UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

FINAL GRADUATION PROJECT NAME (TOPIC)

Project Management Plan to Build a Modern Penal Facility

STUDENT NAME
Lincoln Anthony Dennis

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Carlos Brenes Vega **MAP, PMP, MBA**
Full name must be written
TUTOR

Eduardo Lima
Full name must be written
REVIEWER No.1

Carlos Colon
Full name must be written
REVIEWER No.2

Lincoln Anthony Dennis
Student full name
STUDENT

DEDICATION

This Project is dedicated to my wife Natalie Ann- Marie. Dennis and our children; Lamar Anthony Dennis, Luke Anthonio Dennis and Laciann Allea Dennis for the sacrifice that they endure during the time of this study. To my friends and church family who always believe that I will be successful in this endeavour.

ACKNOWLEDGMENTS

Special thanks to the staff of the Department of Correction Services and the wider staff of the Ministry of National Security. Thanks also to the professors at the University of International Cooperation who has given the necessary information that is needed so that I could put this project together. Let me highlight the tutor for this course Carlos Brenes who has directed me through this difficult time.

Special thanks to Stacey-Ann Carter who has assisted me through the process with her editing skills and formatting, her willingness and respect is always admirable. I am forever grateful for your assistance.

How can I forget the Almighty God who has blest me with this partial scholarship and allowed me to reach thus far.

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ABBREVIATIONS AND ACRONYMS

- Accountant AA
- Actual Cost AC
- Architect A
- Assistant Project Manager AP
- Basis of Estimates BOE
- Cayman Islands CI
- Charter of Fundamental Rights CFR
- Chief Executive Officer CEO
- Child Care and Protection Act CCPA
- Commissioner of Corrections COC
- Cost Breakdown Structure CBS
- Cost Performance Index CPI
- Cost Variance CV
- Department of Correctional Services DCS
- Deputy Commissioner of Corrections DCC
- Doctorate of Philosophy PHD
- Engineer E
- Foreman F
- General Reference Guide GPM
- Government of Jamaica GOJ
- Human Resource Management HRM
- Human Resource Plan HRP
- Interior Designer ID
- Jamaica JA
- Jamaicans For Justice JFJ
- Kingston and St. Andrew Metropolitan Corporation KSAMC
- Mason MA
- Messenger M
- Microsoft MS

- Ministry of Finance and Planning MOFP
- Ministry of National Security MNS
- New Penal Facility NPF
- North Central University NCU
- Planned Value PV
- Plumbing Engineer PE
- Project Evaluation Review Technique PERT
- Project Execution Plan PEP
- Project Life Cycle PLC
- Project Management Body of Knowledge PMBOK
- Project Management Institute PMI
- Project Management Plan PMP
- Project Management PM
- Project Steering Committee PSC
- Quality Management Plan QMP
- Quality Surveyor QS
- Responsible Accountable Consulted and Informed RACI
- Santiago Canyon College SCC
- Standard for Sustainable Project Management P5TM
- United Kingdom UK
- United States Dollars USD
- University of International Cooperation UIC
- User Acceptance Testing UAT
- Work Breakdown Structure WBS

EXECUTIVE SUMMARY (ABSTRACT)

The Department of Correctional Services is a government agency under the Ministry of National Security in Jamaica. There is a total of eleven facilities on the island. Due to sentencing laws, the majority of inmates are held at the two maximum security facilities. These facilities are St. Catherine Adult Correctional Centre and Tower Street Adult Correctional Centre. On the other hand, the lower security facilities are below capacity, these two facilities regularly hold high above their maximum capacity. The high population in some of the facilities and lack of funding has led to substandard living conditions. Many of the inmates are held in cells that are infested with fleas, lice, and cockroaches. Many of these cells are designed only to hold one or two individuals, any additional inmates are forced to sleep on the floor. Quiet often, they are allowed out of their cells twice a day to visit the washroom. Despite an effort for reform, corruption in the prison system allows guards to abuse inmates, sometimes to the point of death. In early 2017, the South Camp facility became the new women's facility. The women were moved there from the aging Ft. Augusta facility. The women's facility faces many of the same issues of overcrowding, poor living conditions, and abuse that the other facilities do.

Human rights advocacy group Jamaicans for Justice (JFJ) has raised concerns that the practice has re-emerged and provided The Sunday Gleaner with statistics which suggest that "in 2018, some 413 children (211 males and 203 girls) appeared before court, not for committing an offence but for exhibiting "uncontrollable behaviour". Thus putting a project plan in place to build a new facility with these issues above as one, will be able to better plan for these inmates as there will be a better facility to place our children and there will be proper planning for rehabilitation. It will be easier to have educational opportunities in the correction facility and therefore the human rights laws will not be breached. Amid the clash of thoughts there appears to be a strong view that Jamaica needs a new prison. No matter what one's position is in the debate, it is undeniable that the conditions in our prisons fall well below standards prescribed by the Charter of Fundamental Rights and International Minimum Standards.

The general objective is, to create a project management plan for a New Penal Facility in Jamaica with better planning strategies so that proper planning and rehabilitation can take place. The specific objectives were; to create a project charter that formally authorizes the project and provide the Project Manager with the authority to use organizational resources on the project in order to produce the project management plan, to create a scope management plan to ensure that all works required are included to successfully complete the project, to create a schedule management plan to support the development and management of a project schedule that ensures 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 that ensures the project is completed within the budget constraints, to develop a quality management plan to identify the quality

requirements for the project, to ensure the results meet expectations for approval within the time, cost and scope constraints, to create a human resource management plan to ensure that all human resources are identified and managed effectively to complete the project within time, cost and scope constraints, to develop a communication management plan to ensure the timely and effective 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 and develop plans to minimize the likelihood of the risks, to develop a procurement management plan to be used to obtain products, services or results required by the project, to develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder engagement.

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*) Edition and interviews, which were held with members from the client and performing organization. The information was analyzed to create each subcomponent of the subsidiary plans used to develop the Project Management Plan for a Penal Facility.

The methodology used is analytical and explanatory, the main source of the information is PMBOK6. Interviews were held with members of the organization and other stakeholder that have vested interest in the project. The information provided was used to developed aspects of the of the development plan.

The Project Management Plan, developed using the *PMBOK® Guide* 6th Edition, provided a new methodology for the project team to build a more thorough project management plan for a project as important as the New Penal Facility, to improve the way the company would manage the project. It is recommended that the project team will consider the use of the planning process and documents developed during the development of the Project Management Plan for the building of the department of correctional services as a basis for implementing a methodology for similar projects in the future. Furthermore, the team at the Department of Correctional Services should also seek to utilize and document management and storage systems, to organize, store and create a central location for project planning documents and future Organizational Process Assets.

1 INTRODUCTION

1.1 Background

The Department of Correctional Services is a government agency under the Ministry of National Security in Jamaica. There is a total of eleven facilities on the island. Due to sentencing laws, the majority of inmates are held at the two maximum security facilities.

These facilities are St. Catherine Adult Correctional Centre and Tower Street Adult Correctional Centre. While the lower security facilities are below capacity, these two facilities regularly hold high above their maximum capacity. The high population in some of the facilities and lack of funding has led to substandard living conditions. Many of the inmates are held in cells that are infested with fleas, lice, and cockroaches. Many of these cells are designed to hold one or two individuals, any additional inmates are forced to sleep on the floor. They are often only allowed out of their cells twice a day to visit the washroom. Despite an effort for reform, corruption in the prison system allows guards to abuse inmates, sometimes to the point of death.

In early 2017 the South Camp facility became the new women's facility. The women were moved there from the aging Ft. Augusta facility. The women's facility faces many of the same issues of overcrowding, poor living conditions, and abuse that the other facilities do.

Jamaica has made great effort to improve the juvenile side of their corrections system. Their four juvenile facilities are run like schools. The children are offered

education and vocational training that will give them more job opportunities as adults. Unlike the adult facilities, the youth are allowed to occasionally leave the facility with special permission. Juvenile boys ages 12–17 are initially sent to St. Andrew Remand Centre. At the disposal of their court cases, they are sent to Hill Top Juvenile Correctional Centre or Rio Cobre Juvenile Correctional Centre, the two residential prisons for boys. All juvenile females ages 12–17 are sent to the Armadale Juvenile Correctional Centre.

Before amalgamation, the Jamaica Prison Services had eight prisons under its management. These were General Penitentiary, St. Catherine District Prison, Tamarind Farm Prison, Richmond Farm Prison, Fort Augusta Prison, Hill Top Prison – which then operated as a young prison for males between 18 and 21 years old – Gun Court Prison (South Camp Rehabilitation Centre), which was established a year before amalgamation (1974) and the Female Prison. The latter prison was first located in Manchioneal, Portland, but was relocated in 1845 to a newly built 100-women cell block at the General Penitentiary.

There were several Approved Schools across the island, many of which had between 10 and 15 wards. As a result, only the four Approved Schools that later formed part of the Department of Correctional Services will be mentioned in this article. These were: the Rio Cobre Approved School, Stony Hill Approved School, Armadale Approved School and Lower Esher Approved School.

On the other hand, the Probation Services managed cases island-wide through four offices located in Kingston, Spanish Town, Montego Bay and Port Maria. The island was also regionalized into the Northern Circuit (Trelawny, St. James,

Hanover and Westmoreland), Eastern Circuit (St. Thomas, Portland, St. Mary and St. Ann), Western Circuit (St. Catherine, Clarendon, St. Elizabeth and Manchester) with the main office serving Kingston and St. Andrew. In 1950 each circuit had one Probation Officer, while the main office had two. However, by the end of 1972 each circuit had an average of 11 Probation Officers per region.

The operations of the three entities had separate costs and, in many instances, each was duplicating services offered by the others. The conclusion then was that a merger would address this situation. That is when the Jamaica Prison Services, Probation Services and Approved Schools became one entity – the Department of Correctional Services.

1.2 Statement of the problem

Jamaica is in need for a New Correctional or Penal Facility, so this plan will facilitate to reach that objective. For the Department of Correctional Services to have international standard one need to look at the various conditions and put proper planning in place so that proper rehabilitation can be done so that citizens and inmates will be protected alike. Contraband is one of the biggest threats facing corrections. Efforts made to deter the influx of contraband into correctional facilities have to be both proactive and reactive. We need to protect our prisons and jails by ensuring facilities have the right tools for contraband scanning, that facilities are properly staffed and that officers are protected so they can get the job done effectively. We need to employ all efforts to eliminate the paths along which contraband can travel. Contraband posed serious challenges for us, such as inmate drug overdoses, inmates manipulating the jail environment and inmates

harming other inmates and officers, just to name a few of the issues. Despite solemn promises given six years ago by the previous administration to wipe from the books a section of the Child Care and Protection Act, which allow judges in the Family Court to deem a child uncontrollable and commit them to the custody of the Department of Correctional Services, this law is still on the governments book and is still being used by the judge today.

Human rights advocacy group Jamaicans for Justice (JFJ) has raised concerns that the practice has re-emerged and provided The Sunday Gleaner with statistics which suggest that “in 2018, some 413 children (211 males and 203 girls) appeared before court, not for committing an offence but for exhibiting “uncontrollable behaviour”. Thus putting a project plan in place will deal with these issues as one will be able to better plan for these inmates. Besides there will be a better facility to place our children and there will be proper planning for rehabilitation. It will be easier to have educational opportunities in the correction facility and therefore the human rights laws will not be breached. Thus the need to have a project plan is very important so that it will be used as a guide through the process. The Project Managers will be proper guided and there will be less issues as it relates to the logistics of building a new penal facility.

1.3 Purpose

Amid the clash of thoughts there appears to be a strong view that Jamaica needs a new prison. No matter what one’s position is in the debate, it is undeniable that the conditions in our prisons fall well below standards prescribed by the Charter of

Fundamental Rights and international minimum standards. **According to Alexander (2020). Project planning plays an essential role in helping guide stakeholders, sponsors, teams, and the project manager through other project phases. Planning is needed to identify desired goals, reduce risks, avoid missed deadlines, and ultimately deliver the agreed product, service or result.**

It is no secret that we have over the great many years, violated, and continue to violate the right to all persons to be free from torture, cruel, inhumane and degrading punishment. The very conditions of the major prisons are a violation of this right.

Of the just under 4,000 persons incarcerated in Jamaica today, the two oldest prisons hold the vast majority of that population. They are the General Penitentiary and the St. Catherine District Prison, euphemistically renamed *The Tower Street Adult Correctional Centre* and *The St Catherine Adult Correctional Centre*, respectively. These two Correctional Centres combined are over 500 years old and each houses twice the amount of inmates it was designed and gazetted to accommodate.

Stripped of all emotions, the debate should seriously consider whether the offer of partial funding of a new prison represents a possibility for Jamaica to alleviate the horrific conditions experienced not only by prisoners but also those who are employed within these ‘correctional centres.’

Prisoner transfers as contemplated are conducted around the world under well structured bilateral arrangements between States. At the crux of such arrangements the world over, is the element of tripartite consent, that is to say, the consent of the prisoner; the consent of the transferring country, and the consent of the receiving country. A prisoner may well withhold his or her consent if he or she has reason to believe that the transfer will not be beneficial to him or her.

Whatever the protocol adopted between the UK and Jamaica, it has to be implemented by Jamaican legislation and with this comes a whole raft of legislative adjustments or amendments.

At the forefront of the debate should be:

-That this new prison is not a mere substitute; because if it is, the over-crowding in our prison facilities will not be solved but merely re-located.

-That one of criteria for transfer is that the prisoner must be a national of Jamaica. This should be rigidly applied and not diluted by alternatives like *"other forms of established connection with the receiving country"*.

- The condition of the prison to which a transferee is to be sent cannot be of a lower standard from which he or she is being transferred.

- The cost of integration and maintenance of the transferee into the new prison ought in no way to be borne by us.

- The transferee should not be disadvantaged in his sentence as a result of the transfer.

The national debate points to the urgent need for penal reform.

Thus a plan is needed and thus will assist in the planning and the implementation of the new programmes so that the Jamaican prison can be in line with international standards. They will assist in lowering recidivism and allow for proper planning and rehabilitation for the inmates.

1.4 General Objective

To create a Project Management Plan for a New Penal Facility in Jamaica with better planning strategies so that proper planning and rehabilitation can take place.

1.5 Specific Objectives.

1. To create a project charter that formally authorizes the project and provides the Project Manager with the authority to manage organizational resources in the project so that it produces the project management plan.
2. To create a scope management plan to ensures that all works required are included to successfully complete the project.
3. To create a schedule management plan to support the development and management of a project schedule that ensures 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 that ensures the project is completed within the budget constraints.

5. To develop a quality management plan to identify the quality requirements for the project to ensure the results meet expectations for approval within the time, cost and scope constraints.

6. To create a human resource management plan to ensure that all human resources are identified and managed effectively to complete the project within time, cost and scope constraints.

7. To develop a communication management plan to ensure the timely and effective 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 and develop plans to minimize the likelihood the negative risks.

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 engagement.

2 THEORETICAL FRAMEWORK

2.1 Company Enterprise/Framework

2.1.1 Company Enterprise Background

In various countries, several ministries and departments are used to run the country. In this case, the Ministry of National Security runs the Department of

Correctional Services, with a Cabinet Minister called the Minister of National Security. Head Office houses the Office of the Commissioner and the support services. Major support services at central administration incorporate the following. These units report directly to the Commissioner of Corrections:

- Accounts
- Rehabilitation
- Planning, Research and Evaluation
- Inspectorate
- Management Information System
- Corporate Communications and Public Relation

Human Resource Management.

Human Resource Management falls under the supervision of the Senior Director of HRM and Administration and provides a coherent approach to the management of our most valued asset, the employees who individually and collectively contribute to the set goals and objectives of the organization. The following units fall within HRM and Administration:

- Probation Aftercare Services
- Personnel
- Registry
- Human Resource Development
- Training
- Industrial Relations

- Procurement
- Property

2.1 Company/Enterprise framework

2.1.1 Organizational Background

The department is compromise of sixteen (16) Probation offices, seven (7) adult correctional facilities, and four (4) Juvenile facilities. St. Catherine Adult Correctional Centre, in 1655, the British established this site as a holding area for slaves carted to the facility after they disembarked the ships at Port Henderson. In 1898 the Gallows was relocated from Falmouth to this prison which has always been the holding area for inmates condemned to death. The last hanging was done in 1988.

St. Catherine Adult Correctional Centre

This is one of two reception institutions for males. New Broughton Sunset Adult Correctional Centre, established in 1977 in partnership with the United Church of Jamaica and the Cayman Island from 1912 – 1977.

New Broughton Boys Home occupied the premises. The institution now houses male offenders age fifty five (55) years and over.

Tamarind Farm Adult Correctional Centre

This institution was established in 1949 as a part of the St. Catherine District Prison. It remained attached until 1972 when it gained its autonomy. A farm

institution, agricultural activities form an integral part of the rehabilitation programme.

Horizon Adult Remand Centre

Commissioned into service in 2001, this is the only maximum security remand facility in the island. In 2005 the legislation was revised to give the facility an additional function of correctional centre to house high risk inmates sentenced by the Court.

Richmond Farm Adult Correctional Centre

The original site of a sugar plantation and a great house, this institution is located in the parish of St. Mary.

It was commissioned into service in 1944. As a farm institution agriculture is one of the major activities. Richmond Farm is a low security institution.

Fort Augusta Adult Correctional Centre

This facility was built by the British in the 18th century. It was used as a look-out point for enemy ships entering the harbour. King George III named the facility after his mother, Augusta. Between 1808 and 1968, Fort Augusta was used as an annex of the General Penitentiary. It was refurbished in 1968, and formally established as an Adult Correctional Centre by the Jamaica Prisons Service. The four Juvenile Correctional facilities are:

South Camp Juvenile Remand & Correctional Centre

The facility came into being in May, 1974 as a response to the upsurge in gun related crimes. Originally, it operated as a court and a prison. On October 1, 1974 the Department of Correctional Services took charge of the centre. In September 1998 the court section, “Gun Court” was moved to King Street. In 2012 adult inmates were transferred to other institutions In September 2013 female wards were transferred from Fort Augusta Adult Remand Centre, Horizon Adult Remand Centre and Diamond Crest Juvenile Correctional Centre to this site which now houses the South Camp Juvenile Correctional/Remand Centre.

Rio Cobre Juvenile Correctional Centre

The Rio Cobre Juvenile Correctional Centre is an institution designed to cater for the needs of boys between ages twelve (12) to eighteen (18) who have committed an offence. Generally, they are placed at the Centre after the Court (Children’s Court) has made them the subject of a Correctional Order. The Child Care and Protection Act guide the Correctional Process. The name Rio Cobre is derived from a river, which runs through the parish of St. Catherine. Since the 1950’s Rio Cobre has being placed under different Ministries until it finally rested with the Department of Correctional Services in 1975. Rio Cobre was first housed at Monk Street in Spanish Town under the umbrella of the Ministry of Youth and Community Development. Existing at the same time was Tredegar Park Approved School, which was established for older boys. This too fell under the same Ministry and direct supervision was then with the Children’s Services Division. In 1976 a new Centre was built on the grounds that housed the Tredegar Park Approved School. At the time the Authorities saw it fit to continue with the name Rio Cobre and

Wards and some Personnel were transferred to the new Centre. The building that housed the former Centre was then converted to a Female Adult Correctional Centre.

The new Centre was built to accommodate one hundred and twenty (120) boys who were deemed to be in need of institutional care. The Centre was designed with modules on the philosophy whereby boys ate together in small groups under supervision of House Mothers and Duty Officers. In a therapeutic and “parent secured” government, the Rio Cobre Juvenile Correctional Centre provides total care for the wards. Boys are allowed to attend classes and trade areas as well as engage in spiritual, social and recreational activities to foster a holistic growth. It should be noted that extra-curricular activities and behaviour modification programmes are also incorporated in the curriculum.

Hill Top Juvenile Correctional Centre

The Hill Top Juvenile Correctional Centre is situated in Bamboo, St. Ann, and is a maximum security Institution for male children who have committed offences against the law. In the late 1930’s American soldiers recognized the advantage offered by the location of Hill Top as a look-out point for the area. The soldiers established camp, which was later used as a police post. In later years, the camp was transformed into a prison for young male offenders. The present structure was built by both inmate and staff as part of the structural change to accommodate more inmates and increase security.

In 1973 there was a significant increase in the number of Juvenile offender, and the authorities saw the need to separate them from the other habitual offenders. Hill Top became an approved school under the Children Services Division.

Metcalfe Street Secure Juvenile Remand Centre

On the other hand, the Probation Services managed cases island-wide through four offices located in Kingston, Spanish Town, Montego Bay and Port Maria. The island was also regionalized into the Northern Circuit (Trelawny, St. James, Hanover, and Westmoreland), Eastern Circuit (St. Thomas, Portland, St. Mary and St. Ann) and Western Circuit (St. Catherine, Clarendon, St. Elizabeth and Manchester) with the main office serving Kingston and St. Andrew. In 1950 each circuit had one Probation Officer, while the main office had two. However, by the end of 1972 each circuit had an average of 11 Probation Officers per region. The operations of the three entities had separate costs and in many instances, each was duplicating services offered by the others. The conclusion then was that a merger would address this situation. That is when the Jamaica Prison Services, Probation Services and Approved Schools became one entity – the Department of Correctional Services.

Mission and vision statements

2.1.1 .1 Vision Statement

To be the Caribbean Centre of excellence in correctional management.

2.1.1.2 Mission Statement

We contribute to a better society by effectively securing and transforming offenders for successful reintegration

2.1.1.3 Organizational Structure

The company is headed by the Commissioner of Corrections; there are two Deputy Commissioner of Corrections; one is in charge of HRM and one in Charge of Custodial Services, the department is assisted by various directors that are in charge of the other departments like;

- Director of Probation Aftercare Services
- Director of Corporate Communication and Public Relations (Acting)
- Director of Juvenile Services
- Director of Human Resource Management
- Director of Corporate Planning and Research
- Director of Rehabilitation
- Technical Coordinator
- Director, Organizational Development/Performance Management
- Director, HRD/Training
- Director of Medical Services Senior Director, Finance & Accounts
- Technical Assistant

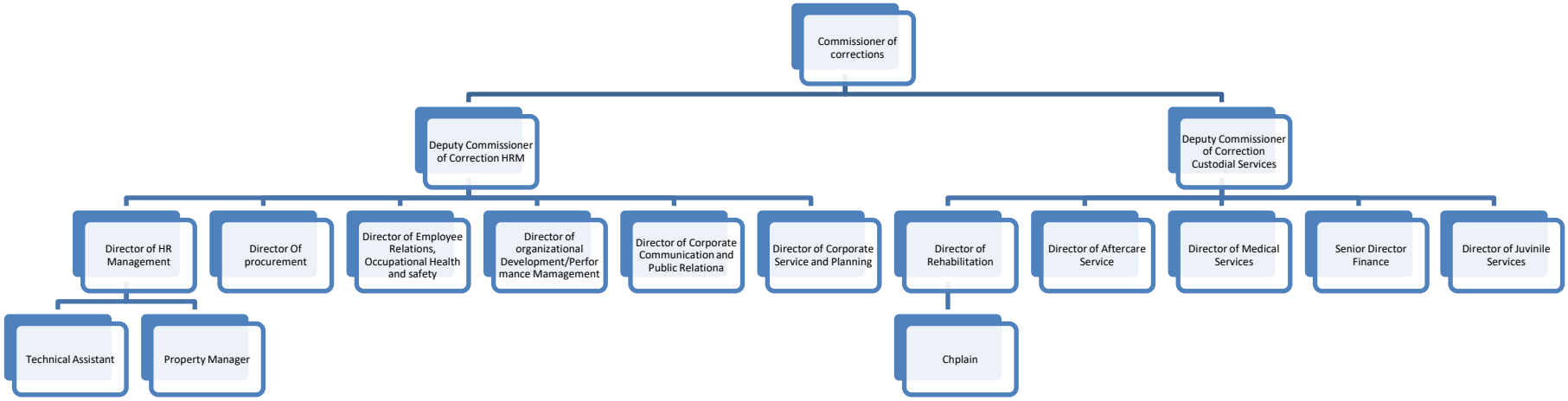


Figure 1 Organizational Structure of the Department of Correctional Services, Jamaica (Source Compiled by Author)

2.1.1.4 Products offered

The Department of Correctional Services offer various programme, namely information, probation, rehabilitation and media. Under information, there are custodial services, juvenile services, sex offender registry, parole, prison fellowship programme, recidivism and DRIVE programme. While under probation, there are a wide variety of services such as; probation aftercare services, criminal justice systems and corrections, community sentencing options, probation officer role and functions, community service order and after care programmes. Rehabilitation is one important aspect most correctional facility is implementing at this, some of the programmes in rehabilitation are; rehab in focus, rehab programmes, we transform, skype programme, creative minds and proclamation. The other segment is media, where one sends out the information needed to inform the stakeholders of what needs to be done, segments in these are; annual reports, newsletters, press release, our gallery articles and brochure.

2.2 Project Management Concepts

2.2.1 Project

The Project Management Body of Knowledge (PMBOK Guide) defines a project as temporary, in that it has a defined beginning and end in time, and therefore defined scope and resources.

A project is unique in that it is not a routine operation, but a specific set of operations designed to accomplish a singular goal. So a project team often

includes people who do not usually work together – sometimes from different organizations and across multiple geographies.

The development of software for an improved business process, the construction of a building or bridge, the relief effort after a natural disaster, the expansion of sales into a new geographic (market all are projects). All must be expertly managed to deliver the on-time, on-budget results, learning and integration that organizations need.

2.2.2 Project Management

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements.

