UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

FINAL GRADUATION PROJECT NAME (TOPIC)

A PROJECT MANAGEMENT PLAN TO DESIGN AND CONSTRUCT AN AT RISKYOUTH DEVELOPMENT CENTER IN BELIZE (CITY)

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DEDICATION

This work is dedicated to my two children, Jena and Jayci Castillo who gave up most of their time for me to obtain my degree. Also to the rest of my family, and close friends who in their own individual unique ways helped me get to this point of my life.

ACKNOWLEDGMENTS

Sincere thanks to my tutor, Luis Diego Arguello, for his ongoing assistance and for ensuring that my thesis was carried out correctly, as well as the professor body, to whom I express my gratitude for the learning possibilities afforded during my educational path.

My completion of this project could not have been accomplished without the support of my family, and close friends who offered words of encouragement. I will also like to recognize Ms. Amieka Myers who assisted in the philology review of this study; your support hasn't gone unnoticed.

Finally, I would like to thank God for giving me the knowledge and courage to complete this assignment. It would have not have been possible without Him.

ABSTRACT

The document aims to develop a Project Management Plan for the Design and Construction of Centralize Youth Development Centre for the at risk youth population in Belize City. Currently there is no centralize or all inclusive facility to accommodate youths mainly the at risk youths. Therefore, the construction of the facility will integrate programs to support social, emotional, cognitive, and academic development, promote physical health, and provide a safe and supportive environment whist reducing risky behaviors, and reducing the crime and violence rate in the country.

The final product of this project consists of a document with a project management plan for the facility. This plan is made up of the final deliverables of the project that correspond to the subsidiary management plans: scope, schedule, costs, quality, resources, communications, risks, procurements, and stakeholder management plans. Each subsidiary plan will contain the processes, procedures and tools necessary to manage the project in a structured and appropriate way. To carry out this development, three research methodologies are utilized; the analytical, descriptive and quantitative method, and the guide provided by the Project Management Institute.

As a result of this project, it is evident that there is a need for the construction of an all-inclusive youth development center in Belize City since majority of the at risk youth population is from the city where crime and violence are rampant. Therefore, the development of this project is important and is being recommended to carry out the project in accordance with the initial decision criteria, both of scope and of the other processes involved in a project, in order to complete all the stages, for efficiency and sustainability.

It is also recommended that the Project Management Plan be shared with all stakeholders before the project begins, particularly architects and building engineers, for careful attention to the system design from a sustainability perspective for resource allocation, as this would allow consensus to agree on a smooth transition to the successful implementation of the project plan.

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ABBREVIATIONS AND ACRONYMS

Acronym	Meaning
CBA	Central Building Authority
DYS	Department of Youth Services
FGP	Final Graduation Project
GOB	Government of Belize
MYS&T	Ministry of Youth, Sports & Transport
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
PM	Project Manager
PMP	Project Management Plan
QA	Quality Assurance
QC	Quality Control
RFI	Request for Information
RFP	Request for Proposal
RFQ	Request for Quotation
RBS	Risk Breakdown Structure
SIF	Social Investment Fund
WBS	Work Breakdown Structure

EXECUTIVE SUMMARY

The Department of Youth Services in Belize under the Ministry of Youth, Sports and Transportation (DYS) has been creating opportunities by supporting and fostering development of youths in Belize. The Department seeks to sharpen its focus, deepen its impact, and clarify its values and practices so that it is best prepared to fulfil its mission and make a positive impact for young people. The department's overarching approach organizes all its practices and staff efforts towards the outcomes the department seeks for youth which include: information technology, arts and entrepreneur and skills building, to name a few, increasing educational development in areas such as numeracy and literacy, ensure there are safe spaces, access to housing, systems of support, financial stability, and wellness.

The general objective of the Final Graduation Project was to develop a Project Management Plan for the design and construction of a Youth Development Centre for the young at- risk population in Belize City, Belize. The specific objectives were to develop a Project Charter, Scope Management plan Communication Management Plan, Resource Management Plan, a Procurement Management, a Stakeholder's Management Plan, Schedule Management Plan, a cost Management p Plan , Quality Management Plan and Risk Management.

The methodology used for the research was analytical, descriptive, and quantitative. The main sources used to gather information included A Guide to the Project Management Body of Knowledge (PMBOK® Guide) sixth and seventh edition followed by a combination of websites, journal articles and data to produce the supplementary plans used to develop the Project Management Plan for the at -risk youth development center.

The Government of Belize has built its road map for sustainability, and this must be considered when constructing to meet the sustainable development goal, climate change. Architects and civil consultants or Building Engineers are key stakeholders for the fruition of the building and all play a significant role in designing an energy efficient building. Incorporating sustainability in building and design will positively yield efficiency, impact people and the planet.

It was concluded that the Project Knowledge Areas are vital for the design and construction of any sustainable project requiring project funds. The Project Charter provided a Statement of the Scope for the project. A Scope Management plan was also developed to ensure that the project is executed as per smart, budgeted, and time requirements. The Communication Plan represented a guide to disseminate the proper information in timely manner or as requested. The Resource Management Plan was created to assign expertise to different work areas or packages, and to track efficiency. The Procurement Management Plan was developed to issue contractual works to vendors to that are in line with the project requirements whilst procuring sustainable goods and services. The Stakeholder's Management Plan was created to identify stakeholders and effectively engage them throughout the project life cycle based on their level of interest and impact to the project. The Schedule Management Plan prioritized task based on importance and

urgency and to track work packages. The Cost Management Plan was created to assist in controlling cost, spending and remaining in the said budget. The Risk Management Plan was developed to identify potential low, medium, and high risk factors that may harm the progress of the project, and address responses to those risks. Lastly, the Quality Management Plan was designed to set policies, criteria, and procedural expectations.

Recommendation is being made for the creation of a Project Management Office at the Department of Youth Services for extensive research and complete project management processes to be conducted for the implementation, monitoring and evaluation of feasibility studies and construction projects. It is also recommended that all Management Plan as stated above are utilized since they offer a realm of knowledge every project manager should be acquainted to systemize and prioritize project management processes, resulting in successful project execution. Most importantly, the creation of a Project Charter and Scope Management Plan.

1. INTRODUCTION

1.1. Background

The paper introduces a Project Management Plan (PMP) for the Design and Construction of Youth Development Center for the young at- risk population of Belize City for the Department of Youth Services centrally located in Belize City, under the Ministry of Youth, Sports & Transport (MYS&T) in Belize. The Project Management Plan will integrate the project knowledge areas which helps to systemize and prioritize project management processes and phases to result in a successful project execution. The Department of Youth Services has been instrumental in creating opportunities, supporting and fostering development of youths in Belize, and making a positive impact for young people.

It is in this regard, that the need for an all-inclusive Youth Development Center is imperative as it will value everyone's uniqueness and the diversity they bring. The goal is that every young person feels that their needs are being met. The building will be constructed on a ten acre plot of land and will be able to house at least one hundred young person in the various areas of interest such as music, tutoring, dance, sports, and life skills etc. Hence will also be designed to integrate physical and digital infrastructures to provide optimal occupancy services in a reliable, cost effective, and sustainable manner, and is aimed at promoting resource conservation, including energy efficiency, renewable energy, and water conservation features.

Positive youth development programs strengthen young people's sense of identity, belief in the future, self-regulation, and self-efficacy, as well as their social, emotional, cognitive, and behavioral competence. Development programs involving youth are more effective and aim to reduce the crime and violence rate in the country.

1.2. Statement of the problem

The Youth Need Assessment Survey 2021, revealed that young persons were looking for a safe place, somewhere they can go for a change of mood, environment, acquire and enhance their skills. Research and reports show that over the last decade (2000-2011), much of the violent crimes occurring in Belize City were attributed to drug related gang violence, and the common factors leading to youth involvement in gangs are poverty, the availability of drugs, and the lack of sense of belonging to the school, the community, the family or a job.

The Design and Construction of the facility is in an effort to assure central government that the project will provide many benefits to young persons of the country as is seeks to promote the rehabilitation and reintegration of youth in conflict and also focus on producing productive young men and women in Belize.

1.3. Purpose

The purpose of this study is to develop a Project Management Plan for the Department of Youth Services that will utilize the Project Management Institute's (PMI) guide to effectively create a Project Management Plan that integrates all knowledge areas to effectively carry out project management activities so that the building can be completed within a reasonable time frame, with desirable quality and within budget. The building will satisfy all safety, environment and building standards, and be utilized by at risk youth and other young person's seeking a safe place. It is in this regard; the Project Planning Unit for the Department of Youth Services will produce the Project Management plan for the Social Investment Fund of Belize.

1.4. General objective

To develop a Project Management Plan for the design and construction of a youth development center that will integrate the knowledge areas of the Project Management Institute to optimize efficiency and sustainability.

1.5. Specific objectives

1. To develop a Project Charter that will provide project managers with written authority to execute the project with its scope.
2. To design a Scope Management Plan to ensure that the project is executed as per smart, budget, and time requirements.
3. To formulate a Communication Management Plan that will be used as a guide to disseminate the proper information in timely manner or as requested.
4. To design a Resource Management Plan to assign expertise to different work areas or packages and to track efficiency.
5. To develop a Procurement Management Plan to issue contractual works to vendors that are in line with the project requirements whilst procuring sustainable goods and services.
6. To create a Stakeholder's Management Plan to identify stakeholders and effectively engage them throughout the project life cycle based on their level of interest and impact to the project.
7. To generate a Schedule Management Plan to prioritize task based on importance and urgency and track work packages.

8. To create a Cost Management Plan to ensure that works, and the allocation of resources are within budget.
9. To develop a Risk Management Plan to identify potential low, medium, and high risk instances whilst addressing responses to those risks.
10. To develop a Quality Management Plan to meet policies, criteria, and procedural expectations when constructing a smart sustainable building.

2. THEORETICAL FRAMEWORK

The theoretical framework for the design and construction of the youth development center presents and describes the concept or rather the written theory for the larger context of the study. It provides a complete overview and understanding for the implementation of the project, frameworks, and perception of the Department of Youth Services.

2.1 Company/Enterprise framework

A business framework is a system of rules that are used to govern a process or decisions. They help ensure that the output of decisions or processes is consistent, of a high standard, and aligned with an organization's principles, values, and goals. (Llewellyn, August, 2022)

2.1.1 Company/Enterprise background

Belize is located on the north-eastern coast of Central America and is bordered on the north by Mexico, to the south and west by Guatemala, and to the east by the Caribbean Sea. Like many developing countries, a critical factor to economic development and poverty reduction is increased access to education and training. In Belize unemployment, crimes, illiteracy, and other social ills continue to be a prevailing issue. According to the Belize Population and Housing Census 2021 executed by the Statistical Institute of Belize; Belize is comprised of six districts with a total population of 419,199.

The categorization of young person from 14-29 made by Belize Population and Housing Census, 2021 revealed that this age group makes up 70% of Belize's population.

The Department of Youth Services (DYS) initially fell under the Ministerial portfolio of Ministry of Education, Youth & Sports; however, in 2021 due to a change in ministerial portfolio

and management it now falls under the Ministry of Youth, Sports and Transportation and operates through the six districts, along with some offices in the rural areas. DYS is responsible for the planning and implementing of policies, programs and other initiatives designed to aid in the reduction of at-risk factors within the youth population and create an enabling environment for youths to be empowered to become productive individuals. The Department also assist young people during their challenging time, ensuring their basic needs are met; helping them identify their hopes and aspirations; providing respectful, efficient, and effective services that move them towards their goals; and supporting them as they transform their lives and build their futures. This is achieved by operating under the four pillars of: well- being (wellness and counselling), job training and E-Skills, safety rehabilitation and reform (behavior modification) and education (skills and academics).

Mission:

The Department of Youth Services mission reads, “To ensure young persons of Belize have access to multiple opportunities and available resources to acquire education, training, and life skills development to succeed in employment, careers, self-sufficiency and become exemplary youths of Belize.”

In alignment with the mission of the Department, the building is to be designed and constructed to combine a physical and digital infrastructural facility that will house young persons and provide an integration of the necessary resources needed to foster self-sustainability, whilst promoting resource conservation including energy efficiency, renewable energy, and water conservation features. Youth Needs Assessment Survey, 2021

Vision

The vision of the Department of Youth Services reads, “To have an empowered youth population so that they are able to perform at their fullest potential whilst still enhancing those capabilities through innovative intervention programs and mentorship to maintain their wellbeing. Youth Needs Assessment Survey, 2021

The youth facility will be designed and constructed with the focus to reduce the risk youth population; thus, reducing the crime rate in Belize.

2.1.2 Organizational structure

The Department of Youth Services through the Ministry of Youth, Sports and Transport is governed and structured by the Ministry of Public Service, Constitutional and Political Reform and Religious affairs.

The executive arm of government has both the responsibility and power to govern the country through a Cabinet selected by the Prime Minister from amongst the parliamentarians. The Prime Minister matches each Cabinet Minister to a portfolio which usually corresponds to a government department or agency. The Ministry of Youth, Sports and Transport is responsible for providing leadership, strategic direction, good governance, and oversight on all matters relating Youth Services and programs and the implementation of policies relating to transport management within Belize.

In all ministries, the Minister overseas the entire ministry, followed by the Chief Executive Officer and heads of Departments. In DYS, there is a Director responsible for the General Administration & Human Resource Management, Finance, Training and Development. Two (2)

positions of Deputy Director exist, Deputy Director, Youth Support Services and Deputy Director, Skills and Training. The Deputy Director, Youth Services is responsible the management of all support services for example, on-the Job Skills Training & Entrepreneurship, Mediation &Conflict Resolution and Counselling & Wellness. The Deputy Director, Skills Training is responsible for the management of the Youth Training Institutes.

