigned?	☐
Has the Procurement Plan been communicated to the project team, Procurement Staff and internal and external stakeholders and accepted?	☐
Do the Procurement Team Members understand the processes outlined in the Procurement Plan and understand the consequences of not following it?	☐
Is system documentation being kept up to date?	☐
Are Procurement activities, resource requirements and other Procurement obligations included in the budget?	☐
Are Procurement activities and process routinely measured against goals?	☐
Is the product or service performing well against the established standards?	☐
Do the Procurement team members understand the warranty, support, and Service Level Agreements?	☐
Have Disaster Recovery and Business Continuity Plans been documented and tested?	☐
Approval	
Has the project sponsor signed off on the closeout stage?	☐

Appendix 9: Philologist's Remarks and Qualifications.

November 21st, 2019

Ms. Karolina Jiménez Monge
UNIVERSITY FOR INTERNATIONAL COOPERATION

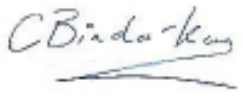
Re: Philologist Approval for Final Graduation Project Review and Correction

Dear Ms. Karolina Jiménez Monge,

I, Cynthia Binda-Karg with identity card number EI 005792, with an undergraduate degree in Teaching English as a Foreign Language from Instituut voor Opleiding van Leraren (Institute for Higher Vocational Education for Teachers in Suriname), graduated in 1990, and work experience as a full-time English proofreader and translator for the Brazilian Embassy in Suriname from 1990-1998, and full-time (junior) high school English teacher since 1998, declare that I, as a professional in the field of Philology, have reviewed and corrected the Final Graduation Project (FGP) of Mr. Shekhar Sewratan, entitled '*The Development of a Project Management Plan to Facilitate Procurement for Halliburton Suriname Division'*, dated November 2019.

The FGP document now meets the proper philological quality in terms of proper writing, spelling and grammar, as stipulated by the University and is corresponding to a master's level work. It is a requirement of the University that the final version of the FGP document for a Master in Project Management, to be awarded by the University for International Cooperation, is reviewed and corrected by a professional in the field of philology.

Yours sincerely,



Cynthia Binda-Karg

Undergraduate degree in Teaching English as a Foreign Language from Instituut voor Opleiding van Leraren in Suriname (IOL)

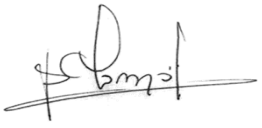
Full time (junior) high school English teacher / English proofreader and translator

Appendix 10: Reader 1 Report

FGP READER REPORT

Student: SHEKHAR SEWRATAN

Topic of Final Graduation Project: THE DEVELOPMENT OF A PROJECT MANAGEMENT PLAN TO FACILITATE PROCUREMENT FOR HALLIBURTON SURINAME DIVISION

Reader: Mónica C. González Ortega **Signature:**  **Date:** 12/10/2019

Telephone: +5491126563153

E-mail: monica.gonzalez@greenprojectmanagement.org

MERIT CRITERIA: APPROVED_X_ FAILED __

CHART OF APPROVAL

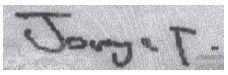
FGP Requirements	Fulfills requirements Yes or No	Observations (if any)
Executive Summary		
Submits in a satisfactory and summarized manner the background, objectives, methodology, results and recommendations.	Yes	
1) Introduction of the FGP		
Includes in a satisfactory manner		

the background, problematic and justification of the project as well as its general and specific objectives.	Yes	
2) Theoretical Framework for FGP		
Includes the theoretical elements related to the study, including the institution´s referential framework.	Yes	
3) Methodological Framework for FGP		
Methods, techniques, procedures and tools are identified and described in accordance to the EDT of the investigation.	Yes	
4) Content Development		
Contributions for the organizations involved, for knowledge and innovation are presented.	Yes	. .
5) Conclusions and Recommendations		
Coherent and linked to the objectives.	Yes	

Appendix 11: Reader 2 Report

Student: SHEKHAR SEWRATAN

Topic of Final Graduation Project: THE DEVELOPMENT OF A PROJECT MANAGEMENT PLAN TO FACILITATE PROCUREMENT FOR HALLIBURTON SURINAME DIVISION

Reader: Jorge Trejos Gutiérrez **Signature:**  **Date:** 12/10/2019

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MERIT CRITERIA: APPROVED_X_ FAILED __

CHART OF APPROVAL

FGP Requirements	Fulfills requirements Yes or No	Observations (if any)
Executive Summary		
Submits in a satisfactory and summarized manner the background, objectives, methodology, results and recommendations.	Yes	
1) Introduction of the FGP		
Includes in a satisfactory manner the background, problematic and justification of the project as well as its general and specific objectives.	Yes	

2) Theoretical Framework for FGP		
Includes the theoretical elements related to the study, including the institution´s referential framework.	Yes	
3) Methodological Framework for FGP		
Methods, techniques, procedures and tools are identified and described in accordance to the EDT of the investigation.	Yes	
4) Content Development		
Contributions for the organizations involved, for knowledge and innovation are presented.	Yes	. .
5) Conclusions and Recommendations		
Coherent and linked to the objectives.	Yes	