It has always been practiced informally, but began to emerge as a distinct profession in the mid-20th century. PMI's *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* identifies its recurring elements:

2.2.3 Project management processes fall into five groups:

1. Initiating;
    - Develop a Business Case
    - Undertake a Feasibility Study
    - Establish a Project Charter
    - Appoint a Project Team
    - Set up a Project Office

- Perform a Phase Review

2. Planning
    - Identify & Meet with Stakeholders. A stakeholder is anyone who is affected by the results of your project plan
    - Set & Prioritize Goals
    - Define Deliverables
    - Create the Project Schedule
    - Identify Issues and Complete a Risk Assessment
    - Present the Project Plan to Stakeholders

3. Executing
    - Project Execution Planning; The Project Execution Plan (PEP) is the primary document that defines how the project will be undertaken
    - Scope Definition
    - Statement of Goals
    - Quality and Technical Specifications
    - Allocation of Resources
    - Project Scheduling
    - Organizational Considerations

- References

4. Monitoring and Controlling

- Designing an efficient plan for monitoring.
- Designing Confirm work is done as per the requirements
- Complete procurement closure
- Gain formal acceptance
- Complete final performance reporting
- Index and archive records
- Effective report management mechanism
- Recommendations for project improvement
- Ensuring guidelines and recommendations are followed accordingly

5. Closing

6.Update lessons learned

2.2.4 Project Life Cycle

The Project Manager and project team have one shared goal: to carry out the work of the project to meet the project's objectives. Every project has a beginning, a middle period during which activities move the project toward completion, and an ending (either successful or unsuccessful). A standard project typically has the following four major phases (each with its own agenda of tasks and issues):

initiation, planning, implementation, and closure, taken together, these phases represent the path a project takes from the beginning to its end and are generally referred to as the project “life cycle.”

Example of a project life cycle:

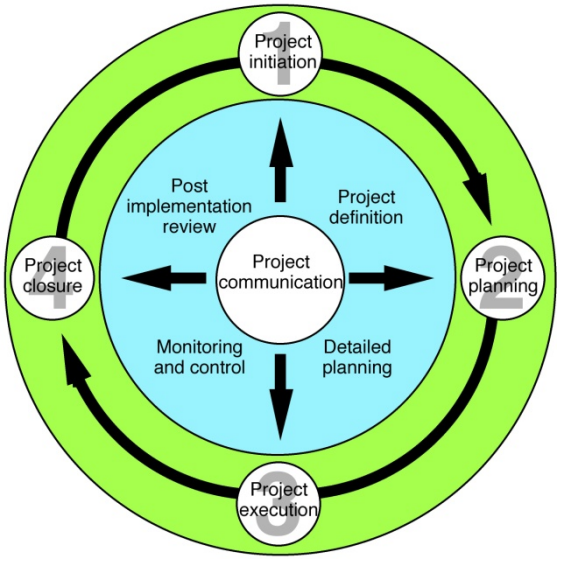


Figure 2.2 Project Management Life Cycle taken from OpenStaxCNS.org

2.2.5 Construction Planning

Construction planning is the specific process construction managers use to lay out how they will manage and execute a construction project, from designing the structure to ordering materials to deploying workers and subcontractors to complete various tasks.

We have taken the well-known five phases of project management these are: concept and initiation, planning, execution, performance/monitoring, and project close.

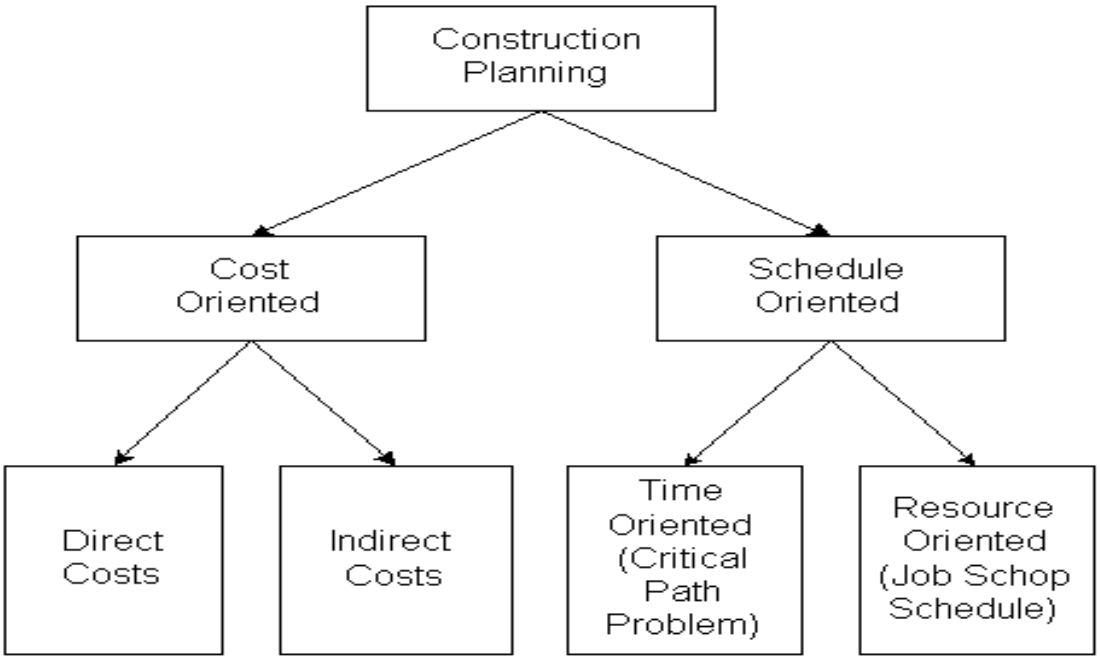


Figure 2.3 Construction Management Planning, Source: CMU. EDU

2.2.6 Project Management Processes

2.2.7 Project Management Processes & Phases

According to William Malsam 2014, Dynamic tools are needed at every phase of a project. It might be time to start implementing proven project management processes and phases at your organization in order to bring your company's workflow under control. At first, the concept of the project management process and its practical adaption can seem a little daunting.

Phases of Project Management

Projects big and small have a lot of moving parts. There is so much to coordinate and track to get from Point A to Point B and execute a successful project. That is why projects are broken down into smaller, more digestible pieces, also known as

project phases. Project phases allow you to take your unwieldy project and organize it so that you can wrap your mind around it and make progress.

In project management, there are five phases: initiating, planning, executing, controlling and closing. Throughout these project phases, there is a need to constantly monitor and report, which is where project management tools come in. Without project management tools, you will be scrambling to gather actionable data, track progress and meet deadlines.

The five phases of a project constitute the project management life cycle, which coincidentally is the title of a book by ProjectManager.com CEO Jason Westland (2020). His in-depth book goes into amazing detail, a level of which we do not have time to cover, but we can give you a brief overview so you can grasp how to make project phases work for you and your team.

Let’s take a closer look at the five phases of a project.

1. Initiation

This is where all projects begin. The value of the project is determined, as well as its feasibility. Before the project is approved or rejected, these two documents are created to sell the work to stakeholders or sponsors:

- **Business Case:** Here is where you justify the need of the project, which includes analyzing return on investment.

- **Feasibility Study:** You need to evaluate what the project's goals are the timeline to completion and how much the whole endeavor will cost. You also note what resources will be required to fulfill the project, and if it makes financial and business sense.

2. Planning

If the project is approved, the next step is to assemble a project team and start planning how to manage the project so it can achieve its goals within budget and on time.

The project plan will include what resources are needed, financing and materials. The plan also gives your team direction and the following:

- **Scope:** There will be a written scope statement that reiterates the need for the project, and what its deliverables and objectives are.
- **Definition:** Here you break down the larger deliverables into smaller ones, which will help with managing them.
- **Tasks:** Identify what tasks are necessary to produce the deliverables, figure out if any tasks are dependent on other tasks.
- **Schedule:** Determine the duration of the tasks and set dates for their completion.
- **Cost:** Estimate the costs involved across the project and formulate a budget.
- **Quality:** Make sure the quality objectives are met throughout the project.
- **Organization:** Note how the project will be organized, including reporting on progress.

- **Staff:** Determine roles and responsibilities of the project team.
- **Communications:** Decide how information will be disseminated, to whom, and with what frequency.
- **Risk:** Determine what risks are likely, how they will impact the project and then plan how to resolve them. Try our free risk register template if you need help getting started with risk management.
- **Procurement:** Decide what work or materials will be contracted. Define those contracts and whom they will go to.

Gantt Charts for Planning & Scheduling

A Gantt chart is the most dependable tool for project planning. A Gantt chart is a visual representation of all your project tasks and deadlines, laid out in a timeline format.

However, you can do more than make simple timelines. Our online Gantt charts let you drag and drop due dates, create task dependencies and set milestones. Additionally, you can assign tasks to team members and balance their workload all on the same screen. Our Gantt feature helps with scheduling and executing with one simple tool, this helps to plan the project, (Project Manager.com, 2020).

3. Execution

Now that the planning is completed, it is time to start the project. This is where the rubber hits the road, but that does not mean you are just cruising. This phase is made up of these detailed processes:

- **Executing the Plan:** Follow the plan you created, assign the tasks to team members and manage and monitor their progress with project management tools, like a project dashboard, (Project Manager.com, 2020).

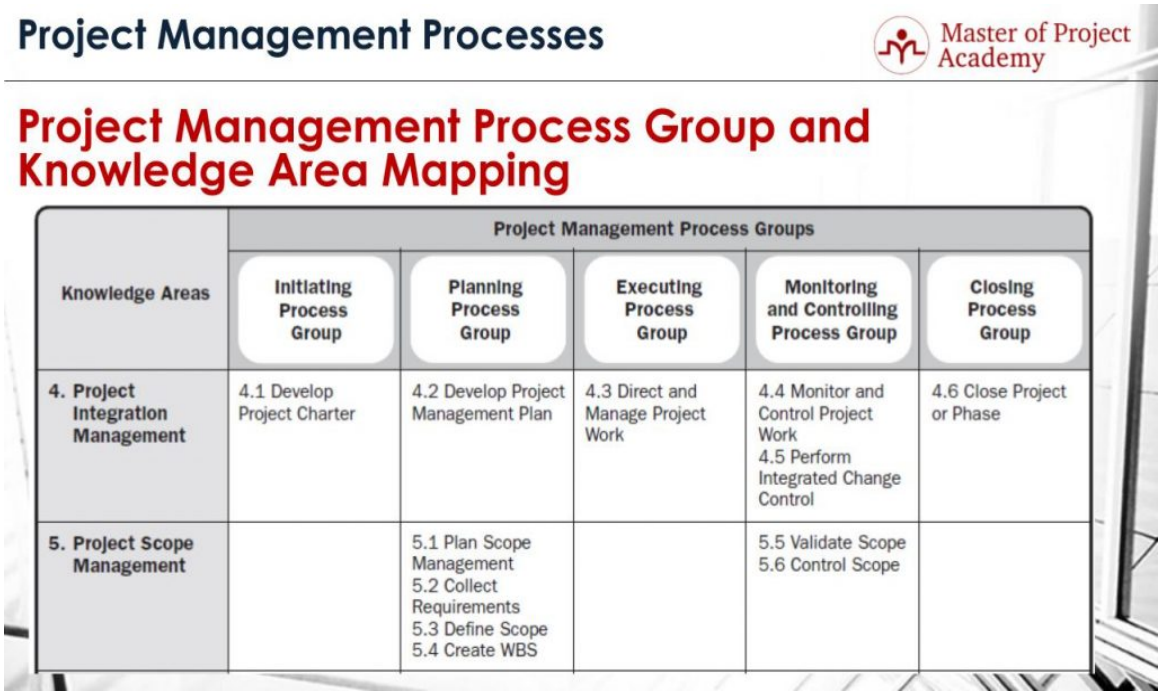
- **Administrate:** Manage the contracts secured in the project.

4. Monitor and Control

To ensure that the project plan is being actualized, all aspects of the project must be monitored and adjusted as needed. To do this, follow these processes:

- **Reporting:** Have a metric to measure project progress and an instrument to deliver this information.
- **Scope:** Monitor scope and control changes.
- **Quality:** Measure the quality of deliverables and make sure that the planned quality is being met; if not, evaluate how to improve the quality.
- **Schedule:** Keep track of delays or blocks that impact the timeline of the project and adjust to stay on track.
- **Cost:** Monitor expenses and control cost changes.
- **Risk:** Note changes in risk throughout the project and respond accordingly.

2.3.1 Construction Management Process



Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Work	4.4 Monitor and Control Project Work 4.5 Perform Integrated Change Control	4.6 Close Project or Phase
5. Project Scope Management		5.1 Plan Scope Management 5.2 Collect Requirements 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope	

Figure 2.4 Construction Management Process Source Masteroproject.com

3. METHODOLOGICAL FRAMEWORK

3.1 Information Sources

3.1.1 Primary sources

According to Santiago Canyon College (2019), a primary source provides direct or firsthand evidence about an event, object, person, or work of art. Primary sources provide the original materials on which other research is based and enable students and other researchers to get as close as possible to what actually happened during a particular event or time period. Published materials can be viewed as primary resources if they come from the time period that is being discussed, and were written or produced by someone with firsthand experience of the event. Often primary sources reflect the individual viewpoint of a participant or observer. Primary sources can be written or non-written (sound, pictures,

artefacts, etc.). In scientific research, primary sources present original thinking; report on discoveries, or share new information.

Examples of primary sources:

- Autobiographies and memoirs
- Diaries, personal letters, and correspondence
- Interviews, surveys, and field work
- Internet communications on email, blogs, listservs, and newsgroups
- Photographs, drawings, and posters
- Works of art and literature
- Books, magazine and newspaper articles and ads published at the time
- Public opinion polls
- Speeches and oral histories
- Original documents (birth certificates, property deeds, trial transcripts)
- Research data, such as census statistics
- Official and unofficial records of organizations and government agencies
- Artefacts of all kinds, such as tools, coins, clothing, furniture, etc.
- Audio recordings, DVDs, and video recordings
- Government documents (reports, bills, proclamations, hearings, etc.)
- Patents
- Technical reports
- Scientific journal articles reporting experimental research results
- Must include the definition of primary information sources, using APA style cites as needed.

- Must indicate which are the primary information sources used on the FGP.

3.1.2 Secondary sources

According to North Central University Library (2020), secondary sources describe, summarize, or discuss information or details originally presented in another source; meaning the author, in most cases, did not participate in the event. This type of source is written for a broad audience and will include definitions of discipline specific terms, history relating to the topic, significant theories and principles, and summaries of major studies/events as related to the topic. Secondary sources are used to obtain an overview of a topic and/or identify primary resources. Refrain from including such resources in an annotated bibliography for doctoral level work unless there is a good reason.

Examples of *secondary sources* are:

- Publications such as textbooks, magazine articles, book reviews, commentaries, encyclopedias, almanacs

Locate *secondary resources* in NCU Library within the following databases:

- Annual Reviews (scholarly article reviews)
- Credo Reference (encyclopedias, dictionaries, handbooks & more)
- Ebook Central (ebooks)
- ProQuest (book reviews, bibliographies, literature reviews & more)
- SAGE Reference Methods, SAGE Knowledge & SAGE Navigator (handbooks, encyclopedias, major works, debates & more)

- Most other Library databases include secondary sources.

Chart 3.01 Information Sources (Source: by the Author)

Objectives	Information sources	
	Primary	**Secondary**
1. To create a project charter that formally authorizes the project and provides the Project Manager with the authority to apply organizational resources to the project in order to produce the project management plan.	Meeting minutes, personal interview with lead Project Manager (expert)	PMBOK Guide, historical data, *P5TM* Standard for Sustainability in Project Management, The GPM® Reference Guide to Sustainability in Project Management
2. To create a scope management plan to ensures that all works required are included to successfully complete the project.	Meeting minutes and personal interview with lead Project Manager (expert)	*PMBoK® Guide* Architectural Drawing, historical data, The *GPM P5TM* Standard for Sustainability in Project Management, The GPM® Reference Guide to Sustainability in Project Management
3. To create a schedule management plan to support the development and	Personal interview with lead Project Manager (expert)	*PMBoK® Guide* Architectural Drawing, historical data, The *GPM P5TM* Standard for Sustainability in Project

management of a project schedule that ensures the project is completed within the time constraints.		Management, The GPM® Reference Guide to Sustainability in Project Management
4. To create a cost management plan to define the processes for developing and managing the project budget that ensures the project is completed within the budget constraints.	Personal interview with lead Project Manager (expert) and meeting minutes	*PMBOK® Guide*, and PMI database
5. To develop a quality management plan to identify the quality requirements for the project to ensure the results meet expectations for approval within the time, cost and scope constraints.	Personal interview with lead Project Manager (expert)	*PMBOK® Guide*
6. To create a human resource management plan to ensure that all human resources are	Personal interview with lead Project Manager (expert)	*PMBOK® Guide* and the internet

identified and managed effectively to complete the project within time, cost and scope constraints.		
7. To develop a communication management plan to ensure the timely and effective communication of the project status and other key information.	Personal interview with lead Project Manager (expert)	*PMBOK® Guide* and PMI database
8. To create a risk management plan to identify and examine risks to the successful completion of the project and develop plans to minimize the likelihood of the risks.	Personal interview with lead Project Manager (expert)	*PMBOK® Guide* and PMI database
9. To develop a procurement management plan to be used to obtain products, services or results required by the project.	Purchasing institutions, personal interviews with lead Project Manager (expert)	*PMBOK® Guide*

10. To develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder engagement.	Interviews with lead Project Manager (expert)	*PMBOK® Guide* and textbook

3.2 Research Methods

According to Research Methodology (2019), research method is a broad term. While methods of data collection and data analysis represent the core of research methods, you have to address a range of additional elements within the scope of your research.

The most important elements of research methodology expected to be covered in business dissertation at Bachelor's, Master's, and PhD levels include: research philosophy, types of research, research approach, methods of data collection, sampling and ethical considerations. The researches that will be used in this document are;

Example:

3.2.1 Interviews

Interviews

According to John Dudovskiy (2010), interviews can be defined as a qualitative research technique which involves "conducting intensive individual interviews with

a small number of respondents to explore their perspectives on a particular idea, program or situation.

There are three different formats of interviews: structured, semi-structured and unstructured.

Structured interviews consist of a series of pre-determined questions that all interviewees answer in the same order. Data analysis usually tends to be more straightforward because researcher can compare and contrast different answers given to the same questions.

Unstructured interviews are usually the least reliable from research viewpoint, because no questions are prepared prior to the interview, and data collection is conducted in an informal manner. Unstructured interviews can be associated with a high level of bias and comparison of answers given by different respondents tends to be difficult due to the differences in formulation of questions.

Semi-structured interviews contain the components of both, structured and unstructured interviews. In semi-structured interviews, interviewer prepares a set of identical questions for interviewees to answer. At the same time, additional questions might be asked during interviews to clarify and/or further expand certain issues.

Advantages of interviews include possibilities of collecting detailed information about research questions. Moreover, in this type of primary data collection, the researcher has direct control over the flow of process and he has a chance to clarify certain issues during the process if needed. Disadvantages, on the other

hand, include longer time requirements and difficulties associated with arranging an appropriate time with perspective sample group members to conduct interviews.

When conducting interviews you should have an open mind and refrain from displaying disagreements in any forms when viewpoints expressed by interviewees contradict your own ideas. Moreover, timing and environment for interviews need to be scheduled effectively. Specifically, interviews need to be conducted in a relaxed environment, free of any forms of pressure for interviewees whatsoever.

Respected scholars warn that, “in conducting an interview the interviewer should attempt to create a friendly, non-threatening atmosphere. Much as one does with a cover letter, the interviewer should give a brief, casual introduction to the study; stress the importance of the person’s participation; and assure anonymity, or at least confidentiality, when possible.

There is a risk of interviewee bias during the primary data collection process and this would seriously compromise the validity of the project findings. Some interviewer biases can be avoided by ensuring that the interviewer does not overreact to responses of the interviewee. Other steps that can be taken to help avoid or reduce interviewer bias include having the interviewer dress inconspicuously and appropriately for the environment and holding the interview in a private setting.

3.2.1 Research methods (Source Complied by Author)

Objectives	**Methodology**
1. To create a project charter that	To obtain information that will inform the

formally authorizes the project and provides the Project Manager with the authority to apply organizational resources to the project in order to produce the project management plan.	scope project team on how to develop a project management plan.
2. To create a scope management plan to ensures that all works required are included to successfully complete the project.	To obtain information by using questionnaires and minutes of meetings.
3. To create a schedule management plan to support the development and management of a project schedule that ensures the project is completed within the time constraints.	A schedule will be developed from data observed from drawings and other construction documents as well as interviews with experts and stakeholders.
4. To create a cost management plan to define the processes for developing and managing the project budget that ensures the project is completed within the budget constraints.	A budget will be developed from data observed from construction documents as well as interviews with experts and stakeholders.
5. To develop a quality management plan to identify the quality requirements for the project to ensure the results meet expectations for approval within the time, cost and scope constraints.	A quality management plan will be developed from data observed from construction documents as well as interviews with experts and stakeholders.
6. To create a human resource management plan to ensure that all human resources are identified and managed effectively to complete the	A human resource plan will be developed from data observed from construction documents as well as interviews with experts and

project within time, cost and scope constraints.	stakeholders.
7. To develop a communication management plan to ensure the timely and effective communication of the project status and other key information.	A communication plan will be developed from data observed from construction documents as well as interviews with experts and stakeholders.
8. To create a risk management plan to identify and examine risks to the successful completion of the project and develop plans to minimize the likelihood of the risks	A risk management plan will be developed from data observed from construction documents as well as interviews with experts and stakeholders.
9. To develop a procurement management plan to be used to obtain products, services or results required by the project.	A procurement plan will be developed from observed from data construction documents as well as interviews with experts and stakeholders.
10. To develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder engagement.	A stakeholder management plan will be developed from data observed from construction documents as well as interviews with experts and stakeholders.

3.2.2 Analytical Method (source compiled by author)

Objectives	**Analytical Methods**
1. To create a project charter that formally authorizes the project and provides the Project Manager with the authority to produce the project	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

management plan.	creating the project charter.
2. To create a scope management plan to ensures that all works required are included to successfully complete the project.	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.
3. To create a schedule management plan to support the development and management of a project schedule that ensures the project is completed within the time constraints.	The analytical method will be 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.
4. To create a cost management plan to define the processes for developing and managing the project budget that ensures the project is completed within the budget constraints.	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.
5. To develop a quality management plan to identify the quality requirements for the project to ensure the results meet expectations for approval within the time, cost and scope constraints.	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.
6. To create a human resource management plan to ensure that all human resources are identified and managed effectively to complete the project within time, cost and scope	The analytical method will be employed by using information derived from the sources identified in Chart 1 objective 6 above, to drive decision making when creating the documents that will comprise the human resource

constraints.	management plan.
7. To develop a communication management plan to ensure the timely and effective communication of the project status and other key information.	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.
8. To create a risk management plan to identify and examine risks to the successful completion of the project and develop plans to minimize the likelihood of the risks.	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.
9. To develop a procurement management plan to be used to obtain products, services or results required by the project.	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 management plan.
10. To develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder engagement.	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

Haughey postulates, that a Gantt chart, logic network, PERT chart, product breakdown structure and work breakdown structure are standard tools used in project planning. What follows is a short definition for each:

Gantt Chart

A Gantt chart is a popular project management bar chart that tracks tasks across time. When first developed in 1917, the Gantt chart did not show the relationships between the tasks. Since then, it has become common to track both time and interdependencies between tasks, which is now its everyday use.

Since their first introduction, Gantt charts have become an industry standard. They are an important project management tool used for showing the phases, tasks, milestones and resources needed as part of a project.

One of the first uses was on America's Hoover Dam project started in 1931.

Logic Network; A Logic Network indicates the sequence of activities in a project over time. It shows which activity logically precedes or follows another activity. It can be used to identify the milestones and critical path of a project. It will help you understand the dependencies in your project, timescale, and its workflow. Valuable information that you may otherwise overlook can be revealed using this technique.

PERT Chart

The Program Evaluation and Review Technique, commonly abbreviated to PERT, is a model for project management developed by the United States Department of Defense's US Navy Special Projects Office in 1958, as part of the Polaris mobile submarine-launched ballistic missile project. PERT is a method for analyzing the tasks involved in completing a given project, especially the time needed to complete each task and identifying the minimum time required to complete the total project.

Product Breakdown Structure (PBS)

In project management, a Product Breakdown Structure (PBS) is an exhaustive, hierarchical tree structure of components that make up a project deliverable, arranged in whole-part relationship. A PBS can help clarify what is to be delivered by the project and can contribute to building a work breakdown structure.

Work Breakdown Structure (WBS)

The United States Department of Defense (DOD) created the Work Breakdown Structure concept as part of the Polaris mobile submarine-launched ballistic missile project. A Work Breakdown Structure is a hierarchical decomposition of the deliverables needed to complete a project. It breaks the deliverables down into manageable work packages that can be scheduled, costed and have people assigned to them. A Work Breakdown Structure is a standard project management tool and the basis for much project planning.