The Organizational Chart submitted for the Department of Youth Services was recently redrawn and is shown as follows:

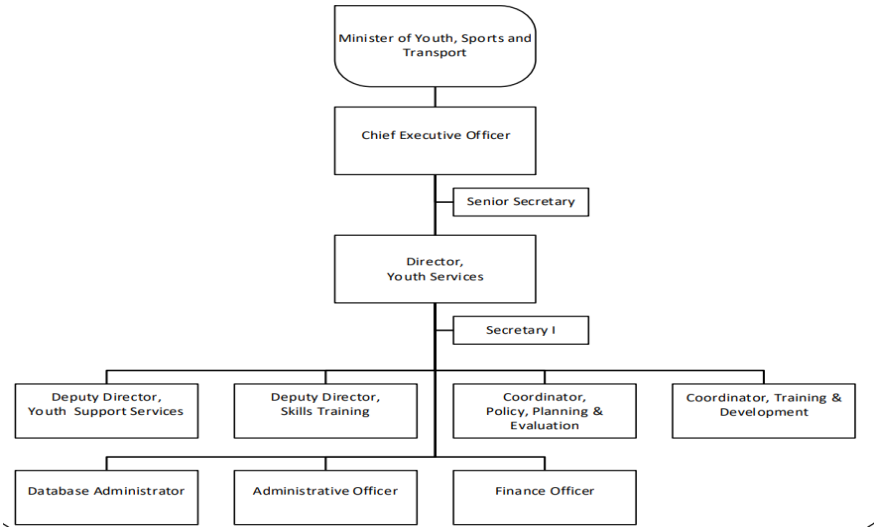


Figure 1: Organizational Chart (Source: Classification and Compensation Unit, MPS)

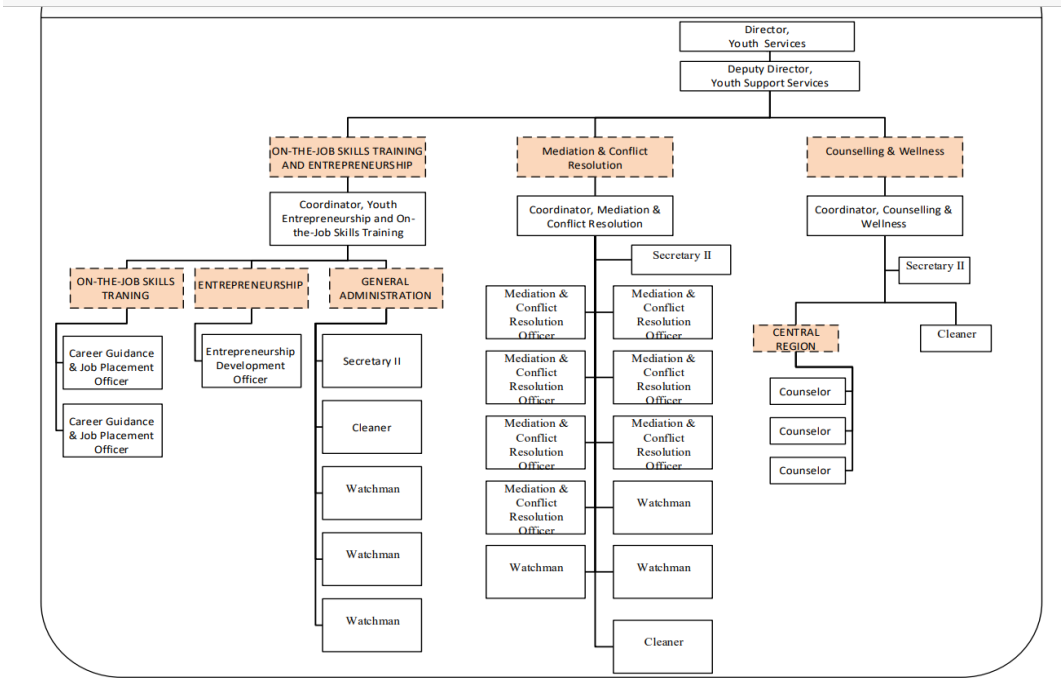


Figure 2: Organizational Development (Source: Classification and Compensation Unit, MPS)

2.1.3 Products offered

The Department of Youth Services execute its duties from four service areas which are Well- Being (wellness and counselling), Job Training and E-Skills, Safety Rehabilitation and Reform (Behavior Modification) and Education (skills and academics). Youth Entrepreneurship and on the Job Skills Services, the number one priority is to help decrease the glaring issues with employment and increase youth entrepreneurship and foster on the Job Training Skills Program across the Country in Belize.

Youth Counselling and Wellness is to instill greater self-acceptance and self-esteem, promote better expression and management of emotions, including, relief depression, anxiety or other mental health conditions and decrease suicidal rates among youth.

Behavior Modification: aims for safety, reform and protection, and is a unit designed to prevent recurrence of violence by reintegrating offenders into the community and assume active responsibility for their actions. Thus, recreating a working community that supports the rehabilitation of offenders and victims, and is active in preventing crime and decreasing gang association and presence.

Education (skills and academics) provides alternative means of continuing education through non-formal education programs, and the provision of effective and age-appropriate comprehensive sexuality education programs within schools, and non-formal educational systems at an early age, and identification and specific targeting of both at-risk and vulnerable youth.

The youth development center will be designed and constructed to cater to all these service areas an all-inclusive facility.

2.2 Project Management concepts

Managing a project includes identifying requirements, establishing clear and achievable objectives, balancing competing demands of quality, scope, cost, time, adapting specifications, plans, and approach to meet expectations of all key stakeholders including the client and the end-user. (Anantatmula, 2020).

2.2.1 Project management principles

The diagram below shows the twelve (12) principles according to the PMI, 7th Edition

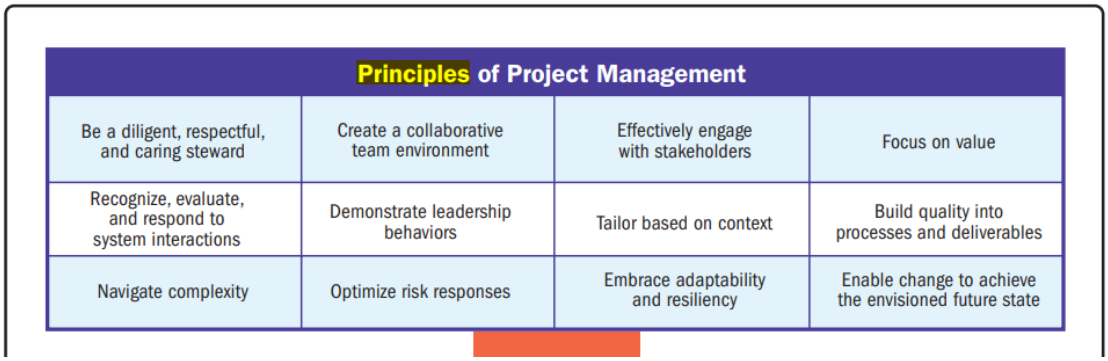


Figure 3: Principles of Project Management (Source: PMI, 2017)

The main principles to be incorporated into the Design and Construction of the Youth Development Center are as listed below:

Team: the project will be planned and executed under the principle and the importance of team work and creating a collaborative environment where everyone understands the objectives of the project and the role they play to execute**.**

Stakeholders: stakeholders will be engaged and briefed accordingly on advancement and details of the project.

Change management: Any changes or change request will be communicated with the Department and stakeholders closely involved in the project.

(Risk) Opportunities and threats: Optimize responses to opportunities and threats. Maximize positive impacts and minimize negative impacts to the project and its outcomes.

Quality: Quality is ensuring that the design and construction is within the guidelines of the Central Building Authority to ensure good structure and proper materials are procured.

Adaptability and resilience: Be adaptable and resilient depending on the context to help the project accommodate change, recover from setbacks, and advance the work of the project.

2.2.2 Project management domains

The Domains are listed below as listed in the PMI, 7th edition

Stakeholders	Identifying, analyzing, prioritizing, engaging, and monitoring all stakeholders associated with the projects and carry out effective communication and decision making.
Theme	This includes everyone directly related in the actual design and construction of the project. Networking with workers by hosting sessions to discuss the project. Create a good communications relationship.
Developmental Approach	The development an approach to be used such as agile or hybrid approaches for the best outcome of the project.
Life Cycle Planning	Determining how the activities for the project will be lined out. Moving the project forward in an organized way or an easier flow.
Project Work	This involves a combination of working with the time, assigning the appropriate human and material resources to carry out deliverables.
Delivery	The objectives and milestones of the project, will be carried out by the team and strategies are linked to results.
Measurement	To determine what mean of measurement will be used to evaluate the project. The Project Performance Measurement will provide a snapshot of its progress.
Uncertainty	The uncertainty is associated with risk management; it will program the team on what to expect, and how to deal with the risk or any uncertainties.

2.2.3 Predictive, adaptive and hybrid projects

The Predictive Project refers to when the scope of work and requirements for the project are clear and justify the detailed upfront planning. It is a form of project life cycle in which the project scope time and cost are determined in the early phases of the cycle (PMI, 2017)

Whereas, Adaptive Project provides a more flexible plan to work with, rather than a project life cycle that is iterative and incremental (PMI, 2017). It can be used as an alternative to traditional projects, and customer involvement is more evident.

Hybrid Projects are essentially taking two (or more) different project management methodologies and combining them to execute the project. A combination of two or more agile and non -agile projects, having a non- agile end result. (PMI, 2016).

Therefore, the design and construction of the at risk youth development center adopts the predictive project life cycle since it considers detail planning of the project life cycle and all possible factors that could emerge during a project, including labor, time and cost.

2.2.4 Project management

Project management is defined as "the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements" (PMI, 2013).

The Department of Youth Services has no formal project structure or process to execute infrastructural projects. Currently, projects are managed by the Department in such a way that deems fit to the nature of the project. For Management to fully appreciate the value of project management, it's important to understand what a project is and its processes which begins with specific start and end parameters designed to produce a defined outcome.

Through stakeholder engagement, the project management plan will serve to educate the key stakeholders of the intended outcomes for this FGP as well as educate them on best practices.

The Project Management Plan for the at-risk youth development center entails all the features of a project. It is time bound with a start and end date, it is achievable, measurable and specific. Thus its brings relevant benefits the Department of Youth Services and the Government of Belize as it aims to build capacity and rehabilitate young persons, with its primary goal to reduce the number of at risk youth, and consequently reducing the crime rate in Belize.

2.2.5 Project management knowledge areas and processes

According to the Project Management Body of Knowledge (PMI) there are 10 project management knowledge areas. The FGP brings focus to all 10 areas as they are associated to the Project Management Plan.

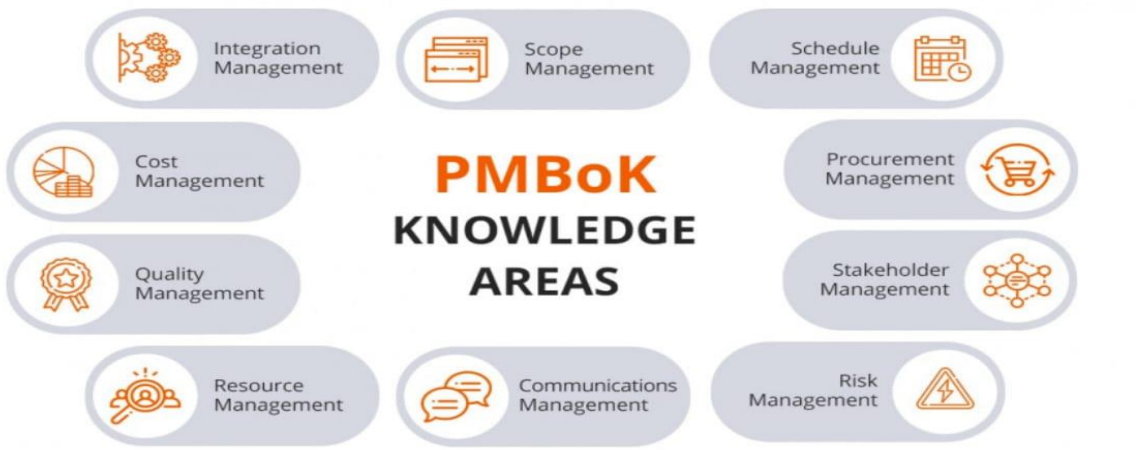


Figure 4: Knowledge Areas of Project Management (Source: PMI, 2017)

Integration Management Plan is the coordination of all project elements for teams to work together more seamlessly as it brings together various processes, systems, and methodologies to form a cohesive strategy.

Schedule Management Plan will be used as a tool to meet deliverables and reflects a clear structure to be followed each day. This structure will include the time or period needed to complete each task.

Cost Management Plan is critical to keeping the construction of the youth development center within budget and will be used a guide to ensure that deliverables are met as per budgeted.

Quality Management Plan ensures that project is built to meet agreed-upon standards and requirements for example, the Central Building Authority, and the Department of the Environment. It applies to project deliverables and project work processes, quality control activities, monitor and verify that project deliverables meet defined quality standards.

Resource Management outlines the roles and responsibilities of assigned duties and of the project and how resources will be categorized, and this is effective throughout the projects like cycle. Key experts are important to be utilized at this stage.

Procurement Management Plan involves when, and how, the project would procure resources or services to support the construction of the facility.

Stakeholders Management Plan will outline the strategies to effectively engage stakeholders throughout the lifecycle of the project, based on the analysis of their needs, interests and potential impact on project success.

Scope Management Plan is required to ensure that the project includes all the work that is needed, and strictly excludes any work that are not relevant and ensuring that the building and works are completed according to the project's schedule and budget.

Risk Management Plan will be designed and implemented to identify potential risk for constructing the building and how these risk will be dealt with based on expert judgment.

Schedule Management Plan will be developed and used a guide for tasks and their durations in order to complete the project within a designated time enabling the project team to prioritize important tasks and identify potential time wasters.

2.2.6 Project life cycle

The Project Life Cycle is framed as "the series of phases that a project passes through from its initiation to its closure" (PMI, 2013).

The PMBOK® Guide states the five stages of Project Management Cycle which are: Initiating, Planning, Executing, Monitoring and Controlling, and Closing. The processes any project should take, whether big or small, is done by categorizing activities into groups.

The initiation phase marks the beginning of the project; the idea is explored and elaborated, and a Project Charter is created. A charter is developed for the FGP and will be used as basis for the authorization of project.

In planning phase, the team identifies all of the work to be done. The project's tasks and resource requirements are identified, along with the strategy for producing them. Work packages are often created in this stage and responsibilities are assigned. The planning stage is a very

important stage as it outlines clarity and ensures that the project will be monitored and controlled.

In the Execution Stage, the project team begins to work, construction begins and the aim is to meet deliverables; being mindful of the triple constraints of time, cost, and working within the scope of the project. At this point remaining on schedule is highly important especially infrastructural project due to natural disasters and economic crisis.

The process groups interact over the project life cycle as per below:

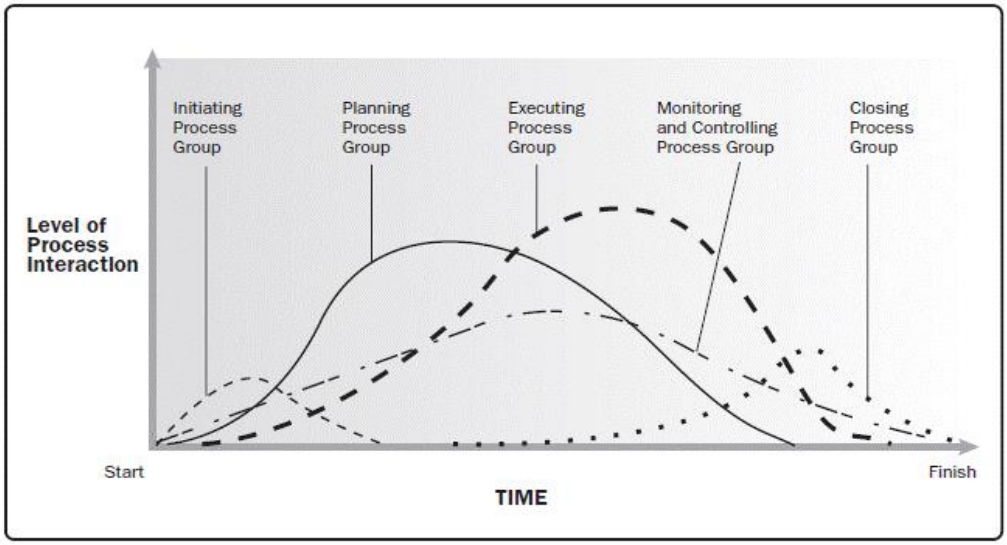


Figure 5: Level of Process Interaction (Source: PMI, 2013)

The Department of Youth Services does not have a project unit; however, the project process still takes place, just not in specified stages. Nonetheless, during the conception stage of the center, a design will be established, land will be acquired and any other resources needed, Construction and Design expertise are critical at this stage. The project will then be implemented and the construction team will be on-site to manage subcontractors, ensure work is being

performed correctly, and keep the team on schedule. Monitoring is done by phases and lastly, the project closes and the construction team will wrap up the project's list, ensuring the building is turned over with all the finishing touches realized and the project owner will receive all the project closeout information

2.2.7 Company strategy, portfolios, programs and projects

Business strategy is the reason for the project and all needs are related to the strategy to achieve the value (PMI. 2021, 35)

Portfolio, Projects, programs, subsidiary portfolios, and operations managed as a group to achieve strategic objectives. (PMI, 2021, P244)

DYSs' daily operations is in line with its mission and vision and has developed its Theory of Change based on organizational core competencies and how these competencies can best be applied to meet the needs of program participants, and create social values that will enrich youths in the country of Belize.

The Department's Theory of Change is more than a method of service provision. It is an overarching approach that organizes all their practices and staff efforts towards the outcomes they seek for youth. In addition to programs, the Department must ensure that organizational operations support as many young people as possible. This includes maintaining a strong workforce, robust data collection and data management systems, sound program evaluation and data utilization practices, and an integrated approach to funding that aligns financial resources to DYS's core purpose.

1.2.3 RELATIONSHIP OF PROJECT, PROGRAM, PORTFOLIO, AND OPERATIONS MANAGEMENT

1.2.3.1 OVERVIEW

Using project management processes, tools, and techniques puts in place a sound foundation for organizations to achieve their goals and objectives. A project may be managed in three separate scenarios: as a stand-alone project (outside of a portfolio or program), within a program, or within a portfolio. Project managers interact with portfolio and program managers when a project is within a program or portfolio. For example, multiple projects may be needed to accomplish a set of goals and objectives for an organization. In those situations, projects may be grouped together into a program. A program is defined as a group of related projects, subsidiary programs, and program activities managed in a coordinated manner to obtain benefits not available from managing them individually. Programs are not large projects.

Figure 6: Relationship of Project, Program, and Portfolio (Source: PMI, 2017)

The Department operates under two portfolios, one of which is youth support services and the other being Training Institute; however, both are interrelated. The design and construction of the building currently fall under the portfolio for Youth Support Services. The Department works with stakeholders to identify and coordinate the formulation of strategies and currently focuses on program areas namely: Entrepreneurship and On-The-Job Skills Training/Job Creation, Counselling and Wellness, Behavior Modification & Conflict Management, (Violence Reduction), all programs and related activities are being implemented by the staff of DYS through District Offices/Resource Centers spread out across the country. However, not all program areas are evident in each district due to unavailability of human and financial resources; nonetheless, the center will integrate all services for equal access to opportunities for young persons.

2.3 Other applicable theory/concepts related to the project topic and context

A theory is a carefully thought-out explanation for observations of the natural world that has been constructed using the scientific method, which brings together many facts and hypotheses. (Kenneth, 2017).

2.3.1 Current situation of the problem or opportunity in study

Belize faces a serious crime issue and for many years the Government and Civil Society has been charting the way forward on how to reduce the at-risk youth population and reducing crime. The government has invested tremendously in investing in young people through the Department of Youth Services to provide youths specifically at-risk youth with access to the resources they need to build their capacity. However, as much as the trainings and other programs are emphasized, a Youth Development Center is nonexistent. Based on the Youth Needs Assessment Survey, 2022, young persons indicated that they were interest in recreation space, counselling and training in skills.

` As a result, the Project Management Plan focuses on the Design and Construction of a Youth Development Center to be based in Belize City which has the highest rate of at-risk youth, due to poverty and gang related issues. The building will be designed to incorporate Academic and Vocational Education, Health and Wellness, Entrepreneurship and Job Preparations, Sports & Recreation which are in line with the operational pillars of the Department.

2.3.2 Previous research done for the topic in study

To design and construct are related and can be viewed as an integrated system. To design means to create the description of the facility and its appearance. Construction is a process of identifying activities and resources required to make the design a physical reality. In both design and construction, numerous operational tasks must be performed with a variety of precedence and other relationships among the different tasks.

Thus far a research on the design and construction of a youth facility in Belize is minimal and no project proposal is evident. Nonetheless, based on internal information after consultations with the Departments' Management Team, the first step was to highlight land space which is currently available as government property and can be used. The other step was to determine the layout of the facility which would include the Youth Centre activity spaces, Control desk/check-in, Commons/game room, Snack bar, Activity rooms/classrooms, multipurpose room/gymnasium, Computer room, Teen room and Outdoor activity areas, and administrative area.

2.3.3 Other theory related to the topic in study

A youth development center affords a safe place, caring adult mentors and instructors, fun and friendship, and high-impact youth development programs on a daily basis during critical non-school hours whilst Promoting academic success, good character and citizenship, and healthy lifestyles.

Based on the departments' approach and having held discussions with other stakeholders to develop a solution to combat crime and reduce to number of at-risk youth, the concept of a

youth development center has been considered as an approach to covenant to solve the issue. Hence, a Project Management Plan will be developed for the design and construction of a facility which will be used as an institution to promote the development, rehabilitation and reintegration of youth in conflict with the law back into society.

A project management plan will provide a "road map" for project accomplishment by facilitating planning, process reviews, and incorporating a design to construct a building that will integrate the intended purpose of the conceptual idea to fulfill the needs of young persons who will be given the opportunity to better off their life, and employability skills through education and training through the establishment of the Youth Development Center.

The Project Management Plan will target all areas of best practices which will define how the project will be executed, monitored, and controlled. Key components include an Integration Plan by means of Project Charter, Scope, Time, Cost, Quality, Resources, Communication, Risk, Procurement, and Stakeholder management plans.

The Department of Youth has developed its Theory of Change based on organizational core competencies, and how these competencies can best be applied to meet the needs of program participants and create social values that will enrich youths in the country of Belize.

3. METHODOLOGICAL FRAMEWORK

Methodological framework is a structure that can be used to organize research. It is composed of methods and concepts that are related to a particular field of study. The framework provides a guide for the research, so that it can be conducted in a systematic and efficient manner. (Hassan, 2020)

3.1 Information sources

An Information Source is a source of information for somebody, i.e. anything that might inform a person about (something or provide knowledge to somebody) Information sources may be observations, people speeches, documents, pictures, organizations etc. (LISBDNETWORK, 2020)

Information sources can be books, encyclopedias, magazines, databases, newspapers, library, catalogue and the Internet. Sources of information or evidence are often categorized as primary, secondary, or tertiary material. These classifications are based on the originality of the material and the proximity of the source or origin.

3.1.1 Primary sources

According to the Seton Hall University Library, Primary sources are original materials, regardless of format. Letters, diaries, minutes, photographs, artifacts, interviews, and sound or video recordings are examples of primary sources created as a time or event is occurring.

The Final Graduation Project will utilize primary information sources such as planned meeting, personal interviews of management and staff from the Department of Youth Services,

interviews with other stakeholders, such as the Central Building Authority, Architect and Building Contractors.

3.1.2 Secondary sources

In contrast, a secondary source of information is one that was created later by someone who did not experience first-hand or participate in the events or conditions you're researching. For the purpose of a historical research project, secondary sources are generally scholarly books and articles. (Solberg, 2020)

For this reason, secondary sources being utilized for the Final Graduation Project are the PMBOk Guides, News Paper Articles, Youth Needs Assessment Surveys, Design Software, and PMI Database amongst others.

Chart 1 Information sources (complied by Author: I.Loague, February 2023)

Objectives	**Information sources**	
	Primary	**Secondary**
1. To develop a Project Charter which will detail a statement of the scope, objectives, and participants in a project.	• Meeting with stakeholders • Review of programs • Meeting with Management	PMBOK guide PMI database
2. To design a Scope Management Plan to ensure that the project is executed as per smart, budget, and time requirements.	• Meeting Minutes for review, information and action.	Articles from magazines, newspapers Commentaries Textbooks

Objectives	Information sources	
	Primary	**Secondary**
3. To articulate a Communication Management Plan that will be used as a guide to disseminate the proper information in timely manner or as requested and execute proper research for information gathering	• Personal interview with key personnel • Sending updated information via email and during meeting. • Record Minutes	Internet Information PMBOK Guide Newspapers
4. To design a Resource Management plan to assign expertise to different work areas or packages and to track efficiency.	• Personal interview with key personnel, in design and construction • Meeting with DYS personnel	PMI, 2016, 2017
5. To develop a Procurement Management Plan for to issue contractual works to vendors to that are in line with the project requirements whilst procuring sustainable goods and services.	• Interview with supplier in reference to quality of goods • Meeting with DYS personnel for	PMBOK guide Internet Research on Procurement
6. To create a Stakeholder's Management plan to identify stakeholders and effectively engage them throughout the project life cycle based on their level of interest and impact to the project.	• One on One meeting with Key stakeholders for their contribution, contractors and DYS projects officer	Internet Information PMBOK Guide Newspapers
7. To generate a Schedule Management plan to prioritize task based on importance and urgency and track work packages.	• Engage in emails, texts and calls to save time and receive quick information	PMBOK Guide PMI database

Objectives	**Information sources**	
	Primary	**Secondary**
8. To create a Cost Management Plan to ensure that works and the allocation of resources are within budget	• Conduct interviews with DYS Management and contractors • Record Minutes • Review Budget •	PMBOK guide Internet Research on costing, and accounting in PM
9. To develop a Risk Management Plan for risk control monitoring, cost-benefit analysis, and financial impacts	• Correspondence • Accounts system • Interviews • Budget review	PMbok Internet Information
10. To develop a Quality Management Plan to meet policies, criteria, and procedural expectations when construction a smart sustainable building	• Interview, Observations, Questionnaires, Correspondence, Books, Newspaper Articles	PMBok Review Articles PMI database

3.2 Research methods

According to the University of New Castle Library Guides "Research methods are the strategies, processes or techniques utilized in the collection of data or evidence for analysis in order to uncover new information or create better understanding of a topic."

The methods to be utilized in the Final Graduation Project are the Analytical, Descriptive and the Quantitative Methods.