Chart 3 Tools (Source *PMBOK® GUIDE* (2013)

Objectives	**Tools**
1. To create a project charter that formally authorizes the project and provides the Project Manager with the authority to apply organizational resources to the project in order to produce the project management plan.	Project Charter template and Project Management Plan template
2. To create a scope management plan to ensures that all works required are included to successfully complete the project.	Requirements traceability matrix template, Microsoft Vision Professional 2016, Requirements Documentation template, Requirements Management Plan template, Work Breakdown Structure generator, and Scope Management Plan template
3. To create a schedule management plan to support the development and management of a project schedule that ensures the project is completed within the time constraints.	Schedule Management Plan template, Microsoft Project 2016, Microsoft Visio Professional 2016, and Activity List template
4. To create a cost management plan to define the processes for developing and managing the project budget that ensures the project is completed within the budget constraints.	Cost Management Plan template, Microsoft Excel 2016 Project Budgeting template, and Cost Baseline template

5. To develop a quality management plan to identify the quality requirements for the project to ensure the results meet expectations for approval within the time, cost and scope constraints.	Quality Management Plan template and Quality Management tools (Checksheets)
6. To create a human resource management plan to ensure that all human resources are identified and managed effectively to complete the project within time, cost and scope constraints.	Human Resource Management template and Responsibility Assignment Matrix
7. To develop a communication management plan to ensure the timely and effective communication of the project status and other key information.	Communications Management Plan template and Communications Matrix
8. To create a risk management plan to identify and examine risks to the successful completion of the project and develop plans to minimize the likelihood of the risks.	Risk Management Plan template, and Risk Register template
9. To develop a procurement management plan to be used to obtain products, services or results required by the project.	Procurement Management Plan template

10. To develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder engagement.	Stakeholder Management Plan template, Stakeholder Analysis Chart, Microsoft Excel 2016, Stakeholder Register template, Stakeholder Engagement Assessment Matrix, Mind tools Online Stakeholder Power/Interest Grid Creator

3.4 Assumptions and Constraints

According to Fahad Usmani (2019), in project management, we make assumptions and constraints always limit us. They are also a part of our lives.

For example, suppose you plan to go shopping at a mall that takes one hour to reach by car.

You assumed that you would leave your home at around 6:00 pm and reach the mall by 7:00 pm.

This was your assumption. What about the constraints?

In the given example, you can think of two. The first constraint is money. If you have 500 USD in your hand, you cannot shop for more than this amount. The second constraint is the mall's closing time; let us say it is at 10:30 pm. This means you cannot continue your shopping after that.

Likewise, projects also have assumptions and constraints. You must understand and control these factors if you want to complete your project successfully.

These are defined and identified when the project start, afterwards, they are refined and re-analyzed throughout the project life cycle. Assumptions and constraints are inputs of many processes in the PMBOK Guide.

They are an essential aspect of your project. They are not managed like the requirements or risks, however, properly documenting them helps to protect you from many issues. You can find your project's assumptions and constraints in the project scope statement.

3.4.1 Assumptions

An assumption is what you believe to be true. They are anticipated events, or circumstances expected during your project's life cycle. You make assumptions based on your experience or the information available on hand.

Assumptions may not end up being true. Sometimes, they can be false and it may affect your project. This adds risk to the project.

For example, let us reconsider the earlier example. You assumed that it would take one hour for you to reach the destination. What will happen if you are stuck in traffic and cannot reach the mall on time?

Your assumption turned out to be false. Now your shopping is at risk.

This can also happen to your project.

For example, you assumed that you could get equipment whenever you needed it. However, you could not when the time came.

Now you are in a difficult situation.

Assumptions play an essential role in developing a risk management plan. Therefore, as a Project Manager, you must analyze each assumption and its impact.

A few examples of assumptions are:

- You will get all the resources you need.
- During the rainy season, cheap labor will be available.
- All relevant stakeholders will come to the next meeting.
- Your team members have all the required skills.
- All of the equipment is in good condition.
- The supplier will deliver consumables on time.

3.4.2 Constraints

Constraints are limitations imposed on the project: for example, budget, schedule, or resources, etc.

The PMBOK Guide recognizes six project constraints: scope, quality, schedule, budget, resources, and risk. Out of these six, scope, schedule, and budget are known as the triple constraints.

These constraints are defined at the beginning of your project and you have to work within their boundaries.

A constraint can be of two types:

1. Business Constraints
2. Technical Constraints

3.4.3 Business Constraints

Business constraints depend on the state of your organization. They are high-level constraints and often defined when the project starts: for example, time, budget, resources, etc.

Changes to these constraints are rare. The project management team has to abide by them.

3.4.3 Technical Constraints

Technical constraints limit your design choices. They are fixed. Any change to the technical specifications can affect your project planning.

For example, let’s say you’re constructing a pipeline. According to the design, the pipeline should withstand a certain amount of pressure; this is your technical constraint.

Every project has constraints. Therefore, you must identify all of them and develop your plan accordingly. Constraints are outside of your control, and are imposed by clients, organizations, or government regulations.

Examples of Constraints

A few examples of constraints are:

- You must achieve the first milestone within one month.
- You have to work with the available resources.
- You will only have two site engineers.

3.4.4 Assumptions Vs Constraints

The following are a few differences between assumptions and constraints.

- Assumptions are believed to be true, while constraints are true in nature.
- Assumptions are good for the project, while constraints are not good, most of the time.
- If assumptions become false, it is bad news for the project. However, if constraints are false, it is good.

These parameters play a vital role in the planning process. They are the foundation of your project management plan. They can be related to human resources, budget, time or any kind of functionally. Any assumption is a potential risk for your project. If an assumption is incorrect, you are in trouble. Your risk management plan heavily depends on assumptions and constraints. Failing to identify any of them can affect your project.

Assumptions and constraints are an important part of your project. They need to be identified, controlled, and monitored continuously. An assumption is a condition

you think to be true, and a constraint is a limitation on your project. Assumptions need to be analyzed, while constraints need to be identified throughout the project lifecycle. Managing assumptions and constraints are necessary to complete your project with minimal obstruction.

Chart 1 Assumptions and constraints (Source: *PMBOK® GUIDE* (2013)

Objectives	**Assumptions**	**Constraints**
1. To create a project charter is the document that formally authorizes the project and provides the Project Manager with the authority to apply organizational resources to the project in order to produce the project management plan.	The charter will be created before all other subsidiary documents.	There are only five (5) days allocated to create the project charter. Also, stakeholder identification is scheduled to occur at the same time as the development of the project charter.
2. To create a scope management plan to ensures that all works required are included to successfully complete the project.	The sponsors have disclosed all of the information required to develop the scope. The scope management plan will identify all the work required	The sponsors are considering the reduction of the project scope by finishing all of the Penal Facility
3. To create a schedule management plan to support the development and management of a project schedule that ensures the project is	The time allocated for the development of the Project Management Plan and the building of the Prison is sufficient.	The time allocated for the building of the Penal Facility might not be enough

completed within the time constraints.		
4. To create a cost management plan to define the processes for developing and managing the project budget that ensures the project is completed within the budget constraints	The budget created during planning will accurately depict the financial resources required to build the Penal facility	The budget for the building of the penal facility might exceed the required resources
5. To develop a quality management plan to identify the quality requirements for the project to ensure the results meet expectations for approval within the time, cost and scope constraints	The quality management plan will identify all of the technical and managerial quality requirements of the project.	The quality constraints require that the structure is able to withstand a Category 5 hurricane and exhibit the luxury features associated with a world-class Penal Facility
6. To create a human resource management plan to ensure that all human resources are identified and managed effectively to complete the project within time, cost and scope constraints.	The organization has sufficient human resources to complete the project. The team development plans for the project team and subcontractors will be sufficient to begin the construction of the Penal Facility on time.	Only the human resources identified and planned for will be included in the budget. The main hours and overtime hours are pre-determined.
7. To develop a	The organization has the	The availability of

communication management plan to ensure the timely and effective communication of the project status and other key information.	technology required to suffice the communication needs of all stakeholders.	electricity and consistency of internet access must be dependable.
8. To create a risk management plan to identify and examine risks to the successful completion of the project and develop plans to minimize the likelihood of the risks.	There is sufficient information required to adequately identify most, if not all, project risks.	All of the project risks need to be identified within the planning phase (stage) or as early as possible.
9. To develop a procurement management plan to be used to obtain products, services or results required by the project	The company personnel have identified an initial list of suppliers.	The list of suppliers needs to be exhaustive. The use of international suppliers should not cause schedule delays.
10. To develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder engagement.	The stakeholder management plan will include a complete list of all stakeholders involved and a plan as to how to properly manage each.	The information required to plan and manage stakeholders must be accurate.

3.5 What Are Deliverables?

According to Bloomental (2019), the term *deliverables* is a project management term that is traditionally used to describe the quantifiable goods or services that must be provided upon the completion of a project. Deliverables can be tangible or intangible in nature. For example, in a project focusing on upgrading a firm's technology, a deliverable may refer to the acquisition of a dozen new computers.

On the other hand, for a software project, a deliverable might allude to the implementation of a computer program aimed at improving a company's accounts receivable computational efficiency.

Understanding Deliverables

In addition to computer equipment and software programs, a deliverable may refer to in-person or online training programs, as well as design samples for products in the process of being developed. In many cases, deliverables are accompanied by instruction manuals.

Documentation

Deliverables are usually contractually obligated requirements, detailed in agreements drawn up between two related parties within a company, or between a client and an outside consultant or developer. The documentation precisely articulates the description of a deliverable, as well as the delivery timeline and payment terms.

Important: Sometimes, distributors that are purchasing independent films for theatrical release will not include a list of deliverables with the first draft of a term

sheet; it is thus, important for filmmakers to proactively ask for the expected deliverables so that they can be assembled in a timely manner. Many large projects include milestones, which are interim goals and targets that must be achieved by stipulated points in time. A milestone may refer to a portion of the deliverable due, or it may merely refer to a detailed progress report, describing the current status of a project.

- The word "*deliverables*" is a project management term describing the quantifiable goods or services that must be provided upon the completion of a project.
- Deliverables can be tangible in nature, such as the acquisition of a dozen new computers, or they can be intangible, like the implementation of a computer program aimed at improving a company's accounts receivable computational efficiency.
- A deliverable may refer to in-person or online training programs, as well as design samples for products in the process of being developed.
- In many cases, deliverables are accompanied by instruction manuals.
- In film production, deliverables refer to the range of audio, visual, and paperwork files that producers must furnish to distributors.

Chart 5 Deliverables (Source: Compiled by Author)

Objectives	**Deliverables**

1. To create a project charter that formally authorizes the project and provides the Project Manager with the authority to apply organizational resources to the project in order to produce the project management plan.	Project Charter
2. To create a scope management plan to ensures that all works required are included to successfully complete the project.	Scope Management Plan, Requirements Management Plan, Requirements Document and Requirements Traceability Matrix
3. To create a schedule management plan to support the development and management of a project schedule that ensures the project is completed within the time constraints.	Schedule Management Plan, Activity List, Schedule Network Diagram, Resource assignments and activity duration and scheduled gantt chart
4. To create a cost management plan to define the processes for developing and managing the project budget that ensures the project is completed within the budget constraints	Cost Management Plan, Cost Baseline and Project Funding Requirements
5. To develop a quality management plan to identify the quality requirements for the project to ensure the results meet expectations for approval within the time, cost and scope constraints.	Quality Management Plan
6. To create a human resource	Human Resource Management Plan

management plan to ensure that all human resources are identified and managed effectively to complete the project within time, cost and scope constraints.	
7. To develop a communication management plan to ensure the timely and effective communication of the project status and other key information.	Communication Management Plan and Communications Matrix
8. To create a risk management plan to identify and examine risks to the successful completion of the project and develop plans to minimize the likelihood of the risks.	Risk Management Plan and Risk Register
9. To develop a procurement management plan to be used to obtain products, services or results required by the project.	Procurement Management Plan
10. To develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder engagement.	Stakeholder Management Plan, Stakeholder Analysis Chart, and Stakeholder Register

RESULTS

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4.1 Project Integration Management

To develop a project management plan for the construction of a new Penal Facility in Jamaica, there needs to be the development of a project charter. This was done through consultation with tutor, stakeholders, interviews, meeting minutes, and the PMBOK guide sources. These were used as the decision-making drivers, together with the application of analytical research methodology and the Project Manager, with the authority to apply organizational resources to the project to produce the Project Management Plan. According to the PMBOK 6th edition, the development of the Project is “The process of developing a document that formally authorize the existence of a Project and provides the Project Manager with the authority to apply organizational resources to the project activities.

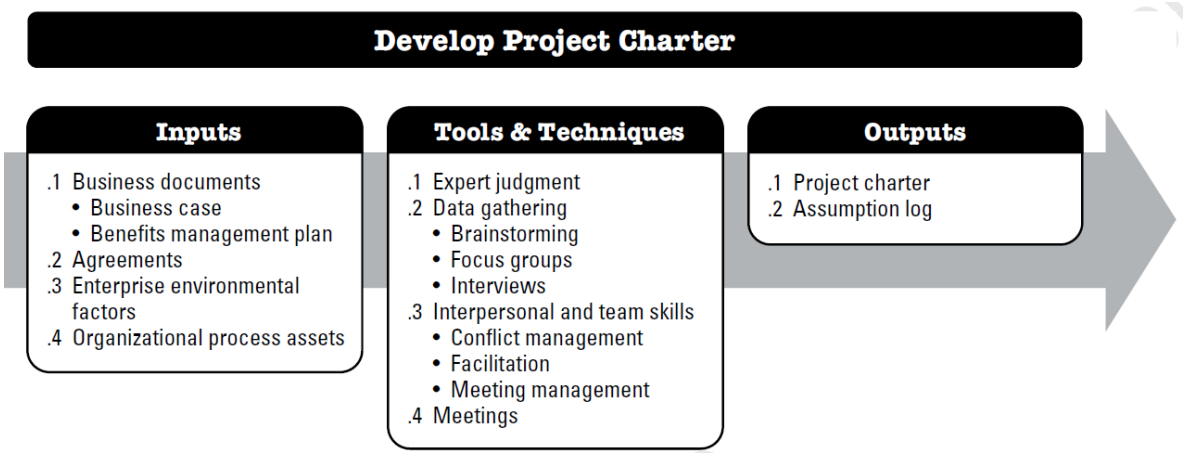

Figure 5 Develop Project Charter Reprinted from *A Guide to the Project management Body of Knowledge* (p. 75), Project Management Institute, 2017. Copyright 2017 by Project Management Institute, Inc.

4.1.2 Knowledge Areas:

Project Integration

Scope Management

Schedule Management

Cost Management

Resourse Management

Risk Management

Procurement Management

Project Communication Management

Project Quality Management

Stakeholder Management

4.1.3 Process Groups

Planning

Initiation

Executing

Monitoring and Control

Closing Process

4.1.4 Project Objectives

General objective: To create a Project Management Plan for the building of a modern Penal Facility

Specific objectives:

1. To create a project charter that formally authorizes the project and provides the Project Manager with the authority to the project in order to produce the project management plan.

2. To create a scope management plan to ensures that all works required are included to successfully complete the project.

3. To create a schedule management plan to support the development and management of a project schedule that ensures 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 that ensures the project is completed within the budget constraints.

5. To develop a quality management plan to identify the quality requirements for the project to ensure the results meet expectations for approval within the time, cost and scope constraints.

6. To create a human resource management plan to ensure that all human resources are identified and managed effectively to complete the project within time, cost and scope constraints.

7. To develop a communication management plan to ensure the timely and effective 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 and develop plans to minimize the likelihood of the risks.

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 engagement.

4.2 Project Scope Management

To create a Project Management Plan for the building of a Moder Penal Facility

Scope Management Plan

4.2.1 Introduction

Scope issues are the number 1 reason for project failure. A scope management plan is the component of the project management plan that describes how the scope will be defined, developed, monitored, controlled and validated, (Project Management Body of Knowledge, 6th Edition).

The core of the scope management plan is the project scope statement. However, the other items establish the foundation underneath the scope statement that are critical to effectively manage and control the project scope, (Project Engineer 2020).

A good scope management plan will have the following sections:

1. Requirements –The requirements for the completion of this Project includes the following objectives, creation of integration management plan, project quality management plan, procurement management plan and a resource management plan. As stated in the project charter, there are six knowledge

areas that need to be integrated in order to produce the project management plan

2. Stakeholders- Stakeholders are those with any interest in your project's outcome. They are typically the members of a project team, Project Managers, executives, project sponsors, customers, and users. Stakeholders are people that have invested in the project, and who will be affected by your project at any point along the way, and their input can directly influence the outcome. It is a good idea to practice good stakeholder management and constantly communicate with them in order to collaborate on the project. After all, they have a stake in how it all turns out, (PMBOK 6th edition).
3. Scope Statement- The product and services generated by the Project will be the following:
    - Identification of lands
    - Creation of the overview for the exhibit strategy for the Penal Facility
    - Assessment of the Penal Facility organization and structure
    - Assessment of the facility building and landscaping
    - Assessment of security facility with the facility
    - Assessment of the type of inmates that the facility will host
    - Creation of a master plan for the facility lands
    - Development of financial plan

Work Breakdown Structure (WBS) - Breaking work into smaller tasks is a common productivity technique used to make the work more manageable and approachable. For projects, the Work Breakdown Structure (WBS**)** is the tool that

utilizes this technique and is one of the most important project management documents. It single-handedly integrates scope, cost and schedule baselines ensuring that project plans are in alignment.

The Project Management Institute (PMI) Project Management Book of Knowledge (PMBOK) defines the Work Breakdown Structure as a “deliverable oriented hierarchical decomposition of the work to be executed by the project team.” There are two types of WBS: 1) Deliverable-Based and 2) Phase-Based. The most common and preferred approach is the Deliverable-Based approach. The main difference between the two approaches is the elements identified in the first Level of the WBS, (WorkBreakDownStructure.com 2020).

		Due date
2.3.1	Scope Management Plan Submission	July 6, 2020
2.3.3	Cost Management Plan and Correction Submission	July 11, 2020
2.3.5	Time Management Plan and Corrections submission	July 18, 2020
2.3.7	Stakeholder Management Plan and correction Submission	July 25 , 2020

2.3.9	Communication Management and correction submission	July 30, 2020
2.7	Final Project Submission	July 8, 2020

4. WBS Dictionary- A WBS dictionary is a document that provides detailed information about each element in the WBS, including work packages and control accounts, (Simplelearn, 2019).

5. Roles and Responsibilities - Planning and Defining Scope
    - Activity Planning and Sequencing
    - Resource Planning
    - Developing Schedules
    - Time Estimating
    - Cost Estimating
    - Developing a Budget
    - Documentation, (Project Smart, 2020).

Deliverables

Projects create deliverables, which are simply the results of the project or the processes in the project. That means a deliverable can be something as big as the objective of the project itself or the reporting, that is part of the larger project.

In other words, they are inputs and outputs in any type of project. That means, what you put into the project such as data, resources, etc., then, the deliverables

would be what comes out. Those deliverables can be a product or service, and it can be the documentation that is part of the project closure to show that the project is complete and everything has been signed off.

There is a distinction between project and product deliverables. Project deliverables are such outputs as the project plans, project reports and even meeting minutes. Product deliverables, on the other hand, could be hardware, software, mobile applications, contracts, or even test assessment results.

The deliverables that clients and stakeholders expect at the end of the project are the product or service, but there is also paperwork as noted. These documents, when completed, are deliverables that clients and stakeholders need in order to evaluate the progress or completion of the project.

This paperwork can include:

- Signed contracts
- Finalized expense reports
- Other types of project reports would show how work is proceeding versus project plan estimations, (Project Manager.com, 2020).

Sponsor Acceptance- Project Acceptance criteria are criteria that include performance requirements and essential conditions, which must be met before project deliverables are accepted (PMBOK® Guide). They set out the specific circumstances under which the user will accept the final output of the project. They

are criteria that we can measure, achieve, and prove to our clients that our work is complete.

Project Acceptance Criteria Examples

1. Backup and Restore testing has been completed successfully.
2. User acceptance testing, (UAT), has been completed, and the Senior User/Project Executive has signed off on user acceptance testing.
3. All requirements have been formally approved.
4. Scope Control. Control Scope is the process of monitoring the status of the project and product scope and managing changes to the scope baseline. The Control Scope is a process that allows the scope baseline to be maintained throughout the lifecycle of the project, (Invensis Learning, 2018).

4.2.2 Scope Management Approach

The Project Manager will have the responsibility of managing the scope of the project. They will develop the schedule management plan as well as the activities and objectives. The Project Manager will have to laisse with stakeholders to ensure that the objectives are completed and the outputs outlined in the project charter are completed.

The scope is defined by the work break schedule below. The project is the Construction of a new Penal Facility in Jamaica. The initial phases of the project call for a Prison with 2 wings, each house prisoners depicting whether they are dangerous or not.

Changes to the scope can be made by the Project Manager, stakeholders or any members of the project steering committee as well as the project management team. Changes to the scope must be done using a change request and approved by the project management team. The Project Manager will then submit the scope change to the sponsor, stakeholders and all other contractors.

4.2.3 Roles and Responsibilities

Name	Role	Responsibilities
The Jamaican Government	Project Sponsor	-Accept project deliverables -Evaluate and accept or deny changes
Commissioner of Corrections	Project Manager	-Determine scope - Facilitate scope change request -update project documents -Communicate with stakeholders
Stakeholders	Workers Contractors Staff at the Department of Corrections	
Project team	Project Team Member	-assist Project Manager -aid in facilitating scope changes -communicate with stakeholders

Chart 6 *Scope Management Roles and Responsibilities*

4.2.4 Scope Definition

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 the scope of the project on a consistent basis throughout the life of the project.

4.2.5 Project Scope Statement

According to Project Manager.com (2019), project scope or project scope statement, is a tool used to describe the major deliverables of a project including the key milestones, high level requirements, assumptions, and constraints. It also defines the boundaries of a given project and clarifies what deliverables are in and out of scope.

Scope description, Product Acceptance Criteria and Project Deliverables

The project calls for the building of a new Penal Facility comparable to modern Penal Facility in first world country. There are about twelve countries in the Caribbean and Jamaica has a serious crime issue, with a population less than

three million, Jamaica falls under the classification of third world country. The Department of Corrections has been able to get a land grant for twenty acres of land in Kingston City.

The new Penal Facility must have the following criteria:

- Accessibility and parking
- Built on one floor
- Include two wings
- Have office Spaces
- Recreation area
- Class Rooms
- Production area
- Include a collections storage, handling and research area
- Building must be between 30,000 to 35,000 square feet with an exhibition area of 14,000 square feet.
- Areas for farming
- Areas for business
- Counselling rooms
- Small Hospital
- Towers for security

4.2.6 Project Exclusion

Development of exhibitions for the Department of Corrections Architectural drawings Project exclusions, assumptions, and constraints (among other information) are included in a Project Scope Statement. They are also explicitly referenced in the develop project charter, plan project plan and plan procurement

management processes. Each of the 47 processes has an implicit reference to exclusions, assumptions and constraints. Here is a simple example to help you lock in the differences among exclusion, assumption and constraints. Anna has a project to make exotic papaya honey cookies to enter in her city's bake-off competition. The scope of the project is to make and enter one dozen cookies for the competition. Here are some examples of exclusions, assumptions, and constraints for this project. Project exclusions are those things that outside of the project boundaries. It explicitly states what is not included in the project.

4.2.7 Project Constraints

The New Penal Facility must be constructed by 2025. The project duration should not exceed over five years. It is a concern that it will be completed within budget. There are also concerns because some citizens believe that prison is not important instead the government should be spending the money on schools and medical facilities. At times change of government affect these projects.

4.2.8 Project Assumptions

Finances

It is assumed that the government will put enough money in their budget in order to complete their project. If the government does not have all these funds it is very important for the sponsors to pick up the short falls.

Budget

It is assumed that the project can be completed using USD $15,000,000.00

Schedule

It is assumed that the project will take forty eight months to complete

4.2.9 Work Breakdown Structure

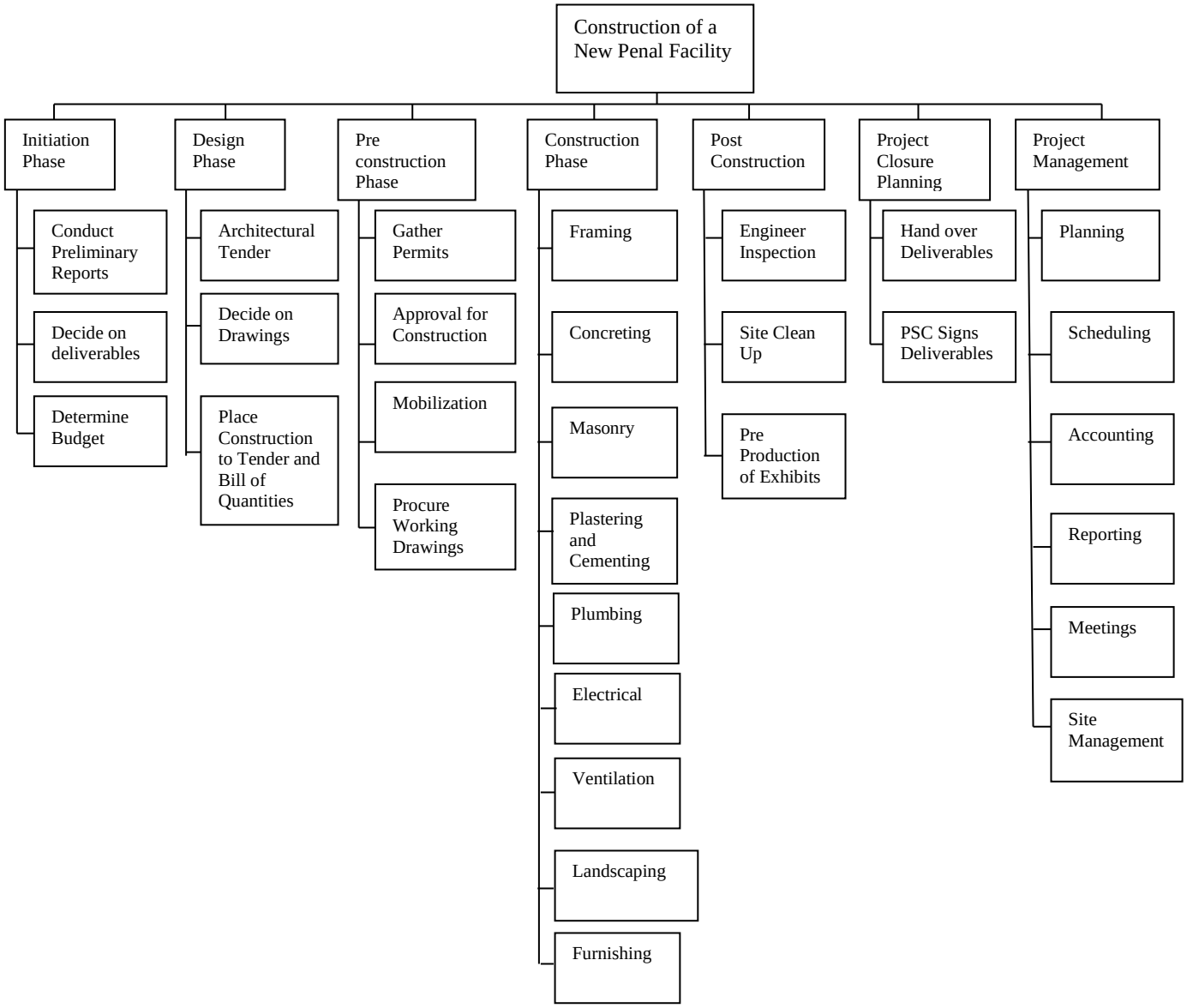

Figure 6, *Work Breakdown Structure (WBS)*

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.