3.2.1 Analytical method

Analytical research is a specific type of research that involves critical thinking skills and the evaluation of facts and information relative to the research being conducted. A variety of

people including students, doctors and psychologists use analytical research during studies to find the most relevant information. From analytical research, a person finds out critical details to add new ideas to the material being produced. (Writer, 2020)

3.2.3 Descriptive method

The Librarian Studies and Information Technology Centre describes Descriptive Research as methods used when the researcher wants to describe specific behavior as it occurs in the environment. (Gihar, 2022). There are a variety of descriptive research methods available, the nature of the question that needs to be answered drives which method is being used. In addition, it does not answer questions about how/when/why the characteristics occurred. Descriptive research aims to accurately and systematically describe a population, situation or phenomenon. It can answer what, where, when and how questions, but not why questions.

Some of the more common methods include surveys, interviews, observations, case studies, and portfolios are some of the proper approaches. The data collected through these methods can be either quantitative or qualitative.

3.2.4 Quantitative Method

Quantitative research is the process of collecting and analyzing numerical data. It can be used to find patterns and averages, make predictions, test causal relationships,
and generalize results to wider populations. (Bhandari, Nov 4, 2022)

Chart 2: Research methods (Source: compiled by researcher: I. Loague February, 2023)

Objectives	**Research methods**		
	Analytical method	**Descriptive method**	**Quantitative Method**
1. To develop a Project Charter which will detail a statement of the scope, objectives, and participants in a project.	Involves critical thinking skills and the evaluation of facts and information relative to the research being conducted for integration and development of a project charter plan.	To use common methods surveys, interviews, observations, case studies, and portfolios and other management plan to form a project management plan.	This method will focus on quantifying the collection of data and its analysis for integration of the project charter.
2. To design a Scope Management Plan to ensure that the project is executed as per smart, budget, and time requirements.	A scope Management Plan will be developed.	Will am to accurately and systematically identify the resources needed to develop the scope of the project.	It can be used to find patterns and averages, make predictions, test causal relationships, and generalize results to wider populations.
3. To formulate a Communication Management Plan that will be used as a guide to disseminate the proper information in timely manner or as requested and execute proper research for information gathering.	This method will enable the researcher to gather the most relevant information through proper research and communication to obtain useful information	Will aim to accurately and systematically describe a population and other resources needed to carry out an effective communication plan.	Will aid in the process of collecting and analyzing numerical data.
4. To design a Resource Management plan to assign expertise to	Will assist in analyzing and identifying the	Will aim to accurately and systematically	This can be used to test theories about people's attitudes and

different work areas or packages and to track efficiency.	proper resources needed to execute task.	describe a population and gather human and other resources needed to carry out an effective Resource plan.	behaviors based on numerical and statistical evidence.
5. To develop a Procurement Management Plan for to issue contractual works to vendors to that are in line with the project requirements whilst procuring sustainable goods and services.	The aim is to being able objectively analyze and determine the best fit using different situations to create the Procurement plan.	To describe the characteristics and potential of procurement services.	Information from large samples will be processed and analyzed using reliable and consistent procedures through quantitative data analysis to determine best fit products.
6. To create a Stakeholder's Management Plan to identify stakeholders and effectively engage them throughout the project life cycle based on their level of interest and impact to the project.	To pool all stakeholders for to carry out analytical thinking and expert judgment.	To determine the stakeholders and study the stakeholders population to determine interest and key personnel's.	This methodology will be used to test theories and hypotheses about the attitudes and behaviors of their stakeholders on the basis of numerical and statistical evidence.
7. To generate a Schedule Management Plan to prioritize task based on importance and urgency and track work packages.	A Schedule Management Plan will be developed from data observed from construction works.	This method will use data collection which allows for gathering in-depth information to ensure quality assurance.	Will aid in the process of collecting and analyzing past data in reference to time span for deliverables and assist to create the management plan.

Objectives	Research methods		
	Analytical method	**Descriptive method**	**Quantitative Method**
8. To create a Cost Management Plan to ensure that works and the allocation of resources are within budget.	Evaluation of facts on cost analysis and information relative to the cost management plan.	Data for similar construction project to develop the cost management plan.	To be used to find patterns and averages, make predictions to aid in the development of the cost management plan.
9. To develop a Risk Management Plan to identify potential low, medium, and high risk and address responses to those risks.	A Risk Management Plan will be developed from data observed from construction documents as well as interviews with experts.	To utilize a selection or development of data gathering instruments to aid in determining the risk.	It can be used to find patterns and averages, make predictions, test causal relationships, and generalize results to be able to identify risk and how to respond to them.
10. To develop a Quality Management Plan to meet policies, criteria, and procedural expectations when construction a smart sustainable building	Will include A variety of stakeholders and experts to use analytical research during studies to find the most relevant information to apply to the quality management.	This method will use data collection which allows for gathering in-depth information to ensure quality assurance.	It can be used to find make predictions, test causal relationships, and generalize results to determine quality of materials.

3.3 Tools

A tool in project management is "something tangible, such as a template or software program, used in performing an activity to produce a product or result" (PMI, 2017).

The tools to be utilized are: Expert Judgment for obtain feedback from skilled personnel, Data Gathering such as case studies, checklist and interviews, Data Analysis and Representation, Leads and Lags to measure the pace of the project, Critical Path Method to prevent project schedule problems, Historical Information Review for decision making purposes, Source Selection Analysis, Bidder Conferences for feedback and expectations, Interpersonal and Team Skills, Training, Communications Requirements Analysis, Communication Technology, Communication Methods, Communication Skills, Meetings, Audits and Risk Categorization.

Chart 3*: *Tools (Source: Compiled by Author: I. Loague, February 2023)

Objectives	**Tools**
1. To develop a Project Charter which will detail a statement of the scope, objectives, and participants in a project.	Expert Judgment Data Analysis Data Gathering Communication Methods
2. To design a Scope Management Plan to ensure that the project is executed as per smart, budget, and time requirements.	Focus groups Surveys Expert Judgment WBS
3. To articulate a Communication Management Plan that will be used as a guide to disseminate the proper information in timely manner or as requested.	Expert Judgment Communication Methods Information management Communication Skills Data Representation
4. To design a Resource Management Plan to assign expertise to different work areas or packages and to track efficiency.	Data Representation Interpersonal and Team Skills Virtual team and training Pre-assignment
5. To develop a Procurement Management Plan for to issue contractual works to vendors to that are in	Expert Judgment Data Analysis

line with the project requirements whilst procuring sustainable goods and services.	Data Gathering Source Selection Analysis Advertising Bidder Conferences
6. To create a Stakeholder's Management Plan to identify stakeholders and effectively engage them throughout the project life cycle based on their level of interest and impact to the project.	Stakeholders Analysis Power and interest Power and influence Influence and impact
7. To generate a Schedule Management Plan to prioritize task based on importance and urgency and track work packages	Leads and Lags Critical Path Method Schedule Network Analysis Leads and Lags
8. To create a Cost Management Plan to ensure that works and the allocation of resources are within budget	Cost Analysis Expert Judgment Data Analysis Decision Making Audits
9. To develop a Risk Management Plan to identify potential low, medium, and high risk and address responses to those risks.	Risk Categorization Expert Judgment Data Analysis Data Gathering Audits
10. To develop a Quality Management Plan to meet policies, criteria, and procedural expectations when construction a smart sustainable building	Design of experiments Cost of Quality Expert Judgment Decision Making

3.4 Assumptions and constraints

The PMBOK Guide describes an assumption as a factor in the planning process that is considered to be true, real or certain without proof or demonstration.

On the other hand, a constraint is defined as a limiting factor that affects the execution of a project, program or portfolio or process. (PMI, 2016)

Chart 4: Assumptions and constraints (Source: compiled by researcher: I. Loague February 2023)

Objectives	Assumptions	Constraints
1. To develop a Project Charter which will detail a statement of the scope, objectives, and participants in a project.	All goals in objectives in the scope will be adhered to.	Works not complete as stipulated in the scope and perceptions may change.
2. To design a Scope Management Plan to ensure that the project is executed as per smart, budget, and time requirements.	The Department, as lead agency, will be supportive and instrumental in the facilitation of works related to the development of the scope management.	A time to gather all necessary information to develop the scope management plan to be collated in a short space of time.
3. To formulate a Communication Plan that will be used as a guide to disseminate the proper information in timely manner or as requested.	The communication plan will be utilized throughout the project	Unavailability of key personnel for information
4. To design a Resource Management Plan to assign expertise to different work areas or packages and to track efficiency	All personnel and other resources for the Project will remain onboard until the project ends.	Budget cost for labor subjected to change due to various reasons
5. To develop a Procurement Management Plan to issue contractual works to vendors to that are in line with the project requirements whilst procuring sustainable goods and services.	All material will be procured as planned.	Unavailability of goods when needed.
6. To create a Stakeholder's Management Plan to identify stakeholders and effectively engage them throughout the project life cycle based on their level of interest and impact to the project.	All stakeholders will be listed in the stakeholder's management plan.	Stakeholder requirements and level of interest may change during the project.

Objectives	Assumptions	Constraints
7. To generate a Schedule Management Plan to prioritize task based on importance and urgency and track work packages	The time allotted for the will be enough for full project implementation Since all stakeholders will work expeditiously to ensure the timely preparation for and execution of their respective tasks.	Delays in information form stakeholder will prolong the project
8. To create a Cost Management Plan to ensure that works and the allocation of resources are within budget	The project will be completed as per budget and in alignment cost management plan.	Economic conditions may increase cost.
9. To develop a Risk Management Plan to identify potential low, medium, and high risk and address responses to those risks.	All possible risk has been identified	Unexpected risk may occur
10. To develop a Quality Management Plan to meet policies, criteria, and procedural expectations when construction a smart sustainable building.	All good procured will be of good quality as in the procurement process	Poor quality items may be procured.

3.5 Deliverables

A deliverable is defined as any unique and verifiable product, result, or capability to perform a service that is required to be produced to complete a process, phase or project. Deliverables may be tangible or intangible (Project Management Institute, 2017).

The Deliverables associated with the Final Graduation Project are shown in a chart such as chart 5 below.

Chart 5*: *Deliverables (Source: Compiled Author: I. Loague 2023)

Objectives	**Deliverables**
1. To Develop a Project Charter that will provide project managers with written authority to execute the project effectively and efficiently.	A Project Charter
2. To design a Scope Management plan to ensure that the project is executed as per smart, budget, and time requirements.	A Scope Management Plan
3. To formulate a Communication Plan that will be used as a guide to disseminate the proper information in timely manner or as requested.	A Communication Management Plan
4. To design a Resource Management Plan to assign expertise to different work areas or packages and to track efficiency.	A Resource Management Plan
5. To develop a Procurement Management plan to issue of contractual works to vendors to that are in line with the project requirements whilst procuring sustainable goods and services.	A Procurement Management Plan

Objectives	Deliverables
6. To create a Stakeholder's Management plan to identify stakeholders and effectively engage them throughout the project life cycle based on their level of interest and impact to the project.	A Stakeholders Management Plan
7. To generate a Schedule Management Plan to prioritize task based on importance and urgency and track work packages	A Schedule Management Plan
8. To create a Cost Management Plan to ensure that works and the allocation of resources are within budget	A Cost Management Plan
9. To develop a Risk Management Plan to identify potential low, medium, and high risk and address responses to those risks.	A Risk Management Plan
10. To develop a quality management plan to meet policies, criteria, and procedural expectations when construction a smart sustainable building	A Quality Management plan

4. RESULTS

The Project Management Knowledge areas provide a framework where key concepts, and activities are grouped into common areas for different project management processes throughout a project lifecycle to enhance understanding of the project.

4.1. Project Charter

Project Charter

Project Name: Youth Development Center for the at risk youth of Belize City
Project Number: YDCBZ001

PROJECT CHARTER	
Date: March 4th , 2023	**At Risk Youth Development Center**
Date of completion of the project charter: **March 30th , 2023**	The Design and Construction of an At- Risk Youth Development Center in Belize City.
Type of project:	Predictive
Knowledge areas / process groups	**Application area (Sector / Activity)** Design and Construction

1. Project Charter 2. Scope Management Plan 3. Communication Management 4. Resource Management Plan 5. Procurement Management Plan 6. Stakeholders Management Plan 7. Schedule Management Plan 8. Cost Management Plan 9. Risk Management Plan 10. Quality Management Plan **Process Groups:** Initiation, Planning, Executing, Monitoring and Controlling, closing.		
Tentative start date	**Tentative completion date**	**Duration (months)**
September 1st 2023	June 30th , 2024	10 Months

Project objectives (general and specific)

General objective:
To design and construct a youth development center for the young at risk population of Belize City within a ten month period, and desired budget while integrating sustainable activities.

Specific objectives:
1. To develop an architectural design and blue print for the youth development center.
2. To construct a 2,000 square feet, two story concrete building with opened second story with covered roof top on a one acre plot of land in Belize City.
3. To promote resource conservation, including energy efficiency, renewable energy, and water conservation features through the installation of solar and recycling systems.
4. To create a multi-faceted infrastructure that will attract at risk youths through sports and other recreational activities.

5. To construct within time and maintain a budget of $125,000.00USD.
6. To develop a project team and assign expertise to different work areas or packages and ensure they are equipped with the proper resources needed to execute their duties

Justification or purpose of the project (Contribution and expected results)

The increase of violent crimes occurring in Belize City were attributed to drug related gang violence, and the common factors leading to youth involvement in gangs are poverty, the availability of drugs and the lack of sense of belonging to the school, the community, the family or a job.

The Design and Construction of the facility is in an effort to convince central government that the projects seeks to provide many benefits to young persons and the country as is seeks to promote the rehabilitation and reintegration of youth in conflict, and also focus on producing productive young men and women in Belize. The ultimate goal is to provide our youth with a multipurpose facility that provides useful recreational, academic and skills training as they participate in an activity in their field of interest while building their capacity to become productive citizen of society.

The facility is scheduled to be completed within a period of ten months and can house at least one hundred youth per time.

Description of the product or service that the project will generate - Final project deliverables

1. One concrete two storey with open second floor recreational area.

Assumptions

1. The project can be completed within the 10 months allotted and can be done by one Project Manager.

2. The Project will remain as budgeted for completion.

3. All material will be available for construction.

Restrictions

1. Inadequate knowledge and skills in information technology for the installation of the renewable resources and other state of the art equipment.
2. Natural disasters during the construction phase.
3. Delay in procurement of appropriate tools and equipment due to environmental enterprise factors.
4. Delays in the approval of permits.

Preliminary identification of risks

1. As a result of a lack of definition in the scope of the project, rework may occur, which could delay the completion of the deliverable and increase its cost, impacting the duration and cost of the project.

2. As a result of a lack of communication between designers and builders, construction practices that allow optimal use of materials may not be considered, which could impact the cost of the deliverable.

3. As a result of not seeking human expertise , the quality of construction may not be of standard, causing works to be revisited, thus causing delays in the project and increased cost.

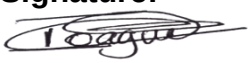
General resources and budget

Deliverable	Name of the resource (can be human, equipment, material, supply, infrastructure, contracting)	Unit	Amount	Unit cost	Total cost
Foundation	Materials & Labour				$12,040
Columns	Materials & Labour				$13,125
Ground	Materials & Labour				$42,875
1st Floor Floor Slabs	Materials and Labour				$35,575

Walls, Roof/ 2st Floor& Ceiling	Materials and Labour				$35,000
Windows & doors	Materials and Labour				$15,750
Colums, Final Roof Rails & Stairs	Materials and Labour				$21,000
Finishing	Materials and Labour				$13,760
Installations					$8500
Design & Approval					$5,000
					$203,625.00
	Add contingency 10%		$20,362.50		$223,987.50
	Add Management Reserve 10%		$22,398.75		**$246,386.25**
List the main (significant) resources and budget required for your project. Describe the budget with each deliverable and write down the total project budget.					
TOTAL PROJECT COST: $246,386.25 for design and construction					

Milestones schedule Establish the completion date of each second-level deliverable as a milestone. Remember that a milestone is a control point that is related to a deliverable (acceptance, signature, presentation, official delivery, approval).	
Milestone name	**End date**
Project Management Plan Approval& Design	July 1st , 2023
Procurement of Contractor (s)	July 10th , 2023
Project Launch Date	September 1st , 2023
Preliminary Planning	September 5th2023
Preconstruction Phase	September 30th, 2023
Foundation, Columns and Ground Floor& Cure	November 30th 2024
Walls , Roof and Ceiling& Cure	January 30th , 2024
Columns & Final Roofing	March 15th 2024
Installations& Finishing: Pluming & Electrical	May 30th , 2024
Project Closeout	June 15th, 2024
Official Hand Over	June 30th , 2024
The Milestones are based on the WBS- figure 8 in the Scope Mgmt. Plan.	

Relevant historical information
The Youth Need Assessment Survey, 2021 revealed that young persons were looking for a safe place, somewhere they can go for a change of mood, environment, acquire and enhance their skills. It is with this in mind, that the need for an all-inclusive Youth Development Center is imperative as it will value everyone's uniqueness and the diversity that they bring. The Department of Youth Services is responsible for the planning and implementation of policies, programs and other initiatives designed to aid in the reduction of at-risk factors within the youth population, and creating an enabling environment for youths to be empowered and consequently becoming productive individuals of Belize. The goal is for every young person to feel that their needs are catered. The facility will house young people in various areas of interest, such as music, tutoring, dance, sports, etc., and will also be designed to integrate physical and digital infrastructures to provide optimal occupancy services in a reliable, cost effective, and sustainable manner. It is also aimed at promoting resource conservation, including energy efficiency, renewable energy, and water conservation features.
Identification of groups ofinterest (stakeholders)
Detail name, position, organization of each stakeholder: Director, Minister, CEO: Department of Youth Services Executive Director: Social Investment Fund **Direct Stakeholders:** Project Manager: Indira Loague **Indirect Stakeholders:** Youth Population of Belize

Student's name (project manager): Indira Loague (Ms.)	**Signature:** 
Name and title of the authorizing person (facilitator):	**Signature:**

Scope Management Plan

Project Name: Youth Development Center for the at Risk Youth of Belize City
Project Number: YDCBZ001

BELIZE

TABLE OF CONTENTS

4.2. Scope Management Plan

Introduction

The Scope Management Plan provides an outline of the framework for this project, which basically details how the project scope will be defined, developed, and verified. It documents the scope management approach; roles and responsibilities as they pertain to project scope; scope definition; verification and control measures; scope change control; and the project's work breakdown structure. Any project communication which relates to the project's scope should adhere to the Scope Management Plan.

Scope Management Approach

The Scope management approach will be used to identify and define the actions required to deliver the project's requirements and ensuring that that work is completed according to the project's schedule and budget.

This provides the procedures and responsibilities undertaken to effect any required change to the scope of the work. The changes may be initiated by the Project Manager, stakeholders or any member of the project team. However, it is required that changes be proposed and submitted on a standard change-request form approved by the project team, to the Project Manager, who will then evaluate the value of the change against the project's schedule, quality, cost, resources, technicalities and any other risks associated. The Project Manager will then submit the proposal and its analysis statement to the Change Control Board and Project Sponsor for review and decision.

Following the approval/disapproval of the scope changes by the Change Control Board and project sponsor, the project team will update all project documents and communicate the decision to all stakeholders and or contractors. All change documents will then be filed for future reference.

Roles and Responsibilities

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

Chart 6: Stakeholder Roles and Responsibilities (Source: Author of the study)

Name	Role	Responsibilities
William Lamb Social Investment Fund	Executive Director Project Sponsor	Approve or disapprove scope change requests as appropriate Evaluate need for scope change requests Accept project deliverables
Indira Loague	Project Manager	Measure and verify project scope Facilitate scope change requests Facilitate impact assessments of scope change requests Organize and facilitate scheduled change control meetings Communicate outcomes of scope change requests and document
John Cliff/ Change Control Board	Chair of Change Control Board	Part of the approval/disapproval panel for scope changes Communicate with project manager and project sponsor of critical decisions that may affect the project's constraints.

Other Stakeholders	Team Members	Can propose scope changes Will execute change directives issued by Project Manager. Report challenges and concerns to the Project Manager

Scope Definition

This project involves the construction of a Youth Center for at risk youth population which will be located at an allocated plot of land sponsored by the Government of Belize. The building will be approximately 2,000sq ft. comprised of two floors including a parking area with sufficient yard space to host sporting activities. The facility will be designed to house at least seventy five young persons in the various areas of interest such as music, tutoring, dance, sports etc., and will also be designed to integrate physical and digital infrastructures to provide optimal occupancy services in a reliable, cost effective, and sustainable manner, and is aimed at promoting resource conservation, including energy efficiency, renewable energy, and water conservation features.

This facility will provide a safe space for the productive engagement mainly for at risk - youth during and after school hours while their parents are out seeking gainful employment. All efforts are afoot in terms of financing, scheduling, communication and stakeholder engagement.

Project Scope Statement

The project scope statement provides the detailed features and functions of the project, deliverables, constraints, assumptions, and acceptance criteria. The project includes the building of a two stored all – inclusive youth development center housing youths between the ages of 14 –

29 years old. This statement helps to visualize the complete project and its deliverable, reduces the chances of scope creep and assist the manager to develop the plan effortlessly,

The figure below shows the propose youth facility.

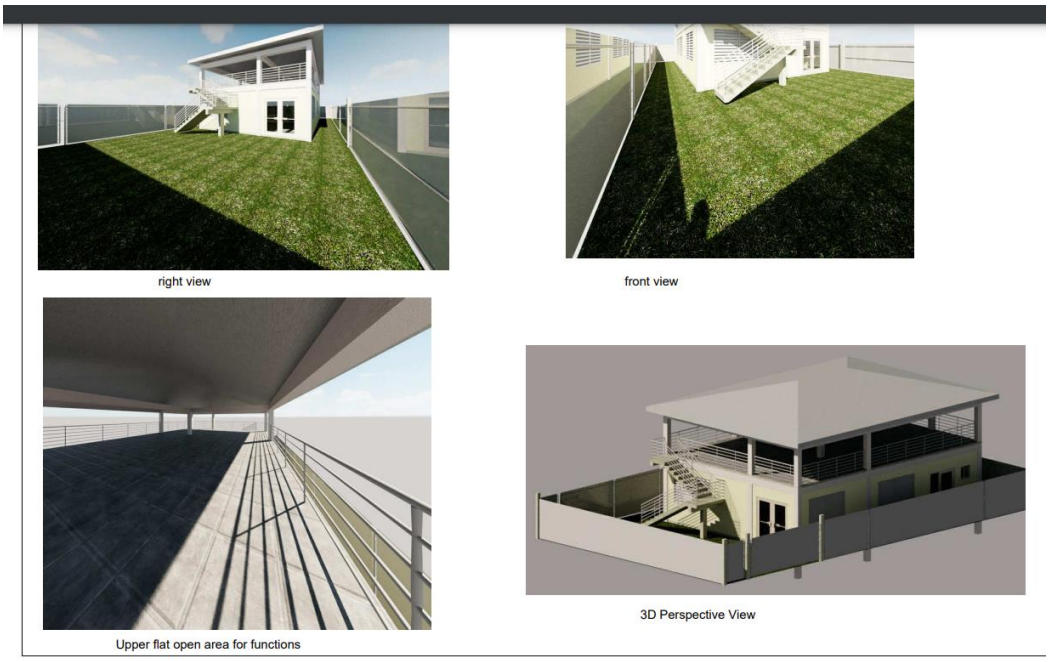


Figure 7: Propose design Youth Development Center (Source: Swasey Architectural & Engineering Design)

The initial scope is as follows:

- Proposed location/Land of the facility is owned by the Government of Belize and will be approved for the construction of the facility on a plot of one acre of land.
- The project includes the building of a two-story sustainable youth development center bearing description of a youth facility measuring 2,000 square feet.
- First Floor shall be a closed area measuring 50' x 40' and shall have a finished floor to floor height of 18.00’ (eighteen feet).

- Foundation walls shall be 8" thick block with vertical reinforcement 3/8" diameter bars at 32" o.c. grout solid all cells.
- Exterior walls shall be 8" or 6" thick block with vertical reinforcement 3/8" diameter bars at 32” and 3/8" diameter horizontal bars at 48" grout cells.
- Interior masonry walls shall be 4" or 6" thick block.
- Specified compressive strength of masonry at the age of 28 days = 1000 psi minimum and manufacturer of masonry units shall submit to the engineer a certificate certifying the compressive strength of masonry blocks.
- A minimum of 1/2" diameter rebar shall be placed at openings in wall.
- The second floor shall be of same dimensions of first floor and is to be an opened recreational /gathering area auditorium style.
- Roof framing shall also be a structural (exterior grade) cold-formed steel framing product manufactured from steel with a G90 galvanized coating for corrosion resistance. All fasteners are stainless steel screws. Roofing covering to be a heavy-duty gauge, standing seam roofing painted aluminums 24” raised panel engineered and fabricated by “sheet Coop Metals located in Spanish lookout, Cayo District, Belize.
- The construction/architectural plan must be approved by the Central Building Authority of Belize.
- Building will utilize green/smart energy technologies
- Provides parking

- A state-of-the-art cooling system
- Landscaping

Project Constraints:

- The project must be completed by 30th June, 2024 provided the project commences by or on 1st September, 2023 (10 months).
- Allocated Funds budgeted through the Social Investment Fund of USD$125,000 is to be strictly adhered to in order for project objectives to enable project completion.
- Construction cannot begin until all the necessary approvals have been granted.
- The project commences within the hurricane season.

Project Assumptions:

Below are several assumptions made prior to the study:

- It is assumed that the budget will be sufficient to complete the project.
- It is assumed that we have sufficient quantities of skilled workers that are competent.
- It is assumed that all materials will be available upon request.

Work Breakdown Structure

In order to effectively manage the work required to complete this project, it will be subdivided into individual work packages into manageable deliverables. Each deliverable is assigned a task, or series of tasks that can be further broken down into subtasks to meet the needs of the project. This will allow the Project Manager to more effectively manage the project's scope as the project team works on the tasks necessary for project completion.