Level	WBS Code	Element Name	Description of Work	Deliverables	Budget	Resources
1	1.1	Initiation Phase	Start of planning for the new penal facility		80,000	
2	1.1.1	Conduct Preliminary reports	Procure initial reports from the department of Corrections	Phase three report on the new Penal Facility	70,000	Internet Literature review
2	1.1.2	Decide on Deliverables	Develop PSC to review report and determine what deliverables will be used	Objectives documented	5,000	Project Scope
2	1.1.3	Determine Budget	Break down of cost	Cost Evaluation	5,000	Project Scope
1	1.2	Design Phase	Consultations with stakeholders		100,000	
2	1.2.1	Architectural	Project will	Architectural	10,000	Consultant

		tender	have a drawn rendition of the new prison facility	drawings		
2	1.2.2	Decide on Drawings	Consultants will compile engineering reports, survey reports, steel engineering reports.	Engineering of Building	70,000	Consultant
2	1.2.3	Place construction to tender and bill of quantities	Contractor selection.	Engineering of Building	70,000	Consultant
1	1.3	Pre-Constructio n Phase	Contractor will be given a formal contract to start construction as well as the formation of a project steering committee		20,000	
2	1.3.1	Gather Permits	City Permits and construction permits need to be	Permits approved	20,000	Architectural drawings and engineering reports

			submitted and approved for construction to begin			
2	1.3.2	Approval for Construction	Engineering reports need to be completed in order for contractor to start	Engineering approved	20,000	Engineering reports
2	1.3.3	Mobilization	Contractor will start to move to construction site	Site preparation including levelling, fencing and temporary water and electricity	70,000	Construction machines including mixers, graders cranes and bulldozers
2	1.3.4	Procure Working Drawings	Drawings that will be used by the contractor to build Penal facility to specifications outlined by the DCS		30,000	
1	1.4	Construction Phase	Construction of Building starts		200,000	
2	1.4.1	Framing	Entails the frames and beams that will	Frames are set up and inspected by	700,000	Requirements, Architectural

			carry the load of the Building	engineer		and structural Drawings
2	1.4.2	Concreting	Entails all concrete work to set foundation	Floors and foundation is completed	2,000,000	Requirements, Architectural and structural Drawings
2	1.4.3	Masonry	Entails all masonry work after foundation is set	Building is cemented and frames are covered	2000,000	Requirements, Architectural and structural Drawings
2	1.4.4	Plastering and Cementing	Plastering of walls	All walls of building are plastered	6,0000	Requirements, Architectural and structural Drawings
2	1.4.5	Plumbing	Installation of water and waste water lines in the building	Pipes are set up in the building	139,000	Requirements, Architectural and structural Drawings
2	1.4.6	Electrical	Electrical power to the building is set up	Building has electricity	400,000	Requirements, Architectural and structural Drawings
2	1.4.7	Ventilation	Set up central air and cooling	Air conditioning	200,000	Requirements,

				and ventilation system		Architectural and structural Drawings
2	1.4.8	Landscaping	Yard work is completed around the building	Yard is Landscaped	2200,000	Requirements, Architectural and structural Drawings
2	1.4.9	Furnishing	Furniture and fixtures for finishing are installed	Building is move in ready	400,000	Requirements, Architectural and structural drawings
1	1.5	Post Construction			100,000	
2	1.5.1	Engineer Inspection	Engineer inspects all aspects of construction	Final engineering report on Building	50,000	Consultant
2	1.5.2	Site Clean up	All material and construction equipment is removed	Building has no construction equipment or debris	200,000	Contractor
2	1.5.3	Pre-Production of Exhibits	Technical staff of the DCS prepares for set up of exhibitions	Exhibitions are set up	1000,000	Technical Staff of the Department of Corrections
1	1.6	Project	Completion of		NA	

		Closure Planning	project and handing Building over to the Jamaican Government			
2	1.6.1	Hand Over Deliverables	Contractor prepares deliverables check list	Deliverables are all completed	NA	
2	1.6.2	DCS Signs Deliverables	Project Manager goes over deliverables and makes recommendations to PSC	Deliverables are signed off	NA	
1	1.7	Project management	Managing the planning monitoring and control an closure of project		387,000	
2	1.7.1	Planning	Planning and update on project activates for duration of project	Project management Plan	300,000	
2	1.7.2	Scheduling	Project activities,	Schedule	40,000	

			timeline and dates to determine duration of project			
2	1.7.3	Accounting	Monitoring of finances throughout the project	Reports	60,000	
2	1.7.4	Reporting	Reporting on project activities and presenting to stakeholders	Project Manager reports	150,000	
2	1.7.5	Meetings	Quarterly meetings with DCS	Quarterly meetings	24,000	
2	1.7.6	Site Management	Monitoring of daily activates at construction site	Site management	500,000	

Chart 7 WBS Dictionary (By Lincoln A. Dennis)

4.2.10 Scope Verification

Scope verification is the process of formalizing acceptance of the project scope by the stakeholders. It requires reviewing work products and results to ensure that all were completed correctly and satisfactorily. Scope verification occurs at the end of each project phase, and as part of the project close out process. Scope verification is concerned with stakeholder acceptance of the work.

4.2.11 Scope Control

According to Envensis Global Learning Services (2020), the Control Scope is a process which is probably one of the most crucial in maintaining the scope baseline and changes the scope baseline whenever necessary. The Project Managers will mainly look to avoid the scope creep, which is a process where the scope is expanded in an uncontrolled manner.

4.2.12 Sponsor Acceptance

Approved by the Project Sponsor:

_____ Date:_____

<Project Sponsor>
<Project Sponsor Title>

4.3 Project Schedule Management

According to the PMBOK sixth edition the Project Schedule Management Process "… includes the processes required to manage the timely completion of the project" The sub processes include: according to Wrike (2020), the most common form of project schedule is a Gantt chart. Both a milestone schedule and a detailed project schedule can be created as a Gantt chart. When choosing a scheduling software, look for scheduling tools that allow you to create different views from the same schedule. If you create a detailed schedule with milestones as a Gantt Chart, make sure it can be summarized up to that level for a simpler view that can be easily

shared with your team or stakeholders. This gives you the ability to present the same schedule in different formats depending on the level of detail required and the target audience.

Project Schedule Management for the Construction of the New Penal Facility in Jamaica
Project Schedule Management Plan

4.3.1 Introduction

The Schedule Management Plan is created during the project's Planning Process Phase and is considered a component of the Project Management Plan (PMP). The Schedule Management Plan defines how the project schedule is managed throughout the project lifecycle. The plan provides guidance and sets expectations for project schedule policies and procedures for planning, developing, managing, executing, and controlling the project schedule.

The project schedule is the tool that communicates what work needs to be performed, which resources of the organization will perform the work, and the time frames in which that work needs to be performed. The project schedule should reflect all of the work associated with delivering the project on time. Without a full and complete schedule, the Project Manager will be unable to understand and communicate the total cost and resources needed to deliver the project.

4.3.2 Plan Schedule management

Project schedule management includes the process of developing, maintaining and communicating schedules for time and resource. According to PMBOK sixth

edition, it is defined as “the process of establishing, planning, developing, managing, executing and controlling the project schedule”.

The Project schedule will be made using Microsoft Project. The activities will determine which type of work will be performed in order to complete each deliverable in the project schedule. Based on previous knowledge acquired during the activities will be sequenced in order to determine the works and the relationship between activities. The activities will determine the resources and time needed to complete each milestone.

When the project schedule is determined, the Project Manager in consultation with stakeholders will review the proposed schedule and allot the resources needed to complete. After this is done the stakeholders and Project Steering Committee will need to meet in order to approve the work schedule and resources.

These are the Milestones included in the Schedule for the Project:

Initiation of Project

2. Construction Preliminary Reports

3. Decide on Deliverables

4. Determine Budget

5. Architectural Tendering Process

6. Decide on Drawings

7. Bill of Quantities

8. Place Construction to Tender

9. Gather Permits

10. Approval for Construction

11. Mobilization

12. Procure Working Drawings
13. Framing
14. Concreting
15. Masonry
16. Plastering
17. Cementing
18. Plumbing
19. Electrical
20. Ventilation
21. Landscaping
22. Furnishing
23. Engineer Inspection
24. Site Clean Up
25. Pre-Production of Exhibits
26. Handing Over of Deliverables
27. DCS Sign Deliverables
28. Project Completion

The Project Manager will be responsible for taking the milestones and converting it into a schedule. The Schedule will be made using MS projects. Once the schedule is created it will then need to be presented to the Project Steering Committee and stakeholders for it to be validated. This will then be used to determine the schedule baseline.

4.3.4 Schedule Control

Control schedule is a process in project management that involves monitoring the status of activities related to a particular project. Aside from monitoring the status, it also involves updating of the project process as well as managing the changes to the schedule in order to achieve the plan. Comparing the progress of the project against a scheduled baseline allows Project Managers to determine if a particular project activity is ahead or behind the schedule. Project Managers can then plan on corrective actions to manage the changes to the baseline schedule. This will reduce the risk of delivery of the products or services especially when it is managed well. The control schedule process is part of the controlling and monitoring process group of project management. The key principle of this process is that the changes should not just be reacted to but should also be controlled proactively. This task falls on the Project Manager and it is important that the Project Manager acts immediately before the changes affect or influence the entire project schedule. Another aspect of the control schedule process is that it manages the expectations of the stakeholders by means of giving them advice when work needs to be performed including the type of work and its duration. It is carried out throughout the entire project after the schedule has been developed until all the activities have been completed. It is important to know the actual performance of the schedule. Any schedule baseline can be approved using the Perform Integrated Change Control process. With the control schedule process, it allows Project Managers to determine the status of the project schedule, conducting reviews, reprioritizing remaining work plan, determining that there is indeed a change of the project schedule and managing actual changes.

4.3.5 Schedule Changes and Threshold

According to the PMBOK 6, a threshold is an upper or lower limit dependent upon what context it is used in. Thresholds may be used to define the limit of an acceptable cost or expenditure in project management. It may be used to indicate the maximum amount of time in which an action or process may take place. It may refer to the minimum level of quality allowed for any product or work completed. Threshold specifications may be included on any product to indicate the maximum and minimum temperature which the product can withstand according to project management guidelines. Threshold may indicate the maximum length of time which a product can remain operational without service or repairs. It could show the greatest and weakest sources of power with which said product can be supplied and function safely. A threshold will also define the maximum stress level or workload which the product can function under without reducing its efficiency and/or increasing the chances that said product will malfunction or breakdown.

Should the threshold in any context be surpassed at any time it is mandatory to generate an exception report indicating in what way said threshold was surpassed and for what reason. Based on these reports appropriate disciplinary measures will be considered on a case-by-case basis by project management.

Change Request Form (*example*)

[This form is divided into three sections. Section 1 is intended for use by the individual submitting the change request. Section 2 is intended for use by the Project Manager to document/communicate their initial impact analysis of the requested change. Section 3 is intended for use Project Steering Committee]

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teamgantt

Project Change Order Request

Project name:

Requested by:	**Date:**
Request name:	**Request number:**

Change description:

Change reason:

Impact of change:

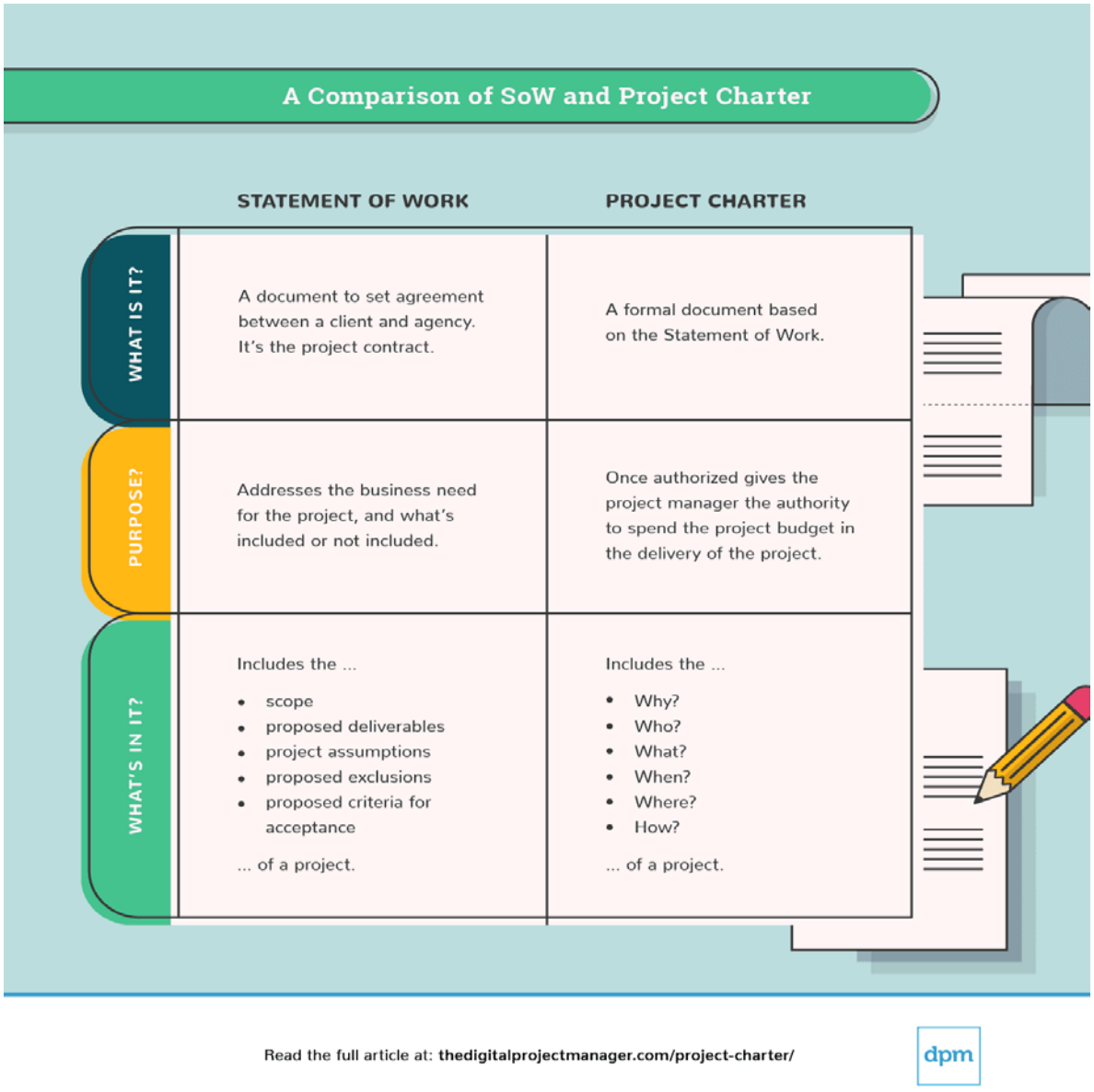
- **Scope**:
- **Budget**:
- **Timeline**:
- **Resourcing**:
- **Communications**:
- **Other**:

Proposed action:

Associated cost:

Approved by:	**Date:**

Taken from teamgannt.com (2020)



3.) CHANGE CONTROL BOARD – DECISION				
Decision	☐ Approved	☐ Approved with Conditions	☐ Rejected	☐ More Info
Decision Date				
Decision Explanation				
Conditions				
Approval Signature			**Date Signed**	

Figure 7 Change Request form, Adapted from:

https://www2.cdc.gov/cdcup/library/.../CDC_UP_Change_Request_Form. Retrieved June 22, 2020.

Define Activites is the second process in Project Schedule Management. It identifies and documents the actions that need to me done in order to produce the project deliverables. This process allows for the decomposition of works to activities. Those activities allow the estimating, scheduling, executing, monitoring and controlling of works.

The Activity list will be made based from the milestone list compiled in the previous section. According to PMBOK sixth edition, the activity list “includes the schedule activities required for on the project.” The activity list should include the activity identifier and scope of work description.

Activity ID Number	**Activity Name**	**Description of Work**	**Responsibility**
1.1	Initiation of Project	Write for proposals	Project Manager, Assistant Project Manager
1.2	Construction Preliminary Reports	Procure initial reports from department of corrections Report and present to Stakeholders	Project Manager
1.3	Decide on Deliverables	Develop DCS to review report and determine what deliverables will be used	Project Manager, Stakeholders, Sponsors
1.4	Determine Budget	Determine cost of	Project Manager,

		construction of the Penal Facility as well as the amount requested.	Consultant
2.1	Architectural Tendering Process	Project will have a drawn rendition of Prison building	Architect, Project Manager
2.2	Decide on Drawings	Consultants will compile engineering reports, survey reports, steel engineering reports.	Stakeholders, Sponsors, Project Manager
2.3	Bill of Quantities	Compiled list of what it will cost to gather the resources needed to build New Penal Facility	Consultant, Ministry of Works, Project Manger
2.4	Place Construction to Tender	Advertise for contractor suitable and within budget as stipulated in the Bill of Quantities	Project Team
3.1	Gather Permits	Gathering permits needed for construction in Kingston city Mainly the building permit	Ministry of Local Government

3.2	Approval of Construction	All permits are approved so construction can Begin	Project Manager, Architect, Ministry of Works
3.3	Mobilization	Movement of resources to construction area	Assistant Project Manager, contractor, Foreman
3.4	Procure Working Drawings	Drawings that will be used by the contractor to build prison to specifications outlined by the KSAMC	Architect
4.1	Framing	Entails the frames and beams that will carry the load of the Building	Contractor, Engineer, Assistant Project Manager
4.2	Concreting	Entails all concrete work to set foundation	Contractor, Engineer, Assistant Project Manager
4.3	Masonry	Entails all masonry work after foundation is set	Contractor, Assistant Project Manager
4.4	Plastering	Plastering of walls	Contractor, Assistant Project Manager
4.5	Cementing	Cementing of Public access areas	Contractor, Assistant Project Manager

4.6	Plumbing	Installation of water and waste water lines in the building	Contractor, Engineer, Assistant Project manger
4.7	Electrical	Electrical power to the building is set up	Contractor, Engineer, Assistant Project manger
4.8	Ventilation	Set up central air and cooling	Contractor, Engineer, Assistant Project manger
4.9	Landscaping	Yard work is completed around the building	Contractor, Engineer, Assistant Project manger
4.10	Furnishing	Furniture and fixtures for finishing are installed	Assistant Project Manger
5.1	Engineer Inspection	Engineer inspects all aspects of construction	Engineer, Project Manager, Ministry of Works
5.2	Pre-Production of Exhibits	Technical staff of the DCS prepares for set up of exhibitions	Prison Commissioner, Project Manager
5.3	Handing Over of Deliverables	Contractor prepares deliverables check list	Project Manager
5.4	KSAMC Sign Deliverables	Project Manager goes over deliverables and makes recommendations	Project Manager, DCS, Stakeholders

		to DCS	
6.1	Project Completion	All deliverables have been signed off on.	Stakeholders, Sponsor, Project Manager

4.3.6 Sequence Activities

Sequence Activities is the process of identifying and documenting relationships among the project activities. The key benefit of this process is that it defines the logical sequence of work to obtain the greatest efficiency given all project constraints. The inputs, tools and techniques.

Workbreakdown Structure

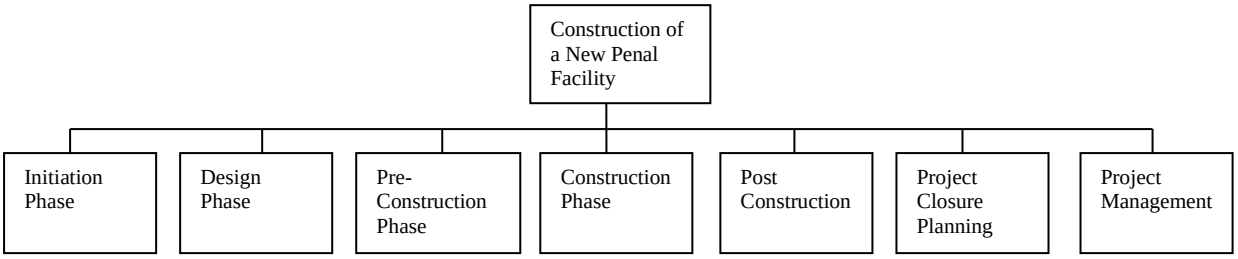


Figure 8 Schedule Network Diagram

4.3.7 Estimate Activity Duration

Estimate Activity Durations is the process of estimating the number of work periods needed to complete individual activities with estimated resources. The key benefit of this process is that it provides the amount of time each activity will take to complete, which is a major input into the Develop Schedule process. The inputs, tools and techniques, and outputs of this process are depicted in Figure 6-14. Figure 6-15 depicts the data flow diagram of the process.