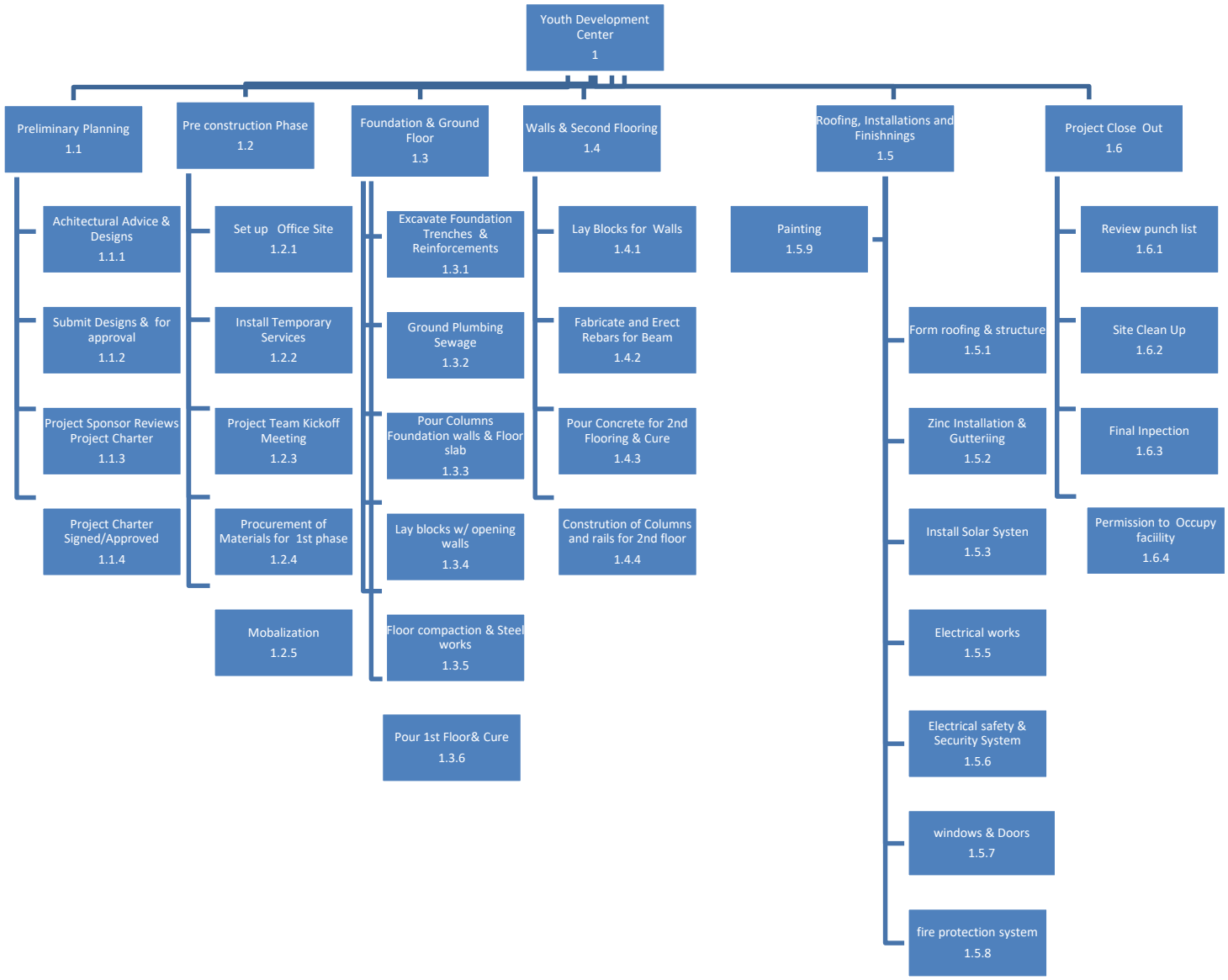


Figure 8a: Work Breakdown Structure (Source: Compiled by Author)

Work Breakdown dictionary

The WBS Dictionary demonstrates a description of work for each element and the deliverables.

The primary purpose of the WBS Dictionary is for project team members to have a clear understanding of the work being performed in all the elements and particularly the Work Packages.

Level	WBS Code	Element Name	Description	Resources
1	1.1	**Preliminary Planning**	**Commencement and planning**	
	1.1.1	Architectural Advice & design.	Briefing describing the understanding of the project with the architect, and Sub consultants.	Laptop, Computer Internet, Relevant Literature
	1.1.2	Submit Designs for approval	Submit architectural work to the project team for approval.	CBA, Town Council
	1.1.3	Project Sponsor reviews project charter	Peruse documents and provide feedback.	Architectural Drawings/Sketches and Project Scope
	1.1.4	Project Charter signed/approved	Project Charter is accepted by Project Sponsor & team	Architectural Drawings/Sketches and Project Scope
2	1.2	**Preconstruction Phase**	**Site preparations**	
	1.2.1	Set up office space	Process of preparing the project site for works to begin	Backhoe, dump truck, cement mixer, light weight crane, wheel barrows.

	1.2.2	Install temporary services	Coordinate with utility companies for electricity, water and internet.	Electrical wires, pans and water pipes and
	1.2.3	Project Team kickoff meeting	All team member and experts meet to review project charter and clarify and discrepancies.	Project Team, contractor
	1.2.4	Procurement of materials for 1st phase	Engage in the vendoring and procurement process, ensure all materials as procured based on approved BOQ	Suppliers Quotes and Subcontractors installation quote
	1.2.5	Mobilization	All items are delivered to site and personnel are ready to commence work.	Backhoe, dump truck, cement mixer,excavator, other machinery
3	1.3	**Foundation & Ground Floor**	**Execution of works begins**	
	1.3.1	Excavate foundation trenches & reinforcement	Apply trenches and ensure steel reinforcement.	Excavator, other machinery
	1.3.2	Ground Plumbing & Sewage	Installation of pipes, and sewage and surface water is carried through same sewers and drains.	Pipes, shovels, picks, and othe rmachinery
	1.3.3	foundation walls Pour columns, & floor slab	The flooring structure is created and along with columns	Backhoe, dump truck, cement mixer,excavator, other machinery
	1.3.4	Lay blocks with opening walls	Cement blocks are procured and the laying of blocks commences with opening walls for foundation.	Cemenet, cement blocks ,and sand
	1.3.5	Floor compaction & flooring	Floor bed is created by means of filling and concrete mixture is poured to create the floor.	Cement, sand, steel, cement

				blocks & mixer, working tools
	1.4	**Walls & Second Flooring**	**Continuation of execution of structure**	
	1.4.1	Lay blocks for walls	Concrete walls are created and filled.	Cement, cement blocks ,and sand
	1.4.2	Fabricate and extract rebars for beam	Reinforcement of steel to support concrete and building structure.	Cement, cement blocks ,steel, and sand
	1.4.3	Pour concrete for 2nd floor and cure	Pour concrete to floor and leave for curing.	Cement, cement blocks ,steel, and sand, cement mixer
	1.4.4	Construction of columns for second floor	Set columns and leave to cure and install rail design.	Cement, cement blocks ,steel, and sand, cement mixer
	1.5	**Roofing, Installations & Finishing**	To carry out the final zinc roof, final installations and other finishing.	
	1.5.1	Form roofing structure	Install underlayment, drip edges and flashing, corrugated metal roofing panels, closure strips and ridge caps.	Shingles, rafters, roof metal framing, nails, screws etc
	1.5.2	Zinc installation & guttering	Apply zinc to roof structure layout and install guttering.	Zincs, screw, gutters
	1.5.3	Installation of solar system	Multiple solar cells connected series to give a specific combined voltage value, when sun rays strike them.	Suppliers Quotes and Subcontractors installation quote

	1.5.4	Electrical works	Electrical power to building and equipment (including generator)	Wire, conduits, outlets, ground , electical boxes, conduits
	1.5.5	Electronic Safety and Security	Installation of door buzzers, security cameras and systems, emergency lighting, and alarms and phones	Security cameras, wiring, tv monitors
	1.5.6	Air conditioning system	Main power supply panel that distributes power to the different areas in the providing interior cooling.	Suppliers Quotes and Subcontractors installation quote
	1.5.7	Windows and doors	The installation of procured windows and doors	Windows, doors
	1.5.8	Fire Protection System	Elements of a fire protection system that sense smoke and heat above a specified concentration and temperature, respectively and creating and alarm if such may occur	Suppliers Quotes and Subcontractors installation quote
	1.5.9	Painting	To paint the entire structure inside and out.	Paint, brushes, Suppliers Quotes and Subcontractors installation quote
	1.6	**Project Close Out**	**Completion stage of project and handover of the youth facility**	
	1.6.1	Punch list	Identify the final work items remaining before a construction project is considered complete.	na
	1.6.2	Site clean up	Remove and dispose of all debris	Man power

	1.6.3	Final Inspection	Final inspection by project team and relevant authorities.	Human resource
	1.6.4	Handing over of facility	The facility is passed over to the Department of Youth Services for commencement of programs.	Human resource

Figure 9b: Work Breakdown Dictionary (Source: Compiled by Autho

Scope Validation and Verification

The validate scope process will occur during project monitoring and controlling and will be done at the end of each project phase to get approval for phase deliverables.

The Project Manager will confirm short-term project deliverables against the original scope as defined in the scope statement, work breakdown structure, and dictionary. Once the Project Manager verifies that the scope is in alignment with the requirements defined in the project plan, the Project Manager and Sponsor will determine acceptance of the deliverable. The Project Sponsor then accepts 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 and proper documentation is in place.

Scope Control

The Control Scope process involves monitoring the status of the project and managing changes to the scope. The Project Manager and the project team will work together to control the scope of the project through continuous monitoring. The project team will leverage the WBS Dictionary by using it as a statement of work for each WBS element. The project team will ensure that they perform the work described in the WBS dictionary and generate the defined deliverables for each WBS element. The Project Manager will oversee the project team and the progression of the project to ensure that the scope control process is followed. If a change to the project scope is needed, the process for recommending changes to the scope of the project must be carried out.

Any project team member or sponsor can request changes to the project scope. All change requests must be submitted to the Project Manager in the form of a project change request order. The Project Manager then verifies, submits, and receives approval by the Change Control Board then formally submitting the change request to the Project Sponsor who will then formally accept the change by signing the change order. Upon acceptance of the scope change by all parties, the Project Manager will update all project documents and communicate the scope directive to all project team members and stakeholders.

Communications Management Plan

Project Name: Youth Development Center for the at Risk Youth of Belize City
Project Number: YDCBZ001

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4.3. Communications Management Plan

Introduction

Communication is an essential tool in the field of project management since the success of a project mainly depends on the efficiency of its communication network (Rajkumar, 2010).The Communications Plan serves as a guide and sets the framework for the design and construction of the at risk youth facility for smooth communication amongst the Project Management Team and other stakeholders. The Project Manager will take the primary role in ensuring effective communications on this project.

The processes necessary to ensure that the information needs of the project and its stakeholders are met through development of artifact and implementation of activities designed to achieve effective information exchange (PMI, 2017, p.359). According to PMI (2017, p.359), project communications management consists of two main parts, the first part is based on the development of a strategy to ensure that communication is effective for stakeholders, while the second part focuses on the execution of activities necessary to implement the communication strategy.

This plan identifies and defines the roles of the people involved and also includes a communications matrix that maps the communication requirements of this project. It documents the communications requirements, the information being communicated, and the audience for each communication, the frequency of communication, and the individual responsible for the communication or dissemination of the information to the appropriate audience.

The plan also provides an in-depth guide for conducting meetings and details the communication rules and how the meetings will be conducted. This Communications Plan was developed in conjunction with the Management Team from the Department of Youth Services to meet the overall objective of this Communications Management Plan which is to promote the success of the project by meeting the information needs of project stakeholders.

Communications Management Approach

Changes or updates may be required due to changes in personnel, scope, budget, or other reasons. Additionally, updates may be required as the project matures, and additional requirements are needed. The project manager is responsible for managing all proposed and approved changes to the communications management plan. Once the change is approved, the project manager will update the plan and supporting documentation and distribute the updates to the project team and all stakeholders. The Communications Matrix will be used as a guide for what information to communicate and who is to do the communicating.

Stakeholders Communication Requirements

To communicate requirements effectively, the sender must acknowledge the various filters used to convert and interpret the requirement message that is being sent, such that the sender's meaning is interpreted and understood as intended by the receivers, no matter the form or media used.

In Identifying stakeholders and developing the stakeholder engagement strategy, key stakeholders are identified by the project manager, along with their preferred frequency and method of communication. This information will be retained by the project manager in the project's Stakeholder Register. Standard project communications will occur in accordance with the Communication Matrix; however, depending on the identified stakeholder communication requirements, individual communication is acceptable. In addition to identifying communication preferences, stakeholder communication requirements must identify the project's communication channels and ensure that stakeholders have access to these channels. Once all stakeholders have been identified and communication requirements are established, the project team will maintain this information in the project's Stakeholder Register and use this, along with the project communication matrix, as the basis for all communications.

Communication Delivery Methods and Technologies

Since all stakeholders in this project have been established or identified, it is vital to understand the best way to deliver a message, so that it is clearly delivered. The tools we use to communicate can make or break how well our information is communicated. Communication is a useful tool for stakeholder communication requirements, transparency, and accuracy. When stakeholder groups are identified and engaged at an early stage, this will help keep the project on track.

Due to the advancement of technology, it is no longer necessary to be in the same geographical location to participate interactively since multimedia plays a significant role in redefining communication. The Project Management Team and other stakeholders are to utilize a SharePoint platform, of which Google Docs is the most common, and will be used to provide updates, archive various reports, and conduct project communications. This platform enables senior management, as well as stakeholders with compatible technology, to access project data and communications at any point in time.

The project team will also employ effective communication methods that are necessary for the project's success. The methods of communication that will be utilized by the project team are interactive, push, and pull communications. These will be done in the following form of communication with the agreed guidelines. The project will utilize an interactive communication model that incorporates the human elements of the sender, receiver and feedback. Every message that will be conveyed must be clear and acknowledged as received and understood by the receiver so that feedback can be provided.

Meetings

In an effort to have successful and productive meetings, the team members will adhere to the following guidelines:

- **Meeting invitation and agenda** will be sent within twenty-four (24) hours or before each meeting. The format includes a formal invitation letter and the different points to be shared/ discussed in concise bullet form. Meetings will start with a review of the status of all action items from previous meetings and end with a review of all new action items resulting from the meeting. The review of the new action items will include identifying the owner for each action item along with the deadlines for each item.
- Participants wishing to leave the meeting will so inform the Project Manager prior to leaving.
- The Time Keeper is responsible for helping the Project Manager adhere to the time limits set in the meeting agenda. The Time Keeper will also let the presenter know when they are approaching the end of their allocated time. Typically, a quick hand signal to the presenter indicating how many minutes remain for the topic is sufficient.

Electronic/Emails

All electronic communication/emails pertaining to the project should be professional, respectful and provide brief and relevant information. Emails should be distributed to the correct project participants in accordance with the communications matrix. Emails will include the following information: to whom it is being directed, persons who are being copied in the email, the subject of the email, the body and attachment if any (See below for example).