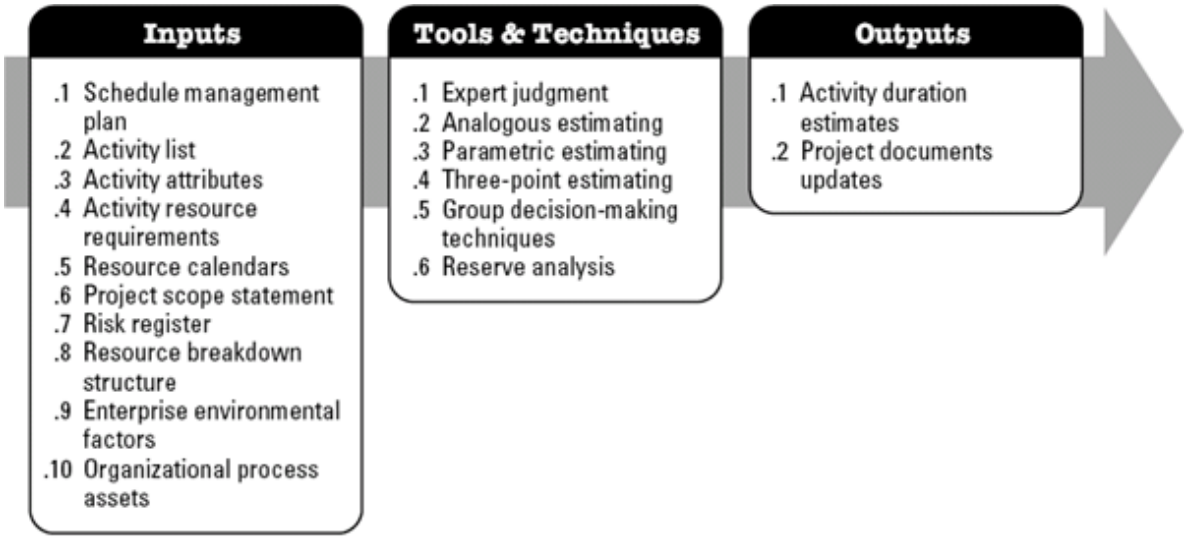


Figure 6-14. Estimate Activity Durations: Inputs, Tools & Techniques, and Outputs

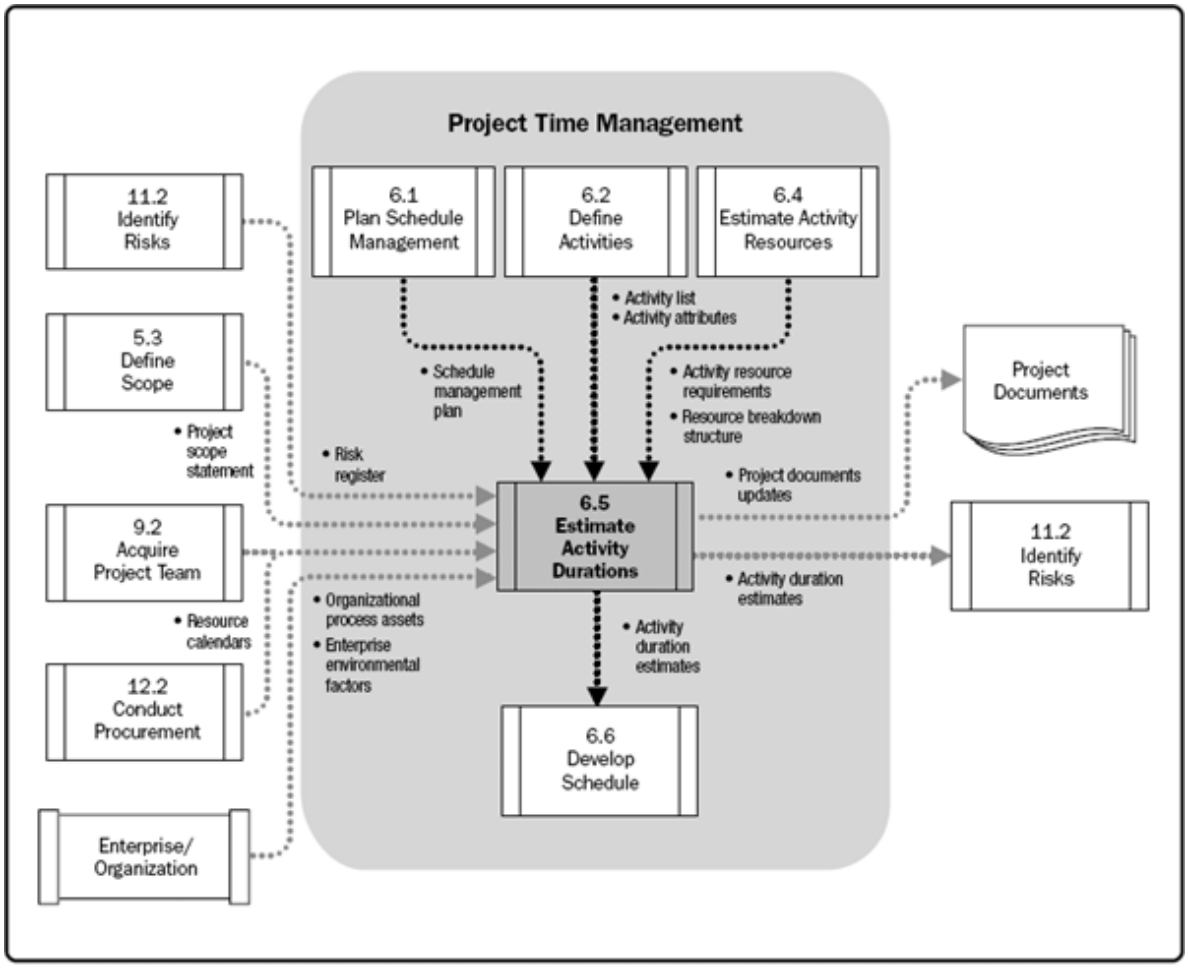


Figure 6-15. Estimate Activity Durations Data Flow Diagram

Chart 8 Resource Assignment and Activity Durations

Activity ID Number	Activity Name	Duration 1429	Resource Names
1.1	Initiation of Project	50 Days	Project Manager, Assistant Project Manager
1.2	Construction Preliminary Reports	50 Days	Project Manager
1.3	Decide on Deliverables	6 Day	Project Manager, Stakeholders, Sponsors
1.4	Determine Budget	20Days	Project Manager, Consultant
2.1	Architectural Tendering Process	60 Days	Architect, Project Manager
2.2	Decide on Drawings	20 Days	Stakeholders, Sponsors, Project Manager
2.3	Bill of Quantities	50 Days	Consultant, Ministry of Works, Project Manger
2.4	Place Construction to Tender	50 Days	Project Team
3.1	Gather Permits	50 Days	Ministry of Works
3.2	Approval of Construction	20 Days	Project Manager, Architect, Ministry of Works
3.3	Mobilization	30 Days	Assistant Project Manager,

			contractor, Foreman
3.4	Procure Working Drawings	50 Days	Architect
4.1	Framing	168 Days	Contractor, Engineer, Assistant Project Manager
4.2	Concreting	180 Days	Contractor, Engineer, Assistant Project Manager
4.3	Masonry	100 Days	Contractor, Assistant Project Manager
4.4	Plastering	100 Days	Contractor, Assistant Project Manager
4.5	Cementing	60Days	Contractor, Assistant Project Manager
4.6	Plumbing	60 Days	Contractor, Engineer, Assistant Project manger
4.7	Electrical	60 Days	Contractor, Engineer, Assistant Project manger
4.8	Ventilation	60 Days	Contractor, Engineer, Assistant Project manger
4.9	Landscaping	84 Days	Contractor, Engineer, Assistant Project manger
4.10	Furnishing	42 Days	Assistant Project

			Manger
5.1	Engineer Inspection	14 Days	Engineer, Project Manager, Ministry of Works
5.2	Pre-Production of Exhibits	42 Days	Penal Facility Director, Project Manager
5.3	Handing Over of Deliverables	1 Day	Project Manager
5.4	DCS Sign Deliverables	2 Day	Project Manager, PSC, Stakeholders
6.1	Project Completion	0 Days	Stakeholders, Sponsor, Project Manager

The Final Planning process is Project Time Management. This schedule was created using the previous two charts, the schedule management plan, activity list, and project schedule diagram and resource requirements. The table was created using Microsoft Projects.

4.4 Project Cost Management

According to Wrike (2020), Cost management is the process of estimating, allocating, and controlling the costs in a project. It allows a business to predict coming expenses in order to reduce the chances of it going over budget. Projected costs are calculated during the planning phase of a project and must be approved before work begins. As the project plan is executed, expenses are documented and tracked so things stay within the cost management plan. Once

the project is completed, predicted costs verses actual costs are compared, providing benchmarks for future cost management plans and project budgets.

These processes include:

- Plan Cost Management
- Estimate Costs
- Determine Budget
- Control Cost

Project Management Plan for the Construction of the New Penal Facility of Jamaica
Cost Management Plan

4.4.1 Introduction

In simple words, a cost management plan is the outline of the project's estimation, allocation and control of costs for the required resources to complete all project activities. The project's cost plan configuration is one of the most essential parts of a project's planning phase, and effectively serves as a safety net that guarantees that project cost is kept within the limits of the budget. The cost management plan in general terms analyzes how the project costs will be planned, funded and controlled, (Clarizen, 2018).

4.4.2 Cost Management Approach

Almost all projects need estimates. In order to be approved by the applicable authorities, the amount that the project will cost is usually a major variable.

Prior to the estimate stage, the project has been divided into work packages in a Work Breakdown Structure (WBS). The WBS is simply a subdivision of the project into tasks.

Each item in the Work Breakdown Structure is estimated. The hours, tools, equipment costs, and subcontractors are estimated to produce a final task estimate for each task. Each estimate is produced using either analogous or parametric estimating techniques.

Analogous Estimating

Analogous estimating involves comparing to previous, similar projects. The actual cost of the previous project is revised and adjusted to account for the different variables present at the new project.

Parametric Estimating

Parametric estimating involves reverting to unit costs, such as cost per square foot of house construction. Often, these variables are published in commercial sources or well known to the organization. In addition, to avoid estimating errors the estimator can use Three Point Estimating techniques, (ProjectEngineer.net, 2020).

4.4.3 Measuring Project Costs

Most projects have cost accounts into which each cost is placed for tracking purposes. These cost accounts are correlated to the task list, that is, the Work Breakdown Structure (WBS).

To create a strong control on the project budget during project execution, the Project Manager uses Earned Value Management. This means that at specified intervals, usually one week, the following variables are measured from actual project performance.

Planned Value (PV). The amount planned to be spent according to the project schedule. For example, if today is Day 20, and the schedule shows task #1 is to occur from Day 1 – Day 30, the PV is equal to two-thirds of the task budget.

Earned Value (EV). The amount of actual progress expressed as a percentage of the task budget. For example, if today is Day 20, and task #1 is 50% complete, the EV is one-half of the task budget.

Actual Cost (AC). The actual expenditures for the task.

Although there are many variables calculated in Earned Value Management, the following represent the basic minimum to ascertain the project's cost performance:

Cost Variance (CV). This value represents the difference between the planned cost and the actual cost as of the point of analysis. $CV = EV - PV$

Cost Performance Index (CPI). This value represents the cost variance (above) relative to the overall cost of the project. $CPI = EV / PV$

These two variables tell the Project Manager the cost or budget status of the project right up to the point of analysis, relative to the expected performance of the project at that point. It tells you how badly action needs to be taken to bring the project costs in line, and they represent actionable variables that Project Managers can use to govern their day-to-day activities to keep the project in line.

4.4.4 Reporting Format

The Project Cost Management Plan should contain the following items:

- How the project costs will be measured
- Who will measure the costs
- How often they will be measured and/or input into software
- Who will approve them
- How certain purchases will be made
- Whether purchases will be financed: Purchasing, Leasing, Renting or Making
- How project performance will be measured
- Who will produce performance reports
- Who will receive performance reports
- Which Earned Value variables will be reported

4.4.5 Cost Variance Response Process

This section of the cost management plan characterizes the control edges for the project and what activity will be taken in the event if the project triggers a control edge. As a portion of the reaction handle, the Project Manager regularly presents choices for the corrective activity to the project sponsor who will at that point favor a

fitting activity in arrange to bring the extend back on budget. The Project Manager may propose to extend the budget for the project, reduce scope or quality, or a few other remedial activities. The Control (dividing lines or points where things begin or change) for this project is a CPI or SPI of less than 0.8 or greater than 1.2. If the project reaches one of these Control (dividing lines or points where things begin or change) a Cost Variance Corrective Action Plan is needed or demanded. The Project Manager will present the Project Sponsor with options for corrective actions within five business days from when the cost variance is first reported, (Course Hero 2020).

4.4.6 Cost Change Control Process

Purpose- The purpose of this document is to provide the Project Manager, Sponsors, Steering Committee members and all other Stakeholders with the standard process for managing changes on the New Penal Facillity in Jamaica project. Related Documents, the scope of the New Penal Facility in Jamaica has been defined in the approved Project Charter dated February 2020. The work breakdown of the project and the timeline are detailed in the approved project plan dated February 2020. Purpose and Objectives The purpose of this change management procedure is to manage change requests so that approved changes will be controlled, ensuring the project remains on schedule, within budget and provides the agreed deliverables. The primary objectives of change management are to:

• Manage each change request from initiation through to closure;

• Process change requests based upon direction from the appropriate authority;

• Communicate the impact of changes to appropriate personnel; and

• Allow small changes to be managed with a minimum of overhead. Scope The Change Management Process is the mechanism used to initiate, record, assess, approve and resolve project changes. Project changes are needed when it is deemed necessary to change the scope, time or cost of one or more previously approved project deliverables. Most changes will affect the budget and/or schedule of the project. This process typically follows the project change control process. Project cost/budgets approvals must be done by the Project Sponsor, (Berkeley, 2020).

4.4.7 Project Budget

According to Viter (2020), a project without a budget is like a car without fuel. Funding is essential to get the project started and set all resources in motion. If you work in a project-based company as a manager, creating a project budget and helping those wheels spin, will most likely be your full responsibility. At first glance, the whole budget thing might seem intimidating, but eventually, you will realize that all you need is to iron out the plan. This guide is for everyone who would like to discover what goes into making a project budget, and how to calculate one.

Fixed Costs

Material Costs

Contractor Costs

Total Project Costs $**15,000,000**

Management Reserve $**516,706**

Sponsor Acceptance

Approved by:

_____ Date:_____

Representing Ministry of National Security

Figure 9 Construction of the New Correctional Facility in Jamaica Cost Management Plan. Adapted from *Project Management Docs.* Retrieved June 9, 2020 from
https://docushare.sfu.ca/dsweb/Get/Document-501966

1. Cost estimation is used to predict the quantity, cost and price of the resources required by the scope of a project. A project might be any process that is started to perform work activities and/or create assets. The accuracy of the estimate depends heavily on the level of project scope definition: as the design and conditions of the project become better defined, so do the estimated values.

Cost estimation is needed to provide decision-makers with the means to make investment decisions, choose between alternatives and to set up the budget during the front end of projects. For this, estimates made by vendors and contractors need to be validated by clients as well. In later phases of the project, the budget estimate is used as a baseline to assess the performance of a project.

Related to this principle, it is always challenging to collect and read the huge amount of cost data, which does not help with the decision making. Analyzing and visualizing the cost data opens the doors to making the data useful and meaningful. The dashboards of a project control software system are the data-driven graphical representations of a project; dashboards can provide decision-makers with a quick overview of a project's progress and turn the data into

decision points. Estimating is done by breaking down the total scope of a project in manageable parts, to which resources can be assigned and cost. There are standardized ways of breaking down a project, like the Work Breakdown Structure (WBS) and the Cost Breakdown Structure (CBS), but depending on the needs of the project team and external parties multiple structures are often implemented to align reporting and sharing of cost data. A cost estimate is more than a list of costs. It also includes a detailed Basis of Estimate (BOE) report that describes the assumptions, inclusions, exclusions, accuracy and other aspects that are needed to interpret the total project cost. Otherwise, it would be a meaningless number. The BOE is required to communicate the estimate to the various parties involved in the decision making but is also handy during closeout when the performance of the project is compared with other projects. It is the vital part often overlooked, that allows you to learn from your experience and mistakes.

4.4.8 New Penal Facility in Jamaica Cost Baseline

Project Name: Construction of the New Penal Facility in Jamaica
Project Manager: Lincoln A. Dennis
Project Sponsor: Ministry of National Security
Prepared by: Lincoln A. Dennis

Submitted to: Ministry of Finance and Planning
Total Cost Authorization:
Date:

Expense	Quantity	Unit Cost	Total Cost	Purpose
Construction and			**2,592,000**	

Subcontracts				
Unskilled workers	40	57,600	1,152,000	Labour
Skilled Workers	20	86,400	864,000	
Masons	8	96,000	384,000	
Security	8	4800	192000	
Sub-Contracts			**7,460,000**	
Framing	3	500,000	1,500,000	Labour and Material
Concreting	3	500,000	1,500,000	Labour and Material
Plastering	3	250,000	750,000	Labour and Material
Plumbing	1	460,000	460,000	Labour and Material
Electrical	3	250,000	750,000	Labour and Material
Ventilation	1	460,000	460,000	Labour and Material
Landscaping	5	100,000	500,000	Labour and Material
Furnishings	2	350,000	700,000	Labour and Material
Elevators	2	160,000	320,000	Labour and Material
Finishing	2	260,000	520,000	Labour and Material
Professional Consultants			**1,060,000**	
Architect	2	250,000	500,000	Labour Only

Engineer	2	280,000	560,000	Labour Only
Project Management			**2,146,000**	
Project Manager	1	800,000	800,000	Labour Only
Assistant Project Manager	2	600,000	600,000	Labour Only
Accountant	2	100,000	200,000	Labour Only
Office Supplies	3	60,000	180,000	Labour Only
Office Admin	3	90,000	270,000	Labour Only
Messenger	2	48,000	96,000	Labour Only
Site Management			**140000**	
Foreman	1	50,000	50,000	Labour Only
Mobilization		50,000	50,000	
Foreman's Assistant	1	40,000	40,000	Labour Only
Procurement		**550,000**	**550,000**	
Programming	1	500,000	500,000	Labour Only
Research	1	50,000	50,000	Labour Only
Total			**40,000**	
Permits		**20,000**		
Prints		**20,000**		
Contingency (5%)		**699,400**		
General Sales tax		**312,600**		
Total		**1,5000,000**		

Approved By:

_____ Date:_____

Representing Ministry of National Security

Figure 10 Construction of the New Penal facility in Jamaica Cost Baseline. Adapted from *Project Finding Docs*. Retrieved June 9, 2020 from https://www.projectmanagementdocs.com/template/project-documents/project-funding-requirements/#axzz5RUaVj1He

The Project through the Department of Corrections will identify a staff member with responsibility to manage the quality of the project throughout its life cycle. They will be identified as the Quality Manager. They will conduct process audits on a bi-monthly basis. This also includes the monitoring of process performance metrics and ensures that all processes are in compliance with standards set out by KSAMC and the Central Building Authority.

The Project Manager will meet quarterly with the Quality Manager and whenever discrepancies are found. They will meet and determine what processes can be used on the process for improvement initiatives.

4.5. Quality Control

Investopedia (2019) quipped that Quality control (QC) is a process through which a business seeks to ensure that product quality is maintained or improved. Quality control requires the business to create an environment in which both management and employees strive for perfection. This is done by training personnel, creating benchmarks for product quality and testing products to check for statistically significant variations.

A major aspect of quality control is the establishment of well-defined controls. These controls help standardize both production and reactions to quality issues. Limiting room for error by specifying which production activities are to be completed by which personnel reduces the chance that employees will be involved in tasks for which they do not have adequate training.

4.5.1 Quality Control Measurements

The quality control measurements are used to analyze as well as evaluate the quality of the different processes involved in a project against the standards of the organization or on the requirements specified during the project management planning. This measurement can also be used to compare the processes that are used in making the measurements. It is also used to validate the actual measurement to determine their degree of correctness. Since quality control measurements are documented results, it is crucial that they be captured in formats that are specified through the Plan Quality Management process. It is also important to take note that this particular document is also an important input for the Perform Quality Assurance. It is one of the inputs needed to generate change requests, project document updates, project management plan updates and the organizational process assets updates. This is to ensure that the quality standards, as well as operational definitions, are satisfied.

Quality Assurance Log

Trial #	Date	Process Measured	Required Value	Actual Measured	Acceptable? (Y/N)	Recommendation	Date Resolved

Quality Control Log

Trial #	Date	Process Measured	Required Value	Actual Measured	Acceptable? (Y/N)	Recommendation	Date Resolved

Sponsor Acceptance
Approved by:

_____ Date: _____

For Ministry of Finance and Planning

Figure 11 The New Penal Facility in Jamaica Quality Management Plan. Adapted from *Project Management Docs* Retrieved June 9, 2020 from

https://www.projectmanagementdocs.com/template/project-planning/quality-management-plan/#axzz5RZO07yv0

4.6 Project Human Resource Management

According to the PMBOK Sixth edition, “Project Resource management includes the processes to identify, acquire, and manage the resources needed for the successful completion of the project.” The resource management processes include plan resource management, estimate activity resource, acquire resources, develop team, manage team and control resources.

Project Management Plan for the Construction of the New Penal Facility in Jamaica Human Resource Management Plan Department of Correctional Services Kingston Jamaica July 30, 2020

4.6.1 Introduction

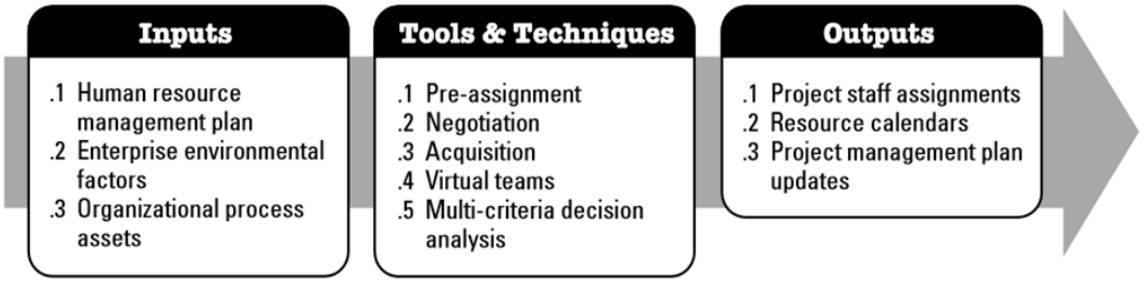
The Human Resource Management Plan for the construction of the New Penal Facility in Jamaica is a key component for this project. Proper planning of human resources will aid in the success of the project. For this project the human resource plan will define the roles and responsibilities, organizational charts, how resources will be acquired, time when each resource will be needed and training requirements if needed.

The Human Resource Management Plan for the construction of the New Penal Facility in Jamaica will include the following:

* How resources will be acquired
* Timeline for resources/skills sets
* Training required for skills development
* How performance reviews will be conducted

* Recognition and reward systems

This plan will aid in achieving project success by acquiring the proper skilled human resources, provide training for project team, team building strategies and manage team activates.



Human Resource Management: Tools and Techniques and outputs (PMBOK 6)

4.6.2 Roles and Responsibilities

This segment of the plan outlines the roles and responsibilities of the team members and stakeholders. The roles and responsibilities for members of the project team and must be clearly outlined. For the construction of the New Penal Facility in Jamaica the following roles and responsibilities are established:

Project Manager (PM), (1Position): responsible for the overall success of the construction project. The Project Manager is responsible for authorizing and approval of all project expenditure. Other responsibilities include approving work activities, acceptable variances, reporting on project status, communicate project team performance to functional manager and acquire human resources

Assistant Project Manager (AP), (1Position): Assists the Project Manager in the creation of the project planning documents. The AP also assists in taking minutes

of meetings held, update the document log, compiling project reports and communicating with stakeholders.

Engineer (E), (1Position): Responsible for inspection of the structure. Ensure that the building is built to standards to ensure structural integrity and produces calculations for the architect.

Architect (A), (1Position): Responsible for the drawing and schematics of the building. The architect works with the engineer to ensure that the building is up to regulated building standards.

Accountant (AA), (1Position): Responsible for all financial transactions pertaining to the project, and project expenditure reports.

Plumbing Engineer (PE), (1Position): Responsible for the plumbing inside the building, this includes all bathrooms, water lines and waste lines.

Electrician (EE), (1Position): Responsible for the wiring of the building as well as the air condition systems. The electrician is responsible for following the electrical plan and placing electrical drops as specified in the architectural drawings.

Quantity Surveyor (QS), (1Position): Responsible for collecting data from the construction specifications to produce the cost analysis of the construction project.

Interior Designer (ID), (1Position): Responsible for the inside of the design of the New Prison Facility. Lassie with the Commissioner of Corrections to program exhibits. The Interior designer is also responsible for the furniture and setting up of office space.

Messenger (M), (1Position): Responsible for performing errands related to the construction project.

Foreman (F), (1Position): Responsible for the supervision of requirements made in the architectural drawings. The foreman is responsible for the skilled workers and supervises their work.

Mason (MA), (1Position): Is responsible for assisting the foreman and provides day to day inspection of the work that the unskilled workers complete.

Project Organizational Charts

The RACI Chart shows the relationship between project tasks and the team members. The Project Manager will manage any changes to the chart and review and approve changes when necessary. Changes done will be in accordance with the change control processes. If changes are made the assistant Project Manager will update the project documents and redistribute responsibilities.

	Project Manager	Assistant Project	Engineer	Architect	Foreman	Mason	Workers
Gathering Permits		R	R	A	I		I
Permit Approval		R	R	A	I		I
Building Design	A	R		R	I	C	I
Procurement	A	R		C	I		
Contracts Administration	A	R		C	C		
Site Management		R			R	A	I
Change Request	A	R		C			
Scope	A	I	I	I			I

Communication	A	R	I				
Quality	A	R		I	C		
Site work		I		C	R	A	I
Preparing Reports	A	R		C	C		

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

4.6.3 Staffing Management

Staff Acquisition

For the building of the New Penal Facility in Jamaica, the Ministry of National Security will source the Assistant Project Manager from its current staff. The said Ministry of National Security has a Technical Director who is responsible to oversee the construction of the new Penal Facility. The Project Manager in this case will be the Commissioner of Corrections since his background is in project management. The Department of Corrections will also provide the Mason to supervise the day to day construction by unskilled labourers. The Project Manager will be responsible to contract all the other functional managers for this project.

Resource Calendars

The Building of the New Penal Facility will take 48 months to complete. The resource histogram below shows the process to build the new Penal Facility with workers working forty hours a week.

Training

There is currently no training scheduled with regard to the Construction of the National New Penal Facility. If training needs are required then funding will be provided from the project contingency.

4.6.4 Performance Reviews

A performance review, also called a performance appraisal or performance evaluation, is a formal assessment in which managers evaluate an employee's work performance, identify strengths and weaknesses, offer feedback, and set goals for future performance. In the past, many organizations held performance reviews annually for the entire workforce; however, more and more companies are moving toward a frequent feedback performance management system in which managers conduct reviews quarterly, monthly, or even weekly. In fact, some organizations are doing away with formal performance reviews altogether in favor of more casual manager check-ins and one-on-ones. When done right, performance reviews can help employees understand what they are doing well in, how they can improve, how their work aligns with larger company goals, and what is expected of them in their given role. On the other end, managers who use performance reviews effectively can more easily recognize high performing employees, correct issues before they become insurmountable, communicate expectations, encourage growth and development, and foster employee engagement.

4.6.5 Recognition and Rewards

The scope of this project does not make mention of incentives or rewards. Incentives and rewards can be programmed into the contracts of the functional managers if they complete tasks ahead of schedule.

Sponsor Acceptance

Approved by:

_____ Date: _____

For Ministry of National Security

Figure 12 The New Penal Facility Human Resource Management Plan. Adapted from *Project Management Docs* Retrieved June 11, 2020 from https://www.projectmanagementdocs.com/template/project-planning/human-resource-plan/#axzz5SVn1IC9T

4.7 Project Communication Management

Excellent communication is a critical component of project success. In fact, according to the Project Management Institute (PMI), most project failures ae due to communication issues. Project communication management ensures that does not happen. It consists of three processes, it helps make sure the right messages are sent, received and understood by the right people. Project communication management is one of the ten key knowledge areas in the PMBOK (Project Management Book of Knowledge). The processes included in this area have changed over the years, but in the current version, there are three primary project communication management processes.

These are:

1. Plan Communications Management
2. Manage communications

3. Monitor communications

Project Management Plan for the Construction of a New Penal Facility in Jamaica Communication management Plan Department of Correctional Services Kingston Jamaica July 2020

Introduction 4.7.1

A project management communication plan identifies how important information will be communicated to stakeholders throughout the project. It also determines who will be receiving the communication, how those people will receive it, when they will receive it, and how often they should expect to receive that information. For instance, if you are a Project Manager in charge of launching a new website, you would have already segmented the project into tasks like wire framing, copywriting, and coding, but you have to determine what you are going to tell your stakeholders at each stage of the project.

When formulating your project communication plan, make sure it includes:

- The purpose or goals of the communication plan
- Information about stakeholders and their roles
- The types of information that needed to be shared with stakeholders
- The methods used to communicate
- The frequency that each stakeholder would like to receive information

Description	Frequency	Method	Audience	Owner
Name of the communication	How often it will happen	Method of communication	Who will receive the communication	Who is responsible
Project team meeting	Daily	Meeting	Project team	Project manager
Stakeholder update	Monthly	Email newsletter	Stakeholders	Project manager
Board meeting	Every two weeks	Meeting	Project board	Project manager
Contribution to department newsletter	Quarterly	Section of newsletter	Wider development	Project manager to deliver to department administration

Figure 13 Communication Plan Template (medium.com)

4.7.2 Communication Delivery methods and Technology

We will use various methods on communication, such as meetings, report, minutes, and other means in order to send and to receive the messages

4.7.4 Communication Matrix

A communication matrix is a document summarizing the communication management plan for a project. To remain effective, the communication matrix must be accessible to all stakeholders and updated throughout the project.

COMMUNICATIONS MATRIX

The following table identifies the communications requirements for this project.

Communication Type	Objective of Communication	Medium	Frequency	Audience	Owner	Deliverable	Format
Kickoff Meeting	Introduce the project team and the project. Review project objectives and management approach.	• Face to Face	Once	• Project Sponsor • Project Team • Stakeholders	Project Manager	• Agenda • Meeting Minutes	• Soft copy archived on project SharePoint site and project web site
Project Team Meetings	Review status of the project with the team.	• Face to Face • Conference Call	Weekly	• Project Team	Project Manager	• Agenda • Meeting Minutes • Project schedule	• Soft copy archived on project SharePoint site and project web site
Technical Design Meetings	Discuss and develop technical design solutions for the project.	• Face to Face	As Needed	• Project Technical Staff	Technical Lead	• Agenda • Meeting Minutes	• Soft copy archived on project SharePoint site and project web site
Monthly Project Status Meetings	Report on the status of the project to management.	• Face to Face • Conference Call	Monthly	• PMO	Project Manager	• Slide updates • Project schedule	• Soft copy archived on project SharePoint site and project web site
Project Status Reports	Report the status of the project including activities, progress, costs and issues.	• Email	Monthly	• Project Sponsor • Project Team • Stakeholders • PMO	Project Manager	• Project Status Report • Project schedule	• Soft copy archived on project SharePoint site and project web site

Figure 14 Sage International Projects Communication Matrix (Sage Publications 2020)

4.7.3 Communication Standards

At this time the Department of Corrections and the Ministry of National Security is actively developing proper communication standards in order for this project to flow properly. They are using example from other countries that have indertake the said project.

4.8 Project Risk Management

What is risk management in project management? It is the process used by Project Managers to minimize any potential problems that may negatively impact a project's timetable. Risk is any unexpected event that might affect the people, processes, technology, and resources involved in a project. Unlike issues, which are certain to happen, risks are events that could occur, and you may not be able to tell when.

Because of this uncertainty, project risk requires serious preparation in order to manage them efficiently, (Wrike 2020).

Project Risk Management Template

Figure 15 Risk Management techniques PMI.org

Project Management Plan for the Construction of the New Penal Facility in Jamaica

Risk Management Plan

4.8.1 Introduction

The purpose of risk management is to identify potential problems before they occur so that risk-handling activities may be planned and invoked as needed across the life of the product or project to mitigate adverse impacts on achieving objectives. Risk management is a continuous, forward-looking process that is an important part of business and technical management processes. Risk management should address issues that could endanger achievement of critical objectives. A continuous risk management approach is applied to effectively anticipate and mitigate the risks that have critical impact on the project.

Effective risk management includes early and aggressive risk identification through the collaboration and involvement of relevant stakeholders. Strong leadership across all relevant stakeholders is needed to establish an environment for the free and open disclosure and discussion of risk. Although technical issues are a primary concern both early on and throughout all project phases, risk management must consider both internal and external sources for cost, schedule, and technical risk. Early and aggressive detection of risk is important because it is typically easier, less costly, and less disruptive to make changes and correct work efforts during the earlier, rather than the later, phases of the project. Risk management can be divided into three parts: defining a risk management strategy; identifying and analyzing risks; and handling identified risks, including the implementation of risk mitigation plans when needed, (Risk Process Guideline 2020).

4.8.2 Risk Management Procedure

Implementing a risk management process is vital for any organization. Good risk management does not have to be resource intensive or difficult for organizations to undertake or insurance brokers to provide to their clients. With a little formalization, structure, and a strong understanding of the organization, the risk management process can be rewarding.

Risk management does require some investment of time and money but it does not need to be substantial to be effective. In fact, it will be more likely to be employed and maintained if it is implemented gradually over time.

Risk Management Template

Using this template framework puts you in the lead to quickly and easily carry out a complete risk management process. You identify, assess and treat risks, and bring your project team and stakeholders along on the journey.

Here are the 12 key elements of a Project Risk Register template together with some examples to help you understand how the process works.

Elements 1 to 3 record the results of the Risk Identification phase.

1. Risk Category – This is where you categorize your risk. Does it fall under the category of scope, time, cost, resources, environmental, or another key category? Using these categories helps tease out likely risks and groups them into relevant categories for future reference.

2. Risk Description – A brief description of the potential risk. For instance, the first potential risk identified in the Resources category is: "*There is conflict over*

resources and team members don't have enough time due to competing demands."

3. Risk ID – This is a unique identification number used to identify and track the risk in the risk register. If Resources is Category 8, then the first risk identified in this category has a unique ID of 8.1.

Elements 4 to 6 record the results of the **Risk Analysis** phase.

4. Project Impact – A description of the potential impact on the project as a result of the risk**.** For example: *"The project schedule may slip, budget may increase and project scope may not be achieved."*

5. Likelihood – The estimated likelihood or probability that the risk will occur at some point and become a project issue. This can be qualitative: high, medium, or low; but it can also be quantitative if enough information is available. For our example, we know that resources have been over-committed in the past and we assess the likelihood of occurrence as "High."

6. Consequence – The potential consequence or impact of the risk if it did become a project issue. For our project, time is a fixed constraint, and so any risk that has the potential to significantly delay the project schedule has a "High" consequence.

Elements 7 and 8 record the outcomes of the **Risk Evaluation** phase.

7. Risk Rank – This is the magnitude or the level of the risk. It is a combination of likelihood and consequence. As they are both "High" in our example, then the risk rank is also "High."

8. Risk Trigger – What are the triggers that would indicate the need to implement

contingency plans? “If resource conflicts have not been resolved three weeks before the scheduled start date, then implement contingency plans.”

These last four elements record the outcomes of the **Risk Treatment** phase**.**

9. Prevention Plan – This is an action plan to prevent the risk from occurring. For our example, the Prevention Plan includes: *Liaise with functional managers and team members to pre-empt future conflicts; and specify and agree resource needs (staff and equipment) with functional managers.*

10. Contingency Plan – This is an action plan to address the risk if it does occur. For our example, the Contingency Plan includes*: “Train and up-skill existing team members in combination with HR department.”*

11. Risk Owner – This is the person responsible for managing the risk and implementing the Prevention or Contingency Plans. Stakeholders, members of the project team, the Project Manager and the Project Sponsor can all be risk owners.

12. Residual Risk – This is the risk that remains after treatment is carried out. After treatment, we assess the residual risk level as “Low.”

It makes sense to belong to the group that uses smart tools to quickly undertake a comprehensive risk management process that covers all the necessary steps. A Risk Register Template is an indispensable tool to help you achieve that outcome.

For busy professionals who need to meet continuing professional development requirements and boost their career opportunities, our online courses provide a flexible and cost-effective way to achieve this by providing anywhere, anytime access and a supportive online community. Continuing Professional Development offers a series of online project management courses to advance your project management skills and career. Our Risk Management Online Course, which

includes an Excel Project Risk Register Template, gives you the practical skills to develop a comprehensive risk management process.

Chart 9 Risk Management Process

Risk ID	Risk Description	Category	Date	Status	Responsible Individual	Probable Cause of Risk	Prevention Strategy	Target Event	Contingency Plan Activation Date	Planned Resolution Date	Risk Close Date	Comments
1	Price increase on materials over time	Financial	September 8, 2020	Open	Assistant project Manager							
2	Damage to Materials on site	Financial	September 8, 2020	Open	Site Foreman							
3	Accidents on site	Financial	September 8, 2020	Open	Site Foreman							
4	Underestimating of project Cost	Financial	September 8, 2020	Open	Project manager							

5	Regulatory demands not consisten with approved drawings	Planning	September 8, 2020	Open	Architect/project manager						
6	Client unauthorized or misplaced involvement in the project	Stakeholder	September 8, 2020	Open	Project Manager						
7	Sever climate changes	Scheduling	September 8, 2020	Open	Assistant Project manager						
8	Shipping delay	Scheduling	September 8, 2020	Open	Assistant Project manger						

9	Production Fabrication delay	Scheduling	September 8, 2020	Open	Project Manager							
10	Design Delay	Scheduli	Septemb er 8,	Open	Archite ct							
11	Non-Compliant Contractor	Scheduling	September 8, 2020	Open	Project Manager							

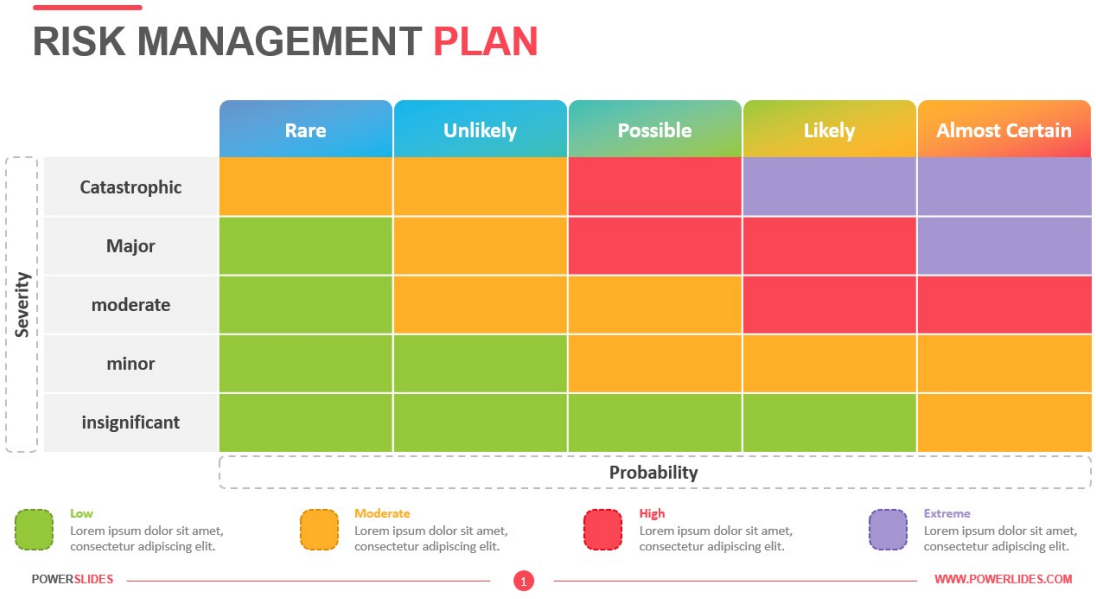


Figure 16 Risk Management Plan (Powerslides.com)

4.9 Project Procurement Management

Project procurement management is a collaboration with outside suppliers in order to obtain or purchase goods and services for projects. These relationships are often created based on a contract so that the needed items or services are received on time and meet the standards requested by the purchasing company. So, if we take our example from earlier, Betty would benefit from meeting with the purchasing department of her company so that they can set up a contract to purchase glass eyes and yarn hair from an outside supplier, in order to finish her project

Like many aspects in a business, project procurement management has a process. This process helps ensure that the supplies and goods are ordered and received, and the project is completed. Often, this process consists of five parts: initiating and planning, selecting, contract writing, monitoring and closing and completing.

4.9.1 Introduction

It is very important for us to put proper measures in place for the building of a New Penal Facility. One thing that needs to be done is a Procurement Management Plan. This will be used to guide the management team to manage procurement through the life of the Project. This plan will be updated on regular intervals as the need may arise. This plan will assist in the identification of the items that need to be sourced outside of the organization. Some items that might be included in the procurement plan are; procurement risk and risk management considerations,

determination of the cost, how to use procurement documentation, issues relating to procurement and the organization of activities relating to procurement.

4.9.2 Procurement Management Approach

The Ministry of National Security will have oversight over the procurement activity during the life of the project. In this case, the Project Manager plays an integral role along with the project team to identify items needs to be procured in order for the project to be successful, the engineers, contractors and other technical personnel will have their input and they will work in relation with the Kingston and St. Andrew Metropolitan Region. The ministry of Finance and Planning will have responsibility for the disbursement of funds and they will make sure that procedures are followed.

4.9.3 Procurement Definition

Procurement is the act of obtaining goods or services, typically for business purposes. Procurement is most commonly associated with businesses because companies need to solicit services or purchase goods, usually on a relatively large scale. Procurement generally refers to the final act of purchasing but it can also include the procurement process overall which can be critically important for companies leading up to their final purchasing decision. Companies can be on both sides of the procurement process as buyers or sellers though here we mainly focus on the side of the soliciting company.

4.9.4 Type of Contract to be used.

The services of contract that will be used for the New Penal Facility in Jamaica, it will deal with the frame, concrete, electrical, roofing will be procured from certain businesses. This process will be approved by the contracts commission that will approve the process; this will also go through the scrutiny of the Auditor General and the Corruption Prevention Agencies. Thus the Project Managers and the project team will have to abide by the rules stipulated.

4.9.5 Procurement Risk

Procurement is no longer just about cost control. It has become a key strategic function aligned with broader corporate priorities. That is because modern businesses must operate globally at a faster pace than ever before. They also serve customers whose purchasing priorities have changed. Problems in procurement have broad repercussions such as:

- Supply chain disruptions delay products and projects. What may have been a minor episode in the past can now drastically affect the stock price in minutes.
- Today's consumers believe that a brand's mission and reputation is just as important as its products. When procurement sources from unsustainable sources or unethical vendors, the resulting scandal quickly spreads and erodes trust.
- Compliance is also a growing concern across the business landscape. Today, even small businesses source worldwide and it's easy to run a foul of local laws such as anti-corruption statutes. The impact can be devastating both financially and in terms of reputation.

4.9.6 Procurement Risk Management

Risk is an event that is capable of impeding procurement from achieving functional and business objectives. There is risk in every supply relationship, without these risks it is difficult to achieve enhanced value. The focus should be on identifying these risks, assessing them effectively and managing them proactively. Therefore, it is good practice for procurement to have a holistic process to risk management. This process should be underpinned by well-defined risk identification and assessment process, an effective risk strategy and a managed risk register.

Risk Management in Procurement

Gateway Procurement (2019)

Risk Management Process

Figure 17 Risk Management Process (Procurement Gateway 2019)

4.9.7 Cost Determination

Determination of Prices means to determine the cost of goods sold and services rendered in the free market. In a free market, the forces of demand and supply determine the prices.

The Government does not interfere in the determination of the prices. However, in some cases, the Government may intervene in determining the prices. For example, the Government has fixed the minimum selling price for the wheat.

Browse more Topics under Determination of Prices

- Changes in Demand
- Changes in Supply
- Simultaneous changes in Demand and Supply

- Features of Perfect Competition
- Price Determination under Perfect Competition
- Long Run Equilibrium of Competitive Firm and Industry
- Monopoly Market
- Monopolist's Revenue Curve
- Price Discrimination
- Monopolistic Competition
- Oligopoly
- Linked Demand Curve

4.9.8 Standardized Procurement Document

Many procurement documents cross a buyer's (physical or virtual) desk. The sequence in which these documents are exchanged is key in ensuring an efficient transaction for both the buying and selling organizations.

Here is the proper sequence for the exchange of these documents:

- Request for Quote/Proposal (from buyer to seller)
- Quote/Proposal (from seller to buyer)
- Purchase Order (from buyer to seller)
- Invoice (from seller to buyer)
- Payment (from buyer to seller)

4.9.9. Procurement Constraints

1. Procurement Constraints refers to those factors that must be put into consideration in the process of doing procurement and necessary steps have to be taken to secure

the whole process of procurement. For instance, the vendors have to be involved to ensure they are able to deliver within those constraints such as costs, technologies, scope, and so on.

2. The Approval Process; It contains all the organizational rules that require compliance for any procurement to be done depending on the nature of the item to be purchased. Some items are procured within the organization and others are procured from external vendors. The relevant internally composed representatives may have the mandate to determine the approval process.

3. Cost Determination; it gives detailed information on the determination of the costs and guidance on the selection procedure to adopt. For example, the bids or proposal given by different vendors are cost informative in nature and, on many occasions, organizations use that information to make procurement decisions.

4. The procurement management plan is used in the decision criteria, such as outsourcing versus in-sourcing. Past records of the performance and capacity of a vendor to meet quality standards are used to award various contracts.

4.9.10 Contract Approval Process

A contract approval is an automated process that regulates the tasks involved in submitting, reviewing, collaborating on, and, ultimately, approving contracts in a highly-predictable manner ensuring compliance.

By providing employees with a central web dashboard for submitting and tracking a request for new contracts, timeliness and productivity are dramatically increased. After implementing a workflow management solution, the contract approval process becomes more streamlined. In some cases, approvals for contracts are

received in a matter of hours, down from days or even weeks. Custom alerts and triggers ensure that anyone involved in the process is aware of their next task and when it is due. Red lines can be attached and sent back to the requestor for review.

Transparency if desired by the administrator, the individual submitting the request can see the entire path of the submitted contract and who's "desk" it is sitting on. They will also know immediately if the new contract provisions are approved and will be able to review any revisions or comments that are made within the dashboard. Once the process is completed and the contract approved it placed into the organization's document management tool of choice for archival. Meanwhile, the entire approval process is auditable anytime.

Contract Approval Process

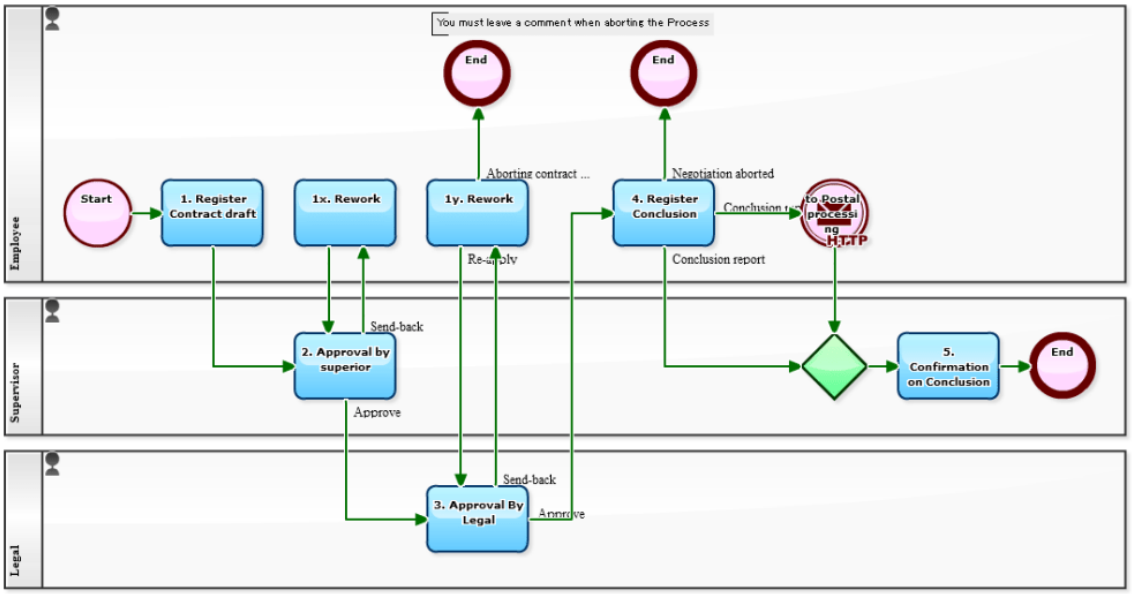


Figure 18 Contract Approval Process (Questetra Support, 2019)

4.9.11 Decision Criteria

There are various procedures that are used in order to select the right contractors in order to get the job done. This industry you are in, plays an integral role in the selection process and you will have to take into consideration the country and the laws of that said country, in the Jamaica jurisdiction the contractor must be registered with the Contracts Commission and therefore selection will be made based on;

- The ability to provide items in a timely manner.
- Quality
- Cost
- Comparison with other contractors
- Track record

4.9.12 Vendor Management

According to Fournier (2015), the businesses and individuals that provide goods and services to an organization are considered its vendors. A company could work with a few, dozens, or even hundreds of different vendors, all with different contract terms, pay rates, and points of contact that must be managed through a vendor manager. The term vendor management is used when describing the activities included in researching and sourcing vendors, obtaining quotes with pricing, capabilities, turn around times, and quality of work, negotiating contracts, managing relationships, assigning jobs, evaluating performance, and ensuring payments are made. It requires a lot of skills, resources, and time.

Though many business owners believe that vendor management is simply about finding the supplier with the cheapest price for a product or service, it is about more than that. It is about streamlining the process for heightened efficiencies and managing vendor relationships to ensure that the agreements made are mutually beneficial for both parties.

With effective vendor management processes in place, you can properly establish service, quality, cost, and satisfaction goals and choose and manage third-party suppliers that help you achieve those business goals.

The Four Parts of the Process

Vendor management is typically broken down into four steps. The first is the establishment of the business goals mentioned above. It is much easier to select and manage vendors when you have clearly defined performance parameters to compare and contrast. The second part of the process is to select the best

vendors that will be able to match your company's performance characteristics. Every vendor will have its strengths and weaknesses, and choosing the right one is a very critical task to optimizing operational results. Third is managing your suppliers. On a daily basis, your vendor managers will need to monitor performance and output, ensure contract terms are being followed, approve or disapprove changes, provide feedback, and develop relationships through effective communication, honesty, and integrity. Finally, the fourth aspect of vendor management is meeting your goals on a consistent basis. This requires continuous work in influencing vendors to meet performance objectives to ensure profitability.

Building Relationships with Vendors

To get the most success out of your vendor management process, you need to take a strategic approach to building and maintaining relationships with your best vendors. Good suppliers are hard to come by, so it is important to nurture your relationships with the suppliers you do not want to lose. Share information and priorities: For your vendors to effectively meet your needs to the best of their ability, it is important for you to provide the necessary information in a timely manner. This might include launch dates, changes in design, forecast information, and other pertinent information that might affect quality or service. Allow strategy and innovation: When you and your vendors work together on strategy, you can get the best value for your money. Invite the vendor to meetings that involve the product he is working on. You hired him because he is an expert in that area, so he could provide valuable insights or innovative suggestions that make the product better or even cheaper, which could give you a competitive advantage.

Look to the future: Short-term relationships with vendors will only lead to short-term gains and marginal cost savings. The real value comes from building partnerships for the long terms. Doing so will enable trust and commitment from your vendors, which could lead to discounts, preferential treatment, and access to expert knowledge. Focus on win-win agreements: you would not be able to build relationships with strong-arm negotiation tactics, instead, you would create resentment that can lead to further problems down the road. Focus on negotiating agreements in good faith that allow both parties to walk away feeling good about the deal. To get the most out of your vendor relationships, you need effective vendor management. Make sure you consider all four parts of the process and focus on building relationships, and you will get better value from your suppliers.

4.9.13 Performance Metric for Procurement Activities

This process is a competitive process and therefore we will have to use the best process to identify the proper vendor to build the new Penal Facility in Jamaica. The ratings that we will use are:

1- Unsatisfactory

2- Aceptable

3- Exceptional

Sponsor Acceptance

Approved by:

_____ Date _____

For the Ministry of National Security

Figure 19 PMBOK® Guide: Procurement Management Plan. Adapted from Project Management Docs. Retrieved November 16, 2016 from http://www.projectmanagementdocs.com/template/Procurement-Management-Plan.doc

4.10 Project Stakeholder Management

Stakeholders are individuals who get impacted by the project. A Stakeholder can be a supporter and a resistor. Project Stakeholder Management involves identification of stakeholders, analysis of their expectations and influences, development of appropriate strategies to work with the stakeholders and executing the process. Frequent communication is required with the stakeholders. Needs and expectations of the stakeholders should to be understood. Managing conflicting interest and involving stakeholders in key project decisions and activities are also crucial. All of this forms a part of the stakeholder management process. The Project Manager is expected to possess the ability to identify the needs and influences of the stakeholders to manage them effectively.

4.10.1 Introduction

The Stakeholder Management Strategy for the construction of the New Penal Facility in Jamaica will be identified by the Ministry of National Security and thus certain measures would be put place in order to do proper assessment of its stakeholders, power, influence and interest. This will also be used to analyze the management approach and communication to the Project stakeholders. It will also allow for the identification of the powerful stakeholders, to get input for Project

planning and to garner support for the life of the Project. The use of Stakeholder Management Policy, and that will affect the Project by eliminating the likelihood of competing objectives and increasing the objectives and increasing the resources needed to be completed the Project. It is very important for stakeholders to be identified early in the project, it will allow the Project to be completed with less issues.