To	Person(s) the email is directed to.
CC	Ensure to copy the necessary individuals.
Subject	Heading of email.
Body of the Email	Include a professional email explaining the reaon of the email. Ensure that the email has a greeting, body, and closing. Also, ensure that the email doesn't have grammatical, spelling or punctuation errors. Be concise!
Attachment	Include necessary files if any.

Figure 10: Email Structure (Source: Compiled by Author)

Written/Hard Copy

Written communication shall be:
Concise
Clearly written
Thorough
Accurate
Coherent
Consistent
Polite

All respective parties should be copied in the letter

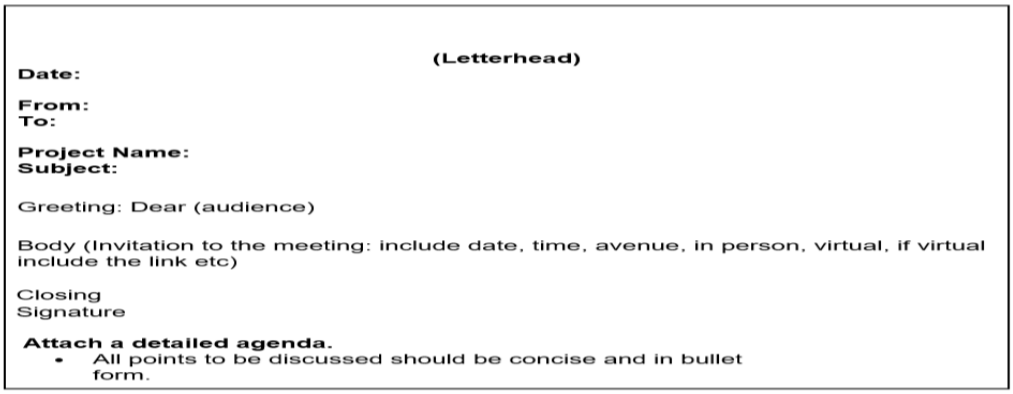

Figure 11: Letterhead Format (Source: Compiled by Author)

Presentations:

Will include relevant information about the topic of the project being presented to a specific audience. The presentation should be accompanied by a Microsoft PowerPoint presentation or any other method that is proven to be effective. The PowerPoint should be precise, in bullet form and include relevant pictures if necessary. It should also be short, presentable, and engaging. Ensure that it doesn't have grammatical, spelling, or punctuation errors.

Project Team Directory

A Project Directory will be prepared and maintained, displaying contact information for key persons identified in this communications management plan. An example directory appears below.

Chart 7: Project Team Directory (Source: Author of the study)

Role	**Name**	**Title**	**Organization**	**Email**	**Phone No.**
Project Sponsor	William Lamb	Executive Director	Social Investment Fund	Wlambsif@yahoo.com	501-622-3465
Project Manager	Indira Loague	Operations Officer	Consultancy Firm	iloagueCF@yahoo.com	501-610-5678
Director	Marvin Cadle	Director	Department of Youth Services	Jcadledys@yahoo.com	501-610-3456
Contractor	Marlon Doe	Contractor	Building, Construction and Design Cooperation	Jdoebconstr@yahoo.com	501-610-7823

Others stakeholders	Stakeholders Directory	Stakeholders Directory	Stakeholders Directory	Stakeholders Directory	
Chair	John Cliff	Change Control Board	Department of Youth Services	Jcliffgob@yahoo.com	501-610-5643

Communication Matrix

The following table identifies the communications requirements for this project.

Chart 8: ***Communications Matrix (Source: Author of the study)***

Communication Type	Objective of Communication	Medium	Frequency	Audience	Owner	Deliverable
Kickoff Meeting	Introduce the project team and the project. Review project feasibility objectives and management approach.	• Face to Face	Once	• Project Sponsor • Project Team • Stakeholders	Project Manager	• Agenda • Meeting Minutes
Project Team Meetings/Reviews	Review status of the project with the team.	• Face to Face • Conference call	Bi-Weekly	• Project Team	Project Manager	• Agenda • Meeting Minutes • Project schedule
Personal Communication	To maintain regular communication on the status of the project.	• Telephone calls, Email, Meetings, Web Conference	weekly	• Project Sponsor • Project Team	Project Manager	• Slide updates • Project schedule
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	• Hard copy Project Status Report • Project schedule

Communication Standards

Efficient and timely communication is the key to successful project completion. As such, it is imperative that any disputes, conflicts, or discrepancies regarding project communications are resolved in a way that is conducive to maintaining the project schedule, ensuring the correct communications are distributed, and preventing any ongoing difficulties.

The escalation model demonstrated below is a process for identifying issues within the project, which may need to be escalated for resolution. This means that there would be a way to identify, track and resolve project issues throughout the life of the project, while ensuring effective communication of these issues with all stakeholders.

Issues would then be resolved at the lowest possible level but could be identified at any level during the project. In relation to those issues that cannot be resolved at the lowest possible level, these issues can be brought up with the appropriate party at the higher level. This procedure would allow for visibility of unresolved issues as well as maintaining a historical record of issues that occurred and their associated resolution.

The following table summarizes the steps in the process to manage issues:

Chart 9 Manage Issues (Source: Author of the study, I. Loague)

Steps	**Action**	**Process**
1	Identify and Document Issues	• Any stakeholder can raise issues at any time, via verbal or written communication. • Issues which cannot be immediately resolved

		within the project team will be entered into the Issue Log. • All issues will be assigned a target resolution date.
2	Review of Issues	• Open issues should be addressed during the scheduled project meetings or as necessary. • Any new issues should be reviewed and identified on the issue log. • Regular updates of issues to ensure all stakeholders are aware of the progress and status of the issue.
3	Communication of Issues	• Open issues should be addressed during the scheduled project meetings or as necessary. Any new issues should be reviewed and identified on the issue log. • Open issues that have passed their targeted resolution date should be reviewed. Monitoring, reviewing, and addressing any new or existing issues for

		possible escalation to the appropriate level. • Documentation and reporting of the status of issues by the assigned party. • Regular updates of issues to ensure all stakeholders are aware of the progress and status of the issue.
4	Escalate Issues	• Open issues should be addressed during the scheduled project meetings or as necessary. Any new issues should be reviewed and identified on the issue log. • Updating of the status of the issue if escalation is deemed necessary.
5	Issue Resolution	• Once the issue has been resolved, the resolution shall be communicated to the originator Update the issue log, setting the status as closed, the date closed, resolution comments and note the variance between the resolution target date and the actual date closed.

Throughout the lifecycle of the project, the team will utilize standard organizational formats and templates for all formal project communications.

Resource Management Plan

Project Name: Youth Development Center for the at Risk Youth of Belize City
Project Number: YDCBZ001

4.4. Resource Management Plan

Introduction

The Resource Management plan documents the processes to identify, acquire, develop, and manage the human and material resources necessary to successfully complete a project. It plays an important component in the Project Management Plan as expertise for the different areas will be identified and placed for the implementation and execution of works for the Youth Development Center for the At- Risk Youth . The roles and responsibilities of each team member are also identified to achieve project success by ensuring that the appropriate human resources are acquired with the necessary skills, resources are trained if any gaps in skills are identified, team building strategies are clearly defined, and team activities are effectively managed.

The Human Resource Management Plan includes the following:

- How roles are assigned
- Roles and responsibilities of team members throughout the project
- How and when do assignments change
- Project organizational charts

How roles are assigned

Roles are assigned through collaborative discussions, where the aim is to assess each team member and identify each person's area of expertise or preference. Assignments change when the team decides that someone else is better suited for a particular role.

Roles and Responsibilities of Team Members

All team members must clearly understand their roles and responsibilities in order to successfully perform their portion of the project from design to construction to completion. Project the following project team roles and responsibilities have been established for the Design and Construction of the Youth Development Center:

Project Sponsor

The Executive Director, Social Investment Fund (SIF) through responsible for the funding of the project and is ultimately responsible for its success. Since the Project Sponsor is at the executive level, communications should be presented in summary format unless the Project Sponsor requests more detailed communications, which can do so at any time.

Project Manager

There is only one Project Manager the person appointed, who is responsible for the overall success of the Project. The PM must authorize and approve all project expenditures. The PM is also responsible for approving that work activities meet established acceptability criteria and fall within acceptable variances. The PM will be responsible for reporting project status in accordance with the communications management plan. The PM must possess the following skills: leadership/management, budgeting, scheduling, and effective communication.

Change Control Board

The Change Control Board is the designated group made up of key stakeholder organizations to review the technical specifications and authorizes changes within the organization's infrastructure. Additionally, there is a chair for this board who is appointed by the team members and leads the meeting.

Key Stakeholders

Would consist of all individuals and organizations that are impacted and considered key stakeholders. These are the Department of Services, the Ministry of Education, Ministry of Finance, and the Belize Police Department. These are the stakeholders with whom the Project staff would need to communicate with and who and are not included in the other roles defined in this section. The Key Stakeholders include executive management with an interest in the project and key users identified for participation in the project.

Other Technical Stakeholders

- The architect is responsible for design and supervision during the construction to ensure the building contractor is complying with the approved plan and design of the facility. Electrical Engineer responsible for ensuring that the building operates at an optimum and efficient electrical capacity. The EE is responsible for producing an electrical floor plan, lighting layout, switches, and rises and also incorporating an energy renewable system and back up supply.
- The Plumbing Engineer responsible for producing floor plans showing the water closets, urinals, supply lines, waste water lines and connections to the sewer system

and waste water supply system. The PE will also communicate regularly with the architect.

- General Contractor directly employs and engages construction workers and manages the construction work of the proposed youth center. He is also considered the lead contractor who is designated to be responsible for ensuring that all aspects of the project are addressed and that the project is implemented in a technically sound manner and according to design. It is required of him to closely communicate with the Project Manager, Project Team and architect.

Project Organization Chart

Chart 10: RACI Matrix (Source: Author of the study)

	Project Manager	Project Sponsor	Assistant Project Manager & Team Members	Engineers	Regulatory Bodies	General Contractor
Building Designs	**A**	C	I	**R**	**R**	**I**
Permits & Approvals	**A**	I	I	**I**	**R**	**I**
Creation of Project Management Plan	**A**	**C**	**I**	**I**		**I**
Scope statement & WBS	**A**	**C**	**I**	**I**		**I**
Manage Worksite	**A**	**C**	**I**	**R**		**R**
Status Report	**A**	**C**	**I**	**A**		**R**
Stakeholders Management	**A**	**C**	**C**			**R**
Procurement	**A**	**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

Staff Acquisition

Staff will consist of a few internal resources, with some office staff executing specific duties; however, much of the work will be subcontracted to external resources for design and construction. There will be outsourcing/contracting performed within the scope of this project. All resources must sign a contract/agreement with the performing organization before they may begin any project work. The subcontractors and site workers will work on site until contract completion.

Training:

Training is required for the site construction workers employed. Once all are on board, they will also be given an overview of the project and its scope. This training will equip the workers with the necessary knowledge to better execute their duties.

Performance Assessments:

The project manager and senior team members will review each individual team member's assigned work activities and ensure they are aligned with expectations of the works performed. Once work is unsatisfactory, the project manager will meet with the appropriate functional manager to determine the consequence of the employee.

Recognition and Rewards:

There are several planned recognition and reward items for project team members. Team / employees will be rewards for completing their milestones and carrying out exemplary works.

Equipment and Material Acquisition

As in all projects, some resources are required before the project can begin, and others will be acquired as the project progresses. Acquisition of materials and equipment needed requires the outsourcing/contracting procedures described in the Procurement Management Plan for the design and construction of the youth facility. Equipment will be purchased through the pre-approved supplier list. Exception to this will need to be raised by the procurement team to the Project Manager, and by extension, the project team.

Management of Material Resources

Once the resources have been acquired, they need to be assigned to the appropriate project tasks and given the information needed to undertake their role effectively. Resource calendars will be prepared to record which types and amounts of material resources will be available to perform the identified schedule activities. Also to ensure that the correct individuals are on-site to utilize the specific equipment and supplies needed for the particular activities.

Control Material Resources

The control resources process is applied from the design to throughout the construction phases of the project on a regular basis because any changes in the project schedule may impact the use of resources. In this process, the project manager ensures that the resources that are assigned and allocated for the project activities are available, monitor their estimated usage verses actual usage and subsequently take corrective actions to keep the project on track so as to ensure efficient and timely use of project resources.

Procurement Management Plan

Project Name: Youth Development Center for the at Risk Youth of Belize City
Project Number: YDCBZ001

BELIZE

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4.5. Procurement Management Plan

Introduction

Procurement involves every activity involved in obtaining the goods and services the Youth Development Center needs to support its daily operations, including sourcing, negotiating terms, purchasing items, receiving and inspecting goods as necessary, and keeping records of all the steps in the process. The Procurement plan will be a guide for managing procurement throughout the life of the project and will be updated as acquisition needs change. This plan identifies and defines, the types of contracts to be used in support of this project, the contract approval process, and decision criteria. This plan identifies and defines the items to be procured, the types of contracts to be used in support of this project, the contract approval process, and decision criteria.

Procurement Management Approach

The Project Team with the Project Manager being the spearhead, will provide oversight and management for all procurement activities under this project until its successful completion. The Project Management Office (PMO) will review and accept the procurement listing prior to submitting it to the purchasing officer under the Procurement Unit. The Unit will review the procurement items, and begin the vendor selection, purchasing, and contracting processes.