4.10.2 Identify Stakeholders

The process of identifying individuals who are impacted by the project is known as Identify Stakeholders Process. The Project Manager will be able to identify the appropriate focus of each stakeholder as an outcome of Identify Stakeholders process. Stakeholders can include the customers, sponsors, employees, management, government, and society as well. These stakeholders have a potential to exert positive or negative influence on the project deliverables. Stakeholder needs are to be identified at an early stage of the project to ensure that all their requirements and voices are considered. The stakeholders can be classified on the basis of their interest in the project, the level of influence on the project outcome and their involvement. For the success of the project, the Project Manager needs to have a relationship that is cordial and extremely success oriented.

Stakeholders Process can receive inputs from:

- Project Charter: Internal and external parties related to the project are identified using the project charter

- Procurement Documents: The parties involved in a procurement contract are key project stakeholders
- Enterprise Environmental Factors: Organizational culture, its structure, governmental regulations, trends, practices or habits of individuals represent enterprise environmental factors
- Organizational Process Assets: Stakeholder registers from previous projects, lessons learned are important inputs for identifying stakeholders

Stakeholder Register Template

Name	Department	Title	Role on Project	Influence	Expectations	Impact (Level of impact /involvement) – low or high?	Stakeholder Category & Action

Chart 10 Stakeholder Register Template (Project Cubicle.com 2020)

4.10.3 Key Stakeholders

A project is successful when it achieves its objectives and meets or exceeds the expectations of the stakeholders. But who are the stakeholders? Stakeholders are individuals who either care about or have a vested interest in your project. They are the people who are actively involved with the work of the project or have something to either gain or lose as a result of the project. When you manage a project to add lanes to a highway, motorists are stakeholders who are positively affected. However, you negatively affect residents who live near the highway during your project (with construction noise) and after your project with far-reaching implications (increased traffic noise and pollution).

Key stakeholders can make or break the success of a project. Even if all the deliverables are met and the objectives are satisfied, if your key stakeholders are not happy, nobody is happy. The Project Sponsor, generally an executive in the organization with the authority to assign resources and enforce decisions regarding the project, is a stakeholder. The customer, subcontractors, suppliers, and sometimes even the government are stakeholders. The Project Manager, project team members, and the managers from other departments in the organization are stakeholders as well. It is important to identify all the stakeholders in your project upfront. Leaving out important stakeholders or their department's function and not discovering the error until well into the project could be a project killer.

First, the number of stakeholders that Project Managers must deal with ensures that they will have a complex job guiding their project through the lifecycle. Problems with any of these members can derail the project.

Second, the diagram shows that Project Managers have to deal with people external to the organization as well as the internal environment, certainly more complex than what a manager in an internal environment faces. For example, suppliers who are late in delivering crucial parts may blow the project schedule. To compound the problem, Project Managers generally have little or no direct control over any of these individuals.

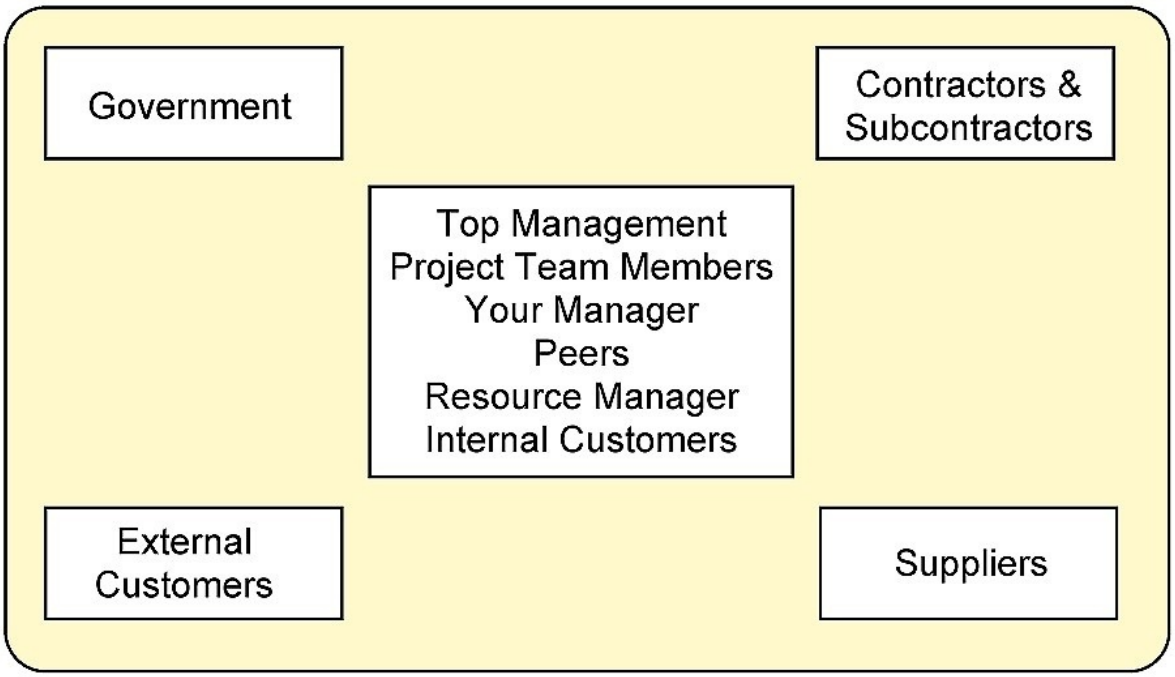


Figure 20. Project stakeholders. In a project, there are both internal and external stakeholders. Internal stakeholders may include top management, project team members, your manager, peers, resource manager, and internal customers. External stakeholders may include external customers, government, contractors and subcontractors, and suppliers. (taken from BC management 2020).

4.10.4 Stakeholder Analysis

A qualitative and quantitative analysis is required to systematically determine the interest of stakeholders throughout the project. The benefits of this analysis are:

- Stakeholder interests can be identified

- Stakeholder expectations can be identified
- Another benefit includes identification of stakeholder relationships that can be leveraged to build partnerships with stakeholders to increase the probability of project success

Steps involved in stakeholder analysis process are:

- Identification of potential stakeholders including their roles, departments, interests, knowledge, expectations, and influence levels.
- Identify and analyze the potential impact each stakeholder could generate
- Classify the stakeholder's basis logical categories of potential impact
- Determine the likely reaction of these stakeholders to respond in various situations
- Plan the approach strategy to enhance their positive support and reduce negative influences

Multiple classification models are used for stakeholder analysis, but not limited to:

Power/Interest grid:

Bifurcation of stakeholders based on their level of authority and their level of concern regarding project outcomes.

Power/Influence grid:

Bifurcation of stakeholders based on their level of authority and their level of involvement in the project

Power/Impact grid:

Bifurcation of stakeholders based on their level of authority and their level of impacting changes on project activities

Salience model:

This model describes categories of stakeholders based on their power, urgency, and legitimacy.

Outputs of Identifying Stakeholders:

Stakeholder register is updated with details such as:

- Stakeholder information
- Includes their name, organizational position, location, role in the project, business phone number, email address, etc
- Stakeholder requirements
- Key expectations, major requirements, involvement in the project etc

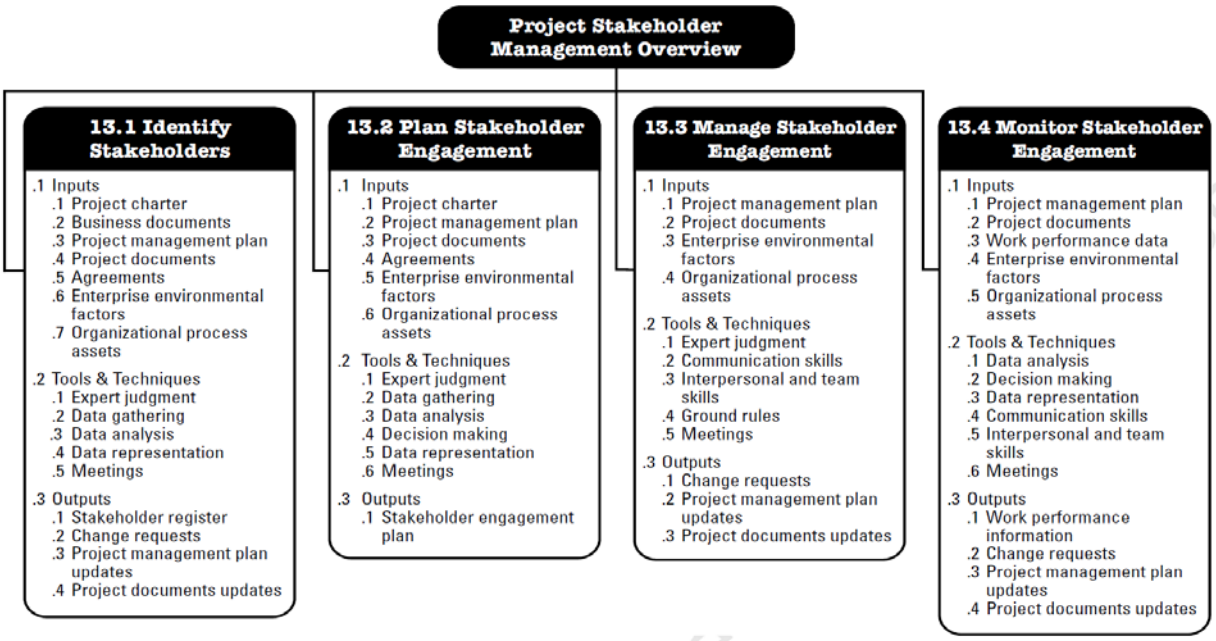


Figure 21 ***PMBOK® Guide*****: Stakeholder Management Planning Processes Overview. Reprinted from** ***A Guide to the Project Management Body of Knowledge*** **(p. 392), Project Management Institute, 2013, Project Management Institute. Copyright 2013 by Project Management Institute, Inc.**

Stakeholder Register

Chart 11 Stakeholder Register for the New Penal Facility in Kingston Jamaica (Source: Lincoln, A. Dennis, August 2020)

Project Name: Building of a New Penal Facility in Jamaica

Prepared by: Lincoln A. Dennis **Project Manager: S. Scott**

Project Sponsor: Department of Correctional Services **Date prepared: August 8, 2020**

ID	Name	Organization	Role	Title	Contact Information	Communication Types	Communication Vehicles	Stake in Project	Influence	Prospective Regarding the Project	Comments
0	CEO	Cement Company	Supplier	Owner	8769221133	Meetings Personal Communication Reports Presentation Announcements	E-Mail Telephone Face to Face	Has high interest in the project and is responsible for the funding of the project. Is most critical throughout enter	High	Positive	Owns 55% of the company
1	Representative	ARC Construction	Key Decision Maker	member	8769934122	Meetings Personal Communication Reports Presentation Announcements	E-Mail Telephone Face to Face	Has high interest in the project and is highly involved in decision making. Is critical throughout the project lifecycle.	High	Postitive	Owns 40% of the company along with other family members
2	Mr. J Brown	Browns Enterprise	Financial Controller	Accountant	jbrownent@yahoo.com	Personal Communication	E-mail	Has high interest in the project and is highly involved with the Owner and Board of Directors. Is critical throughout the project lifecycle.	Med	Positive	Wants to be a member of the Board of Directors and is often in meetings that he should not be a part of. Has been giving advice to the Owner and Board as to how much he

											believes the project should cost which is below market cost.
3	L. A, Johnson	TOK designs	Design	Architect	(876) 354-9076 Tokdesigns @gmail.com	Meetings Personal Communication Reports Presentation Announcements	E-Mail Telephone Face to Face	Has high interest in the project and is responsible for designs. Is critical throughout the duration of the project.	High	Positive	Building design is revolutionary for the country and would bring the architect more business prospects. With such, he is highly involved in the successful completion of this project.
4	K. V. Senior	Mimic Designs	Construction	Contractor	(876) 435-2678 Mimicdsigns @yahoo.com	Meetings Personal Communication Reports Presentation Announcements	E-Mail Telephone Face to Face	Has high interest in the project and has responsibility of managing subcontracts, and construction for entire duration of project.	High	Positive	Same person is also the Designer/ Architect
5	Y. H. Hanson	DD Designs	Project Management	Senior Project Manager	(876) 348-1876	Meetings Personal Communication Reports Presentation Announcements	E-Mail Telephone Face to Face	Has high interest in the project and has responsibility for the management of the building of the convention center. Is critical throughout duration of project.	High	Poitive	Same person is also the Designer/ Architect and Contractor
6	C. A. Baker	Best Designs	Project Management	Office Administration	(876) 490-2921	Meetings Personal Communication Reports Presentatio	E-Mail Telephone Face to Face	Has high interest in the project and has responsibility for assisting in the project management	High-Med	Positive	

					BDesign@gmail.com	n Announcements		reporting, procurement. Works along with Site Superintendent. Is critical through project duration.			
7	N. E. Walcott	Walcotts Designs	Office Administration	Office Assistant	(876) 567-3872 Walcottsdesihn@gmail.com	Meetings Personal Communication Reports Presentation Announcements Team Morale	E-Mail Telephone Face to Face	Has high interest in the project, has responsibility for managing in office communications, taking minutes, relaying messages, etc	Low	Positive	Supporting role
8	O. C. Nelson	Oasis Designs	Construction	Field Superintendent	(876)984-2184 Oasisdesign@yahoo.com	Meetings Personal Communication Reports Presentation Announcements Team Morale	E-Mail Telephone Face to Face	Has high interest in the project, has responsibility of overseeing the foreman, monitors gate and check points. Is in charge of overseeing the day to day running of the project site, hosting site meetings and documenting progress.	High-Med	Positive	
9	Mr. Welch	W Design	Construction	Foreman	(876) 765-7612 WDesidn87@yahoo.com	Meetings Personal Communication Reports Presentation Announcements Team Morale	E-Mail Telephone Face to Face	Has high interest in the project and has responsibility for following technical specifications and industry standards on site. Also manages methods and production.	Med	Positive	
10	Mr. Cunningham	Smart Design	Office Administration	Gofer	(876) 4652-1987	Meetings Personal Communication Announcements Team Morale	Telephone Face to Face	A moderate level of interest in the project and has responsibility for collecting miscellaneous materials from the hardware and lumberyard and minor cleaning.	Low	Neutral	
11	Mr. Larson	L.D Design	Design	Draftsman	(876) 309-1853	Meetings Personal Communication Team Morale	Telephone Face to Face	Has high interest in the project, has the responsibility of working alongside the architect	Low	Positive	

12	Electrical	Subcontractor	Electrical	Electrician	(876) 347-9034 Electricalcompany@gmail.com	Project Announcements Personal Communication Meetings	E-Mail Telephone Face to Face	Has high level of interest in the project and has responsibility as a subcontractor.	Low	Positive	
13	Plumbing	Subcontractor	Plumbing	Plumber	(876) 369-21 Plumbing20@gmail.com	Project Announcements Personal Communication Meetings	E-Mail Telephone Face to Face	Has high level of interest in the project and has responsibility as a subcontractor.	Low	Positive	
14	Fire/Safety	Subcontractor	Fire	Fire/Safety Subcontractor	(876) 387-9052 Firedept@gmail.com	Project Announcements Personal Communication Meetings	E-Mail Telephone Face to Face	Has high level of interest in the project and has responsibility as a subcontractor.	Low	Positive	
15	Roofing	Subcontractor	Roofing	Roofing Subcontarctor	(876) 06-9261 Roofingcompany@gmail.com	Project Announcements Personal Communication Meetings	E-Mail Telephone Face to Face	Has high level of interest in the project and has responsibility as a subcontractor.	Low	Positive	
16	Tiling	Subcontractor	Tiling	Tiling Subcontractor	(876) 367-9187 Tilingcompany@gmail.com	Project Announcements Personal Communication Meetings	E-Mail Telephone Face to Face	Has high level of interest in the project and has responsibility as a subcontractor.	Low	Positive	
17	Pool	Subcontractor	Pool	Pool Subcontract	(876) 376-	Project Announcements Personal Communic	E-Mail Telephone Face to Face	Has high level of interest in the project and has responsibility as a subcontractor.	Low	Positive	

				or	9265 Tilingcompany@gmail.com	ation Meetings					
18	Sound Engineering	Subcontractor	Sound Engineering	Sound Engineering Subcontractor	(876) 356-8719 Soundengineer@gmail.com	Project Announcements Personal Communication Meetings	E-Mail Telephone Face to Face	Has high level of interest in the project and has responsibility as a subcontractor.	Low	Positive	
19	Acoustics	Subcontractor	Acoustics	Acoustics Subcontractor	(876) 327-9187 Acoustics@gmail.com	Project Announcements Personal Communication Meetings	E-Mail Telephone Face to Face	Has high level of interest in the project and has responsibility as a subcontractor.	Low	Positive	
20	Building Lighting	Subcontractor	Building-Lighting	Building Lighting Subcontractor	(876) 372-9274 Building-lighting@gmail.com	Project Announcements Personal Communication Meetings	E-Mail Telephone Face to Face	Has high level of interest in the project and has responsibility as a subcontractor.	Low	Positive	
21	Stage Lighting	Subcontractor	Stage Lighting	Stage Lighting Subcontractor	(876) 348-9283 Stagelight@gmail.com	Project Announcements Personal Communication Meetings	E-Mail Telephone Face to Face	Has high level of interest in the project and has responsibility as a subcontractor.	Low	Positive	
22	Faux Design & Installation	Subcontractor	Faux Specialist	Faux Design & Installation	(876) 387-9862 Fauxd	Project Announcements Personal Communication Meetings	E-Mail Telephone Face to Face	Has high level of interest in the project and has responsibility as a subcontractor.	Low	Positive	

					esign @gmail.com						
23	Windows and Doors	Subcontractor	Finishings	Windows and Doors Subcontractor	Windowsanddoors @gmail.com	Project Announcements Personal Communication Meetings	E-Mail Telephone Face to Face	Has a high interest in the project as a supplier and is most critical during planning and execution	Low	Positive	
24	Interior Designer	Subcontractor	Interior Design	Windows and Doors Subcontractor	Interiordesign @gmail.com	Project Announcements Personal Communication Meetings	E-Mail Telephone Face to Face	Has a high interest in the project as a supplier and is most critical during planning and execution	Low	Positive	
25	Site Workers	Various	Various	Various	Responsibility of employer (subcontractor)	Personal Communication Meeting	Face to Face	Has a high interest in the project as a supplier and is most critical during planning and execution	Low	Positive	
26	Representative	Forest Products	All Purpose Building Supplies	Supplier	(876) 387-8374 Forestproducts@gmail.com	Personal Communication Meetings Written	E-Mail Telephone Web Conference	Has a high interest in the project as a supplier and is most critical during planning and execution	Low - Med	Positive	
27	Representative	AlHomer	All Purpose Building Supplies	Supplier	(876) 478-2937 Alhomer@gmail.com	Personal Communication Meetings Written	E-Mail Telephone Web Conference	Has a high interest in the project as a supplier and is most critical during planning and execution	Low-Med	Positive	
28	Representative	Foreign Building Supply	All Purpose Building Supplies	Supplier	(876) 354-7326 FBSupply@gmail.com	Personal Communication Meetings Written	E-Mail Telephone Web Conference	Has a high interest in the project as a supplier and is most critical during planning and execution	Low-Med	Positive	

29	Representative	JA Pacific	Supplies Proprietary Items	Supplier	(876) 378-8262 Pacificja@gmail.com	Personal Communication Meetings Written	E-Mail Telephone Web Conference	Has a high interest in the project as a supplier and is most critical during planning and execution	Low-Med	Positive	
30	Representative	Allied Steel	Steel /Super Structure	Supplier	(876) 392-2836 Alliedsteel@gmail.com	Personal Communication Meetings Written	E-Mail Telephone Web Conference	Has a high interest in the project as a supplier and is most critical during planning and execution	Low-Med	Positive	
31	Quantity Surveyor	Sub Consultant	Design	Quantity Surveyor	(876) 398-4783 Quantitysurveyor@gmail.com	Personal Communication Meetings Project Announcements	E-Mail Telephone Face to Face	Has a high interest in the project as a Consultant and is most critical during planning and execution	Low	Positive	
32	Land Surveyor	Sub Consultant	Topography	Land Surveyor	(876) 379-2837 Topography@gmail.com	Personal Communication Meetings Project Announcements	E-Mail Telephone Face to Face	Has a high interest in the project as a Consultant and is most critical during planning and execution	Low	Positive	
33	Electrical Engineer	Sub Consultant	Design	Electrical Engineer	(876) 309-7367 Electricalengineer@gmail.com	Personal Communication Meetings Project Announcements	E-Mail Telephone Face to Face	Has a high interest in the project as a Consultant and is most critical during planning and execution	Low	Positive	
34	Structural Engineer	Sub Consultant	Design	Structural Engin	(876) 484-	Personal Communication	E-Mail Telephone	Has a high interest in the project as a	Low	Positive	

				eer	8363 Structuralengineer@gmail.com	Meetings Project Announcements	Face to Face	Consultant and is most critical during planning and execution			
35	Mechanical Engineer	Sub Consultant	Design	Mechanical Engineer	(876) 379-3736 Mechanicalengineer34@gmail.com	Personal Communication Meetings Project Announcements	E-Mail Telephone Face to Face	Has a high interest in the project as a Consultant and is most critical during planning and execution	Low	Positive	
36	Plumbing Engineer	Sub Consultant	Design	Plumbing Engineer	(876) 374-2836 Plumbingengineer@gmail.com	Personal Communication Meetings Project Announcements	E-Mail Telephone Face to Face	Has a high interest in the project as a Consultant and is most critical during planning and execution	Low	Positive	
37	Geotechnical Engineer	Sub Consultant	Design	Geotechnical Engineer	(876) 364-2337 Geotechengineer@gmail.com	Personal Communication Meetings Project Announcements	E-Mail Telephone Face to Face	Has a high interest in the project as a Consultant and is most critical during planning and execution	Low	Positive	
38	Hydrologist	Sub Consultant	Drainage and Dewater Site	Hydrologist	(876) 387-3746 Hydrologist56@gmail.com	Personal Communication Meetings Project Announcements	E-Mail Telephone Face to Face	Has a high interest in the project as a Consultant and is most critical during planning and execution	Low	Positive	

39	Environmental Engineer	Sub Consultant	Impact Assessment	Environmental Engineer	(876) 374-7871 Environengineer34@gmail.com	Personal Communication Meetings Project Announcements	E-Mail Telephone Face to Face	Has a high interest in the project as a Consultant and is most critical during planning and execution	Low	Positive	
40	Community Members	None	Neighbours	N/A	None	Project Announcements	Written	Has a low interest in the project and is most critical during project execution.	Low	Negative	
41	Ministry of Works Ministry of the Environment Ministry of Health	Government	Regulations	Regulations	(876) 673-2298 (876)627-6367 (876) 672-2257	Personal Communication Meetings	Face-to-Face E-Mail Written	Has a low interest in the project and is most critical during project execution and closure.	Med	Neutral	
42	Environmental Agencies	Quasi Organization	NEPA	Environmental Manager	Pubed@nepa.gov.jm	Personal Communication Meetings	Telephone Face-to-Face E-Mail Written	Has low interest in the project. Is interested in impact assessments.	Low	Neutral	

CONCLUSIONS

1. The Project Management Plan was developed using the 6th edition of the PMBOK and information from the Department of Correctional Services in order to do the Project plan for the New Penal Facility.

2. The Project charter was the first element of the Project management Plan, it was created to deliver specific objective number one. Using a

template as a guide to capture, to capture and organize business needs and objectives, project descriptions, preliminary scope statement, initial scope risk, project deliverables, summary milestone, and project budget, the Project Charter also include identification of the Project Manager and the sponsor authorization for the project to commence.

3. To define and specify the scope of the project, the Scope Management Plan, the deliverable created for specific objective number two, along with the WBS, WBS dictionary, Requirements Management Plan, Requirements Document, and Requirements Traceability Matrix, were developed from a table or template, capturing the information gathered during meetings with project stakeholders and from project document reviews.

4. The Schedule Management Plan, the output from the Specific Objectives number three, was created along with Activity list, Resource Assignments table and projects Gantt Chart, in order to adequately identify the orchestrate each project activity to ensure the projects completion within the time constraints.

5. To create the Cost management Plan, the output from the specific Objectives number four, a template in Microsoft Excel was used to adequately develop the project budget, and a template was used to

capture the Cost Management Plan which will guide the development of Cost Management performance measures and documents such as Cost Baseline and the Project Funding Requirements.

6. To develop the Quality Management Plan, the output from specific objective number five, a template was used to identify the project's quality management approach, quality requirements/standards, quality assurance, quality control, and the quality control measures that will be used throughout the project, in order to ensure that quality was built into the project's processes and product.

7. To address specific objective number six, the Human Resource Management Plan, all human resources required to complete the project were identified and classified in a comprehensive list based on their roles and responsibilities. In addition, the project organization chart, the staffing management approach, and details identifying how the human resources will be managed throughout the project are detailed in the plan.

8. To fulfil specific objective number seven, the Project Communications Plan, a template was used along with a list of all stakeholders and their roles and responsibilities. In addition, a Communications Matrix was developed, detailing all project stakeholders (names/titles, information, format) throughout the project lifecycle, and ensuring that

the information disseminated during the project is done so at the right time, in the right format, to the right people and by the right person.

9. The deliverable for specific objective number eight, the Risk Management Plan, was created using a template. Additionally, to capture and classify project risks, so that effective risk responses could be planned, a Risk Register was developed along with a qualitative risk analysis. Quantitative Risk Analysis was not performed during this process as the tools were not available for use.

10. The Procurement Management Plan deliverable, created for specific objective nine, was developed using a template to identify the project's procurement management approach, types of contracts used and contract approval process. The plan is comprehensive in that it also details procurement risks and constraints, and how these issues, along with vendors, will be managed effectively.

11. The Stakeholder Management Plan, developed for specific objective ten, was also developed using a template. In addition to the plan, which details how stakeholders will be identified, classified, managed and engaged throughout the project, the Stakeholder Register and Stakeholder Analysis and Level of Engagement were also developed to provide more information for effective stakeholder engagement.

12. As the project management team was limited in its human resource capacity, the writer, in her role as Assistant Project Manager, developed all subsidiary plans using templates, spreadsheets, tables and charts, conducting meetings with the key contact person - the Lead Project Manager, and reviewing meeting minutes and other project documents.

13. Although construction management has been used as a guide at for the New Penal Facility, 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 building of the New Penal Facility.

RECOMMENDATIONS

1. DCS should employ the necessary skills in order for this project and to put management practices in place so that the project will be successful.
2. DCS needs to develop standards so that the Project planning initiation and documents prior to the execution of the project.
3. All sections of the project manage by the DCS should be headed by a team leader using developed standards project planning documents tailored for the project.

4. DCS should invest in the tools required to complete quantitative risk analyses for all projects.

5. DCS should use a Project Management Guide or Framework to direct the development of all project management tools.

6. DCS should use a Project Management Guide or Framework to direct the development of all project management tools.

7. DCS 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.

8. DCS project management team should utilize a document management and storage system, to organize and store all documents created for future use and review.

9. The Senior manager of DCS should ensure that the project management team be hired and in place prior to the execution of any project and ensure that this team conduct all project planning related activities in order to enhance the proper management of the project during its lifecycle.

10. The project management team of DCS should consider the use of the planning process and templates created during the development of the Project Management Plan for the Building of the New Penal Facility, as a basis for implementing a methodology to be used by the company for future projects of similar relevance.

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Appendix 1: FGP Charter

PROJECT CHARTER Formalizes the project start and confers the Project Manager with the authority to assign company resources to the project activities. Benefits: it provides a clear start and well defined project boundaries.	
Date	Project Name:
Febuary, 2020	Project Management Plan for a new Penal Facility in Jamaica
Knowledge Areas / Processes	Applicacion Area (Sector / Activity)
Integration Management, Scope management, Time Management, Cost Management, Quality Management, Human Resource Management, Communication Management	Construction, Finance, Information Technology, CSR, Communication Mamagement and Human Resource Management
Start date	Finish date
February, 2020	October 1, 2020
Project Objectives (general and specific)	
General objective: To create a Project Management Plan for the building of a modern Penal Facility Specific objectives: 1. To create a project charter that formally authorizes the project and provides the Project Manager with the authority to apply organizational resources to the project in order to produce the project management plan. 2. To create a scope management plan to ensures that all works required are included to successfully complete the project. 3. To create a schedule management plan to support the development and management of a project schedule that ensures 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 that ensures the project is completed within the budget constraints.

5. To develop a quality management plan to identify the quality requirements for the project to ensure the results meet expectations for approval within the time, cost and scope constraints.

6. To create a human resource management plan to ensure that all human resources are identified and managed effectively to complete the project within time, cost and scope constraints.

7. To develop a communication management plan to ensure the timely and effective 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 and develop plans to minimize the likelihood of the risks.

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

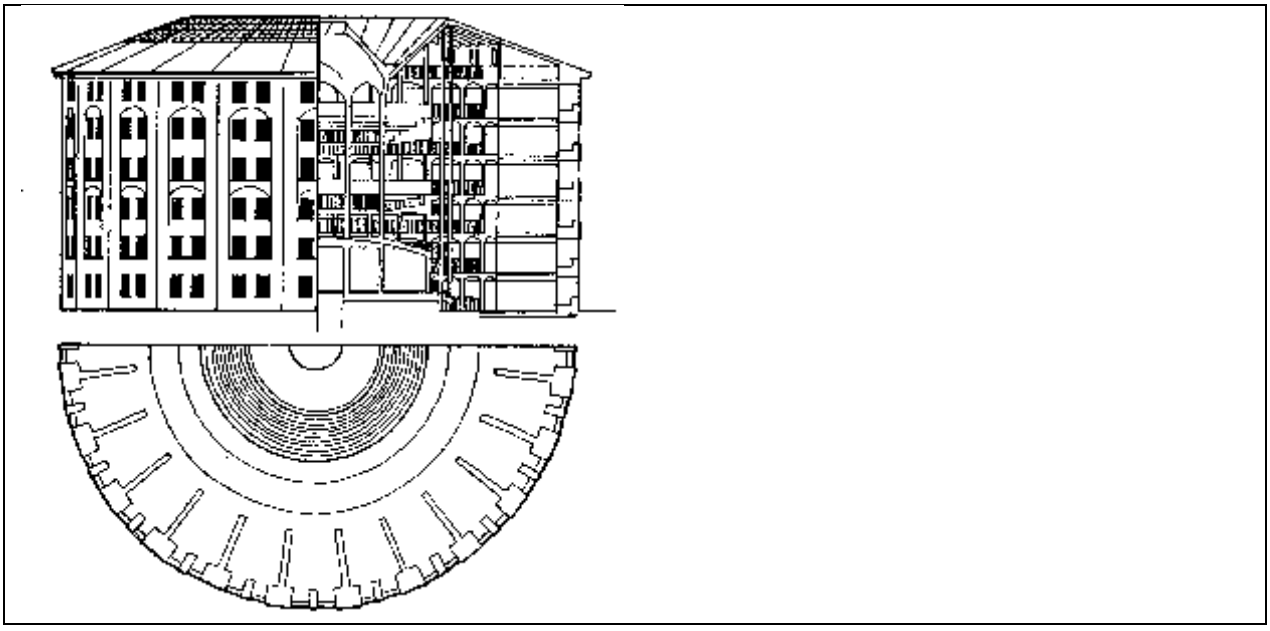
10. To develop a stakeholder management plan to identify and support all the project stakeholders to ensure effective stakeholder engagement.

Project purpose or justification (merit and expected results)

The primary purpose of this document is to facilitate a human rights-based approach in the development of prison infrastructure. Rooted in international legal norms and standards, especially the revised Standard Minimum Rules for this project provides technical guidance and identifies minimum infrastructure recommendations to ensure that prisons respect the human rights and dignity of detained individuals and provide safe, humane and rehabilitative administration of prisons.In short, the guidance aims to help fill the gap between well-established international expectations for the humane and dignified treatment of prisoners and the relative lack of information on

how to build a compliant prison in difficult circumstances. The technical and operational guidance provided will be most useful to individuals involved in the early stages of planning a prison infrastructure project. By incorporating the various considerations this manual calls to attention, and using the accompanying templates and tools to establish physical and service requirements and a provisional budget, development teams will be able to develop a sufficiently detailed design brief for the more specialized stages of prison design. As shown in the design brief constitutes the initial stage in the lifecycle of a prison facility and is essential in providing a solid foundation for a successful infrastructure outcome. More generally, the project is intended to provide instructive and practical guidance to a broad range of Individuals involved in the planning and design of prisons, including architects, planners, operational and Strategic prison management, government agencies, monitoring bodies, and other personnel involved in the construction or refurbishment of prisons. Readers should note that the project provided is comprehensive in scope but general in its depth: the involvement of design professionals such as civil, structural, and services engineers, architects, and staff experienced in the operation of prisons is indispensable at an early stage of planning. In most operational contexts where this manual is likely to be used, additional consideration of local circumstances will also be necessary.

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



Assumptions

One needs to find out if the if the finances are available and if the stakeholders will buy into the plan. Building a prison might not be an easy sell to the population at large because many believes that money must not be spread on prisoners and therefore they should be discarded from the society. One need to find out is there a a population that will use this new prison because as the paradigm shift worldwide, people are more looking at community based sentencing for low risk offenders. One need to also look to see if the resources are available and it will see the project through to the end. Profitability is one aspect one might look at. Is this a profitable project and can prison be profitable, it can be profitable in two sense' 1. Through rehabilitation one can do small business in the prison so that both the government and prisoners benefit. 2. If the society is protect from criminal there can be other profit to gain from this.

Constraints

Might be related to time, cost, scope, quality, resources or other.) Factors that can affect this project are; there can be many unforeseen circumstances that can come up which was not planned for and this can affect the deadline, if the deadline is affect then the budget will be affected and this will lead to cost overrun. The stakeholders might have issue with aspect of the project and this will affect the implementation and the deadline which cannot be met. Members of the project might miss important deadlines and thus this will affect the entire project.

Preliminary risks

If the stakeholder do not buy into this project, it will not go through, this might cause one to have the same issues that one continue to have un our penal system. This will impact the society in a lot of ways because neither the inmates nor the society will be protected.

Budget

Consultant	$1,050,000			
Construction and sub-contractors	$2,592, 000			
Subcontracts	$1,746,000			
Project Management	$2,146,000			
Site Management	$140,000			
Pemits	$40,000			
Contingency	$699, 4000			
Tax	$312, 000			
Total	$15,000,000			

Milestones and dates

Milestone	Start date	End date
Project Charter	March 01, 2020	March 28, 2020
Project Schedule Management Plan	March 30, 2020	May 30, 2020
Cost Management Plan	June 01, 2020	September 8, 2020

Relevant historical information

JAMAICA could well have privately operating prisons soon. Jamaica Observer February 17, 2013

Minister of Justice Senator Mark Golding told the Senate Friday that the Government is looking at the potential of a public/private venture to fill the need for a new, modern facility in the Kingston Metropolitan Region that would ease the burden on the Tower Street Adult Correctional Centre (TSACC) in Kingston, and the St Catherine Adult Correctional (SCACC) in Spanish Town.

"I happen to know that the Minister of National Security (MNS) is looking at the potential for a public/private partnership, spearheaded through the Development Bank of Jamaica (DBJ), to find private investors and the funding necessary to build a modern facility," he said.

Golding, who was responding to questions about poor conditions in the island's correctional centres posed by Opposition senators Tom Tavares Finson and Dr Christopher Tufton, said that this was necessary because of the overcrowding and poor infrastructure of the aged institutions.

Tavares Finson had complained about the poor conditions in which the inmates were detained and the warders/correctional officers worked.

"The remand area at the front of General Penitentiary (the old name for the TSACC), residents of Kingston and St Andrew wouldn't keep their dogs those conditions in which young men are held," Senator Tavares Finson said.

Dr Tufton recommended that the Government establish a committee to examine the possibility of private prisons, noting that hundreds of such facilities were now operating effectively and profitably in the United States and the United Kingston.

He cautioned, however, that this might be seen as being controversial and pointed to other projects which have been denounced by the country's church leaders as allowing the private sector to make a profit from crime.

"The substantive issue is to ensure that Jamaicans and others who are incarcerated are given humane treatment while behind bars," Tufton insisted.

He suggested that the minister appoint a committee to look at the various models for the private/public partnership. But Golding said that the government was already taking

that course. "We are pursuing it even in the context of the very difficult economic environment in which we find ourselves," he said. Leader of Opposition Business in the Senate Senator Arthur Williams told the Jamaica Observer after the sitting that the idea was not new and even preceded the 2007/11 JLP administration in which he was state minister of national security in charge of the Department of Correctional Services (DSC). Williams said that the JLP toyed with the idea of providing the land, then having the private sector build the prison on it and operate it, with the Government paying for the keep of each of the inmate. "But the cost was too much to build the prison and we couldn't get the private sector support we needed," Williams admitted. Last November, permanent secretary in the Ministry of National Security Annmarie Barnes told Parliament's Public Administration and Appropriations Committee (PAAC) that it would cost the Government some $25 billion to build a new 5,000-capacity facility.

Barnes said then that the ministry had been looking at a public/private sector partnership in the construction and management of prisons. The DCS in a submission to the PAAC, outlined some of the challenges it is facing included major structural defects at the Tower Street and St Catherine prisons and attendant safety and security risks; overcrowding at both facilities and poor infrastructure. The DCS suggested improvements including the construction of a new adult facility and the modernization of existing juvenile and adult facilities. Also on the list of recommendations is a new staff structure to improve the department's capacity to carry out its mandate and adequate budgetary allocations to address the training of staff, given the implications of the modernization process. However, like most other government departments, the main challenge still facing the department is where to find the funding.

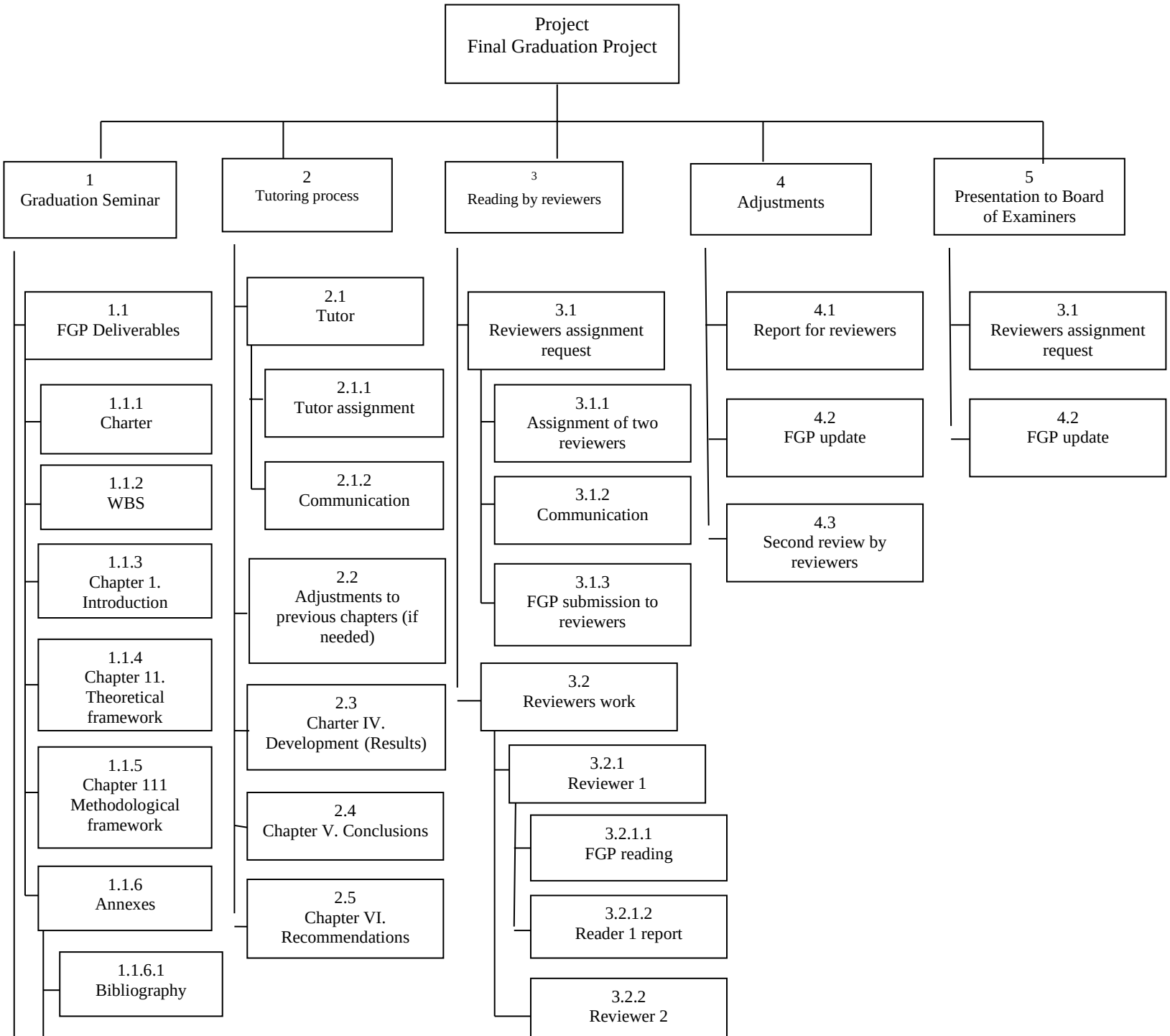
Stakeholders

Direct stakeholders: Prisoners, staff, government members,

Indirect stakeholders: family members, Police Officers, Probation Officers, Parole Officers, Court Officers

Project Manager: **Lincoln A. Dennis**	**Signature:**
Authorized by:	**Signature:**

APPENDICES WBS

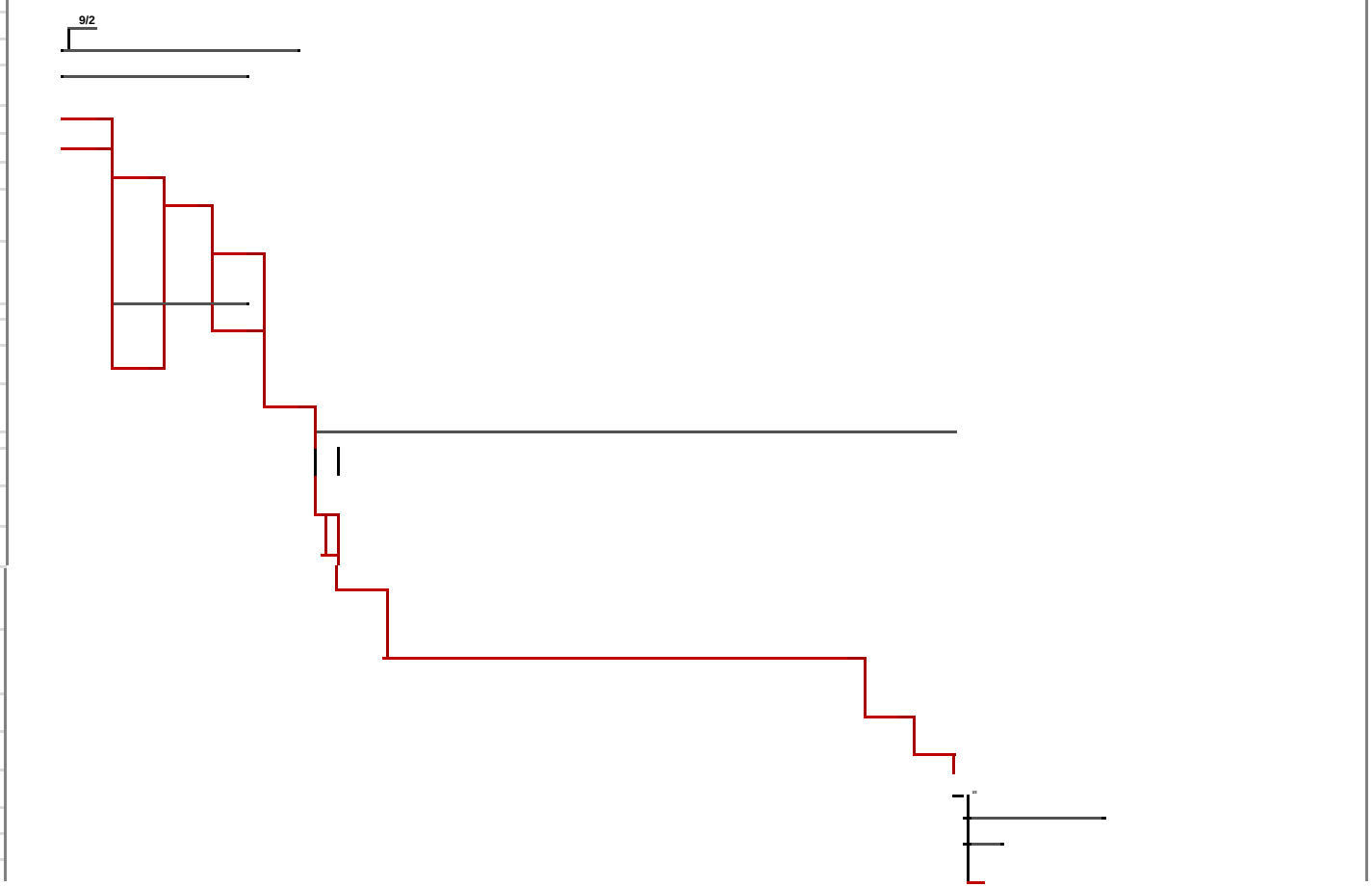



1.1.6.2
Schedule
1.2
Graduation Seminar
Approval
3.2.2.1
FGP reading
3.2.2.2
Reader 2 report

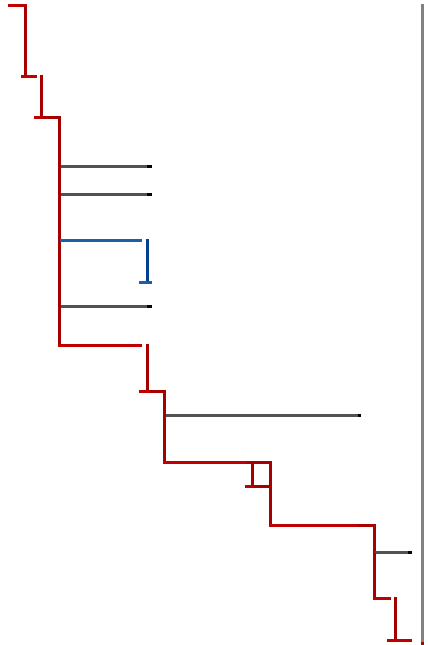
Generic Schedule

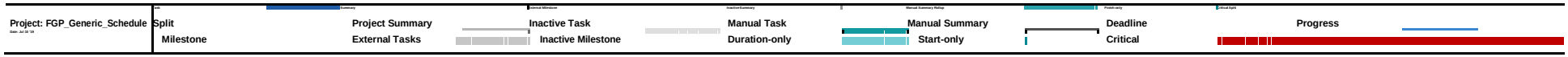
FINAL GRADUATION PROJECT DEVELOPMENT SCHEDULE

ID	Task Mode	Task Name	Duration	Start	Finish
1		Final Graduation Project	30 days	Jan 27 '20	Feb 28 '20
2		FGP Start	0 days	Feb 24,20	Feb 24, 20
3		1,Graduation Seminar	25 days	Feb 24, 2	Mar 21, 20
4		1.1,FGP Deliverables	20 days	Feb, 24,20	Mar16,20
5		1.1.1,Charter	5 days	Feb 24, 20	Feb 28, 20
6		1.1.2,WBS	5 days	Feb 24,20	Feb 28, 20
7		1.1.3,Chapter I. Introduction	5 days	Mar 1, 2020	Mar 5, 20
8		1.1.4,Chapter II. Theoretical framework	5 days	Mar 8, 20	Mar 13, 20
9		1.1.5,Chapter III. Methodological framework	5 days	Mar, 14, 20	Mar 19, 20
10		1.1.6,Annexes	6 days	Sep 9 '19	Sep 27 '19
11		1.1.6.1,Bibliography	5 days	Mar 14, 20	Mar 19, 20
12		1.1.6.2,Schedule	5 days	Mar 8, 20	Mar 13, 20
13		1.2,Graduation Seminar approv	5 days	Mar 20, 20	Mar 25, 20
14		2,Tutoring process	6 days	Jul 3 '19	Jul 3 '20
15		2.1,Tutor	3 days	May 18, 20	May 21, 20
16		2.1.1,Tutor assigment	1 day	May 18, 20	May 18, 20
17		2.1.2,Communication	2 days	May 19, 20	May 20,20
18		2.2,Adjustments of previous chapters (If needed)	5 days	May 21, 20	May 26, 20
19		2.3,Charter IV. Development (Results)	47 days	May, 27,20	July 11, 20
20		2.4,Chapter V. Conclusions	5 days	May 27, 20	June 2, 20
21		2.5,Chapter VI. Recommendatio	5 days	June 3, 20	June 8, 20
22		Tutor approval	0 days	June 9 '20	Jun 9 '20
23		3,Reading by reviewers	15 days	Jun 9 '20	Jun 24 '20
24		3.1,Reviewers assigment reque	5 days	Jun 9 '20	Jun 14 '20
25		3.1.1,Assigment of two	2 days	Jun 15 '20	Jun 16, '20



		reviewers			
26		3.1.2,Communication	2 days	Jun 16 '20	Jun 17 '20
27		3.1.3,FGP submission to reviewers	1 day	Jun 18 '20	Jun 18 '20
28		3.2,Reviewers work	0 days	Jun 13 '20	Jun 24 '20
29		3.2.1,Reviewer	0 days	Jun 13 '20	Jun 24 '20
30		3.2.1.1,FGP reading	9 days	Jun 19 '20	Jun 27 '20
31		3.2.1.2,Reader 1 report	1 day	Jun 28 '20	Jun 28 '20
32		3.2.2,Reviewer	0 days	Jun 13 '20	Jun 24 '20
33		3.2.2.1,FGP reading	9 days	Jun 28 '20	Jul 8 '20
34		3.2.2.2,Reader 2 report	1 day	Jul 9 '20	Jul 9 '20
35		4,Adjustments	0 days	Jul 27 '20	Jul 31 '20
36		4.1,Report for reviewers	9 days	July 10 '20	July 19 '20
37		4.2,FGP update	1 day	Jul 20 '20	July 20 '20
38		4.3,Second review by reviewers	10 days	July 20 '20	July 30 '20
39		5,Presentation to Board of Exam	days	Jul 24 '20	Jul 28 '20
40		5.1,Final review by board	2 days	Aug1 20	Aug 2 '20
41		5.2,FGP grade report	3 days	Aug 3 '20	Aug 5 '20
42		FGP End	0 days	Aug 6 '20	Aug '20





Appendix 4: Other relevant information