Types of Contracts to be used

Persons to be procured for design, and those for the construction phase such as plumbers, masons, and electrical engineers, will be procured as stipulated in the Central Building Authority regulations meaning they must meet specific requirements to operate. The project team will define the needed item types, quantities, services and delivery dates. The project team will work with the contracts and purchasing department to determine the most appropriate contract type for each procurement under one of the following contract types: fixed price, cost-plus, or time-and-materials. The team will then solicit bids from various vendors in order to procure the items within the required time frame and at a reasonable cost.

Procurement Item Identification

The team will identify and document the procurement items and/or services determined to be essential for project completion and success for instance as per table below:

Chart 11**: **Procurement of Items (Source: Compiled by Author

Item/Service	**Justification**	**Needed By**
Design Architect	Will design the overall look of the Youth Center as per request by the Department of Youth Services.	July 15th , 2023
Electrical Engineer	Assists Architect in achieving preliminary design and creates sustainable electrical design	July 30h , 2023
Survey Officer	Provides specialized expertise in surveying as needed during project planning	July 15th, 2023
Plumbing Engineer	Provides specialized expertise as needed during project planning for a sustainable water supply system	July 30th , 2023
Engineer	Provides technical advice to the team.	Sept 1st , 2023

Procurement Risk and Management

The procurement process may contain specific risks and consequences which must be managed to ensure project success. While all risks will be managed in accordance with the project's risk management plan, there are specific risks which pertain specifically to procurement which must be considered:

- Manufacturing capacity capabilities of vendors
- Conflicts with current contracts and vendor relationships
- Potential delays in shipping and impacts on cost and schedule
- Questionable past performance for vendors
- Potential that the final product does not meet required specifications
- Price Instability
- Poor vendor sourcing
- Resistance to digitization leading to poor e-procurement adoption
- Compliance Management

Managing these risks will mitigate the impact of the risk by reducing the likelihood of its occurrence and/or reducing avoidable consequences through planning, monitoring and other appropriate actions. All procurement risk factors that are likely to occur needs to be identified and analysed and then the most appropriate management response for each risk/combination of risks must be taken.

Hence, inconsistencies in the procurement and decisions that need to be made must be approved by the project sponsor, or project manager before implementation. Any issues

concerning procurement actions or any newly identified risks will be immediately communicated to the project's contracting department point of contact as well as the project sponsor.

Greater details for risk and response are outlined in the Risk Management Plan.

Standardize Procurement Documentation

Procurement process documents will aid in narrowing the focus and determining what vendor best meets the procurement standards. Going from learning about an industry, segment, or space, to signing a contract with a preferred vendor can be complex; fortunately, using the right documents helps significantly.

Types of Procurement Documents: RFI, RFP, RFQ. The three most common types of procurement process documents are Request for Information (RFI), Request for Proposal (RFP), and Request for Quotation (RFQ).

The result of the RFI process allows for a list of potential vendors to be identified for their project and can then move on to issuing an RFP or RFQ. With an RFQ, the purchasing officer for the unit is tells the supplier exactly what is needed and asks them to provide a quotation for the listed items. The RFP, however, asks the seller to propose how they will resolve or address the buyer's needs.

Procurement Constraints

These constraints may be related to schedule, cost, and scope, resources, technology, or buyer/seller relationships. As constraints are identified, they must be considered every step of the way as procurement activities are planned and conducted so as not delay the construction on the youth center.

Schedule:

- Procurement must be in alignment with project timeline and must be estimated as accurately as possible, which requires a blend of research and experience. The procurement activities, contract administration, and contract fulfillment must be completed within the established project schedule.

Cost:

- Project budget has contingency and management reserves built in; however, these reserves may not be applied to procurement activities. Reserves are only to be used in the event of an approved change in project scope or at management's discretion.

Scope:

- Issued contracts and all procurement activities must support the approved project scope statement. All contracts will be reviewed by the project team to ensure compliance.

Resources:

- All procurement activities must be performed and managed with current personnel. No additional personnel will be hired after initiation to support the procurement activities on this project.

Technology:

- While proposals may include suggested alternative equipment, parts specifications must match those provided in the statement of work exactly.

Contract Approval Process

Once proposals have been received by all vendors and contractors, the approval process begins. The first step of this process is to conduct an analysis of all vendor proposals to determine which meet the criteria established by the project team. Purchases of Five thousand and below will only require the approval of the Project Manager; whereas, purchases greater than five thousand must be approved by the Project Sponsor and Project Manager.

Decision Criteria

The selection criteria used must be relevant and proportionate to the procurement exercise which are to be based on price, quality, reliability, responsiveness, documentation and flexibility.

Performance Matrix Criteria

The following metrics are established for vendor performance for this project's procurement activities. Each metric is rated on a 1-3 scale as indicated below:

Chart 12: Vendor Performance Metrics (Source: Author of the study)

Vendor	Product Quality	On Time Delivery	Documentation Quality	Development Costs	Development Time	Cost per Unit	Transactional Efficiency
Vendor #1							
Vendor #2							

1 – Unsatisfactory
2 – Acceptable
3 – Exceptional

Stakeholders Management Plan

Project Name: Youth Development Center for the at Risk Youth of Belize City
Project Number: YDCBZ001

BELIZE

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4.6 Stakeholders Management Plan

Introduction

Project stakeholder management is basically identifying, pooling and organizing communication with stakeholders and managing stakeholder expectations. The Project Managers coordinates many aspects of projects, including stakeholder management. Stakeholders usually have some type of interest in or influence on a project. Stakeholders can be individuals, groups, or organizations that may affect, be affected by, or perceive themselves to be affected by a decision, activity, or outcome of a portfolio, program, or project. Stakeholders also directly or indirectly influence a project, its performance, or its outcome in either a positive or negative way. (PMI, 2017).

Identify Stakeholders

In order to develop an effective plan for managing stakeholders. Stakeholders will be mapped and identified by performing a stakeholder analysis in which potential stakeholders and relevant information (interests, requirements, influence, and potential impact on project success) are gathered, documented and analyzed. (PMI, 2017). Stakeholders with similar characteristics will be grouped in order to simplify communication and stakeholder management.

Key Stakeholders

Key project stakeholders are those who have the influence and authority to dictate whether the project is a success or not. Some key for this project such as: The Department of Youth Services, The Ministry of Education, Social Investment Fund, Government of Belize etc. These are the people and groups whose objectives must be satisfied, as they

have the power to make or break the project. Even if all deliverables are in and budgets are met, if the stakeholders aren't satisfied, the project cannot be considered a success.

Stakeholders Analysis

Once all the Project stakeholders have been identified, the project team will classify and examine each stakeholder to determine the stakeholders' level of power or influence, plan the management approach for each stakeholder, and to determine the appropriate levels of communication and participation each stakeholder will have on the project.

The project team will categorize stakeholders based on their organization or department. Once all stakeholders have been categorized. The project team will also complete a stakeholder analysis matrix that illustrates the concerns, level of involvement, and management strategy for each stakeholder.

Stakeholders Matrix

It is very important to identify and classify stakeholders since each may play a significant role in the delivery of the project. With this in mind, a stakeholders Register Analysis Matrix was developed as per below.

Stakeholders Matrix

Chart 13: Stakeholders Matrix (Source: Author of the study)

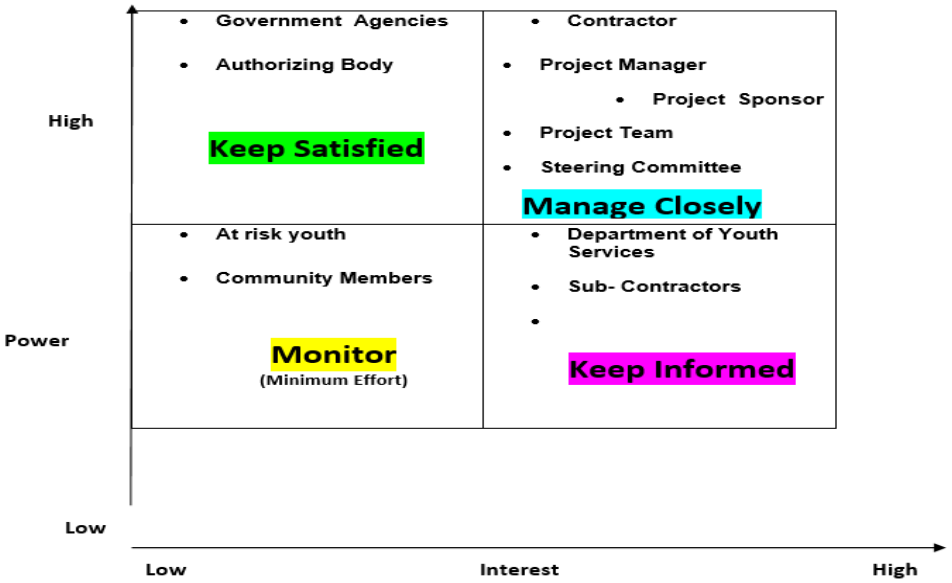
Name	Role	Requirement/ Expectation	Communication Type/ Stakeholders Engagement	Medium	Influence	Impact
William Lamb	Project Sponsor	High Interest- Approval of all documentations an no objections to hired personnel's/contractors	Regular meetings, reports, presentations	Face to face, Phone calls, emails, virtual calls	High	High
Indira Loague	Project Manager	High Interest- Communicates directly to the project sponsor, ensures duties are in alignment with scope	Well informed, answer to PS, ensures scope &works are in alignment	Face to face, Phone calls, emails, virtual calls	High	High
Marvin Cadle	Director – DYS/Committee member	High interest - &communicates with PM & ensures design & construction are as projected.	Consult, involved and keep informed,	Face to face, Phone calls, emails, virtual calls	High	High
Wendel Parham	Assistant PM	High interest & communicates with PM &and ensures scope of works and other timeline is adhered to	Well informed, answer to PM, ensures scope & works are in alignment	Face to face, Phone calls, emails, virtual calls	Med.	Med
Swasey Engineering	Architect	Med Interest- needs to complete design as desired by DYS	Consults with PM, involved and keep informed	Face to face, Phone calls, emails, virtual calls	Med	Med
Errol Lopez	Plumbing Engineer	Med Interest- Propose a sustainable Water system	Reports, answers to PM	Face to face, Phone calls, emails, virtual calls	Low	Med

William Swan	Electrician	Med Interest- Ensures a sustainable energy efficiency system	Reports, answers to PM	Face to face, Phone calls, emails, virtual calls	Low	Med
A & A Construction	Contractor	High Interest-	Daily contact -Calls, texts, emails, virtual calls, face to face communication	Face to face, Phone calls, emails, virtual calls	Med	High
Authorization Bodies	Regulations	Low Interest- Certify and approve request	Documentation	Face to face, Phone calls, emails, virtual calls	Low	Low
Young People	Target group	High Interest- Agrees with the Design and programs of building	Consultation ref to design, construction and programs	Public Meetings, Press releases, emails	High	High
Government of Belize		High Interest- A youth facility catered to at Risk Youths	Consultation ref to design, construction and programs, presentations, and programs; Project Updates	Project Updates: Reports, emails, virtual calls/ meeting	High	High

Power/ Interest Classification

Stakeholders are plotted on the grid in relation to the power and interest they have in respect of the project.

A power interest grid is a tool for identifying, categorizing and managing stakeholders. With an axis for both "Power" and "Interest", the table clearly distinguish each stakeholder into categories as per the below:



Top right are stakeholders that have a high amount of power and high interest.

Figure 12: Stakeholder Power/Interest Group (Source: Compiled by Author)

- Top left are those with high amount of power and low interest.
- Bottom right are those with low amount of power and high interest.
- Bottom left include those that have a low amount of power and low interest.

Plan Stakeholders Management

The Stakeholder Management component aims at developing appropriate management strategies to effectively engage stakeholders throughout the lifecycle of the project, based on the analysis of their needs, interests and potential impact on project success.

The Stakeholder Analysis Register and Communication Plan provide the Project Manager with all stakeholders' information needed, including their roles and responsibilities. With this data, the Project Manager will engage each stakeholder throughout the lifecycle of the project. The level of engagement required for each stakeholder may vary over the course of the project. For instance, during the beginning stages of the project, it might be necessary for the Project Manager to engage key stakeholders to be highly involved for example, the Project Sponsor, Architect, Department of Youth Services and the Contractor. These highly engaged key stakeholders in the early stages of the project are pivotal for project kickoff.

Manage and Monitor Stakeholder Engagement

Managing stakeholder engagement helps to ensure that stakeholders involved in the design and construction of the facility clearly understand the project goals, objectives, benefits, and risks for the project, as well as how their contribution will enhance project success. Maintaining constant and proper communication increases support and minimize resistance from stakeholders, which will significantly increase participation leading to a successful project.

The project team will address all concerns of stakeholders and provide feedback to make sure communications are being received and understood, and to capture important information to help make adjustments and respond to problem areas.

Individual stakeholders will be encouraged to participate and to voice questions and concerns, with the most serious issues and concerns that are raised being addressed in a formal, rigorous process through the Issues and Risk Logs.

The project Issues Log is another tool to be used to collect, document, and address concerns raised by stakeholders and stakeholder management risks that have materialized into issues that must be managed.

The stakeholders identified and their information documented in the Stakeholder Analysis Register will be reviewed at least weekly to ensure the plan is meeting project expectations and to make modifications if required.

Schedule Management Plan

Project Name: Youth Development Center for the at Risk Youth of Belize City
Project Number: YDCBZ001

BELIZE

INTRODUCTION
SCHEDULE MANAGEMENT APPROACH & SCHEDULE PROCESS
ROLES AND RESPONSIBILITIES FOR DEVELOPMENT OF SCHEDULE
PROJECT SCHEDULE
PROJECT DURATION
SCHEDULE CONTROL
SCHEDULE CHANGES & THRESHOLD

4.7 Schedule Management Plan

Introduction

The Schedule Management Plan defines the approach the project team will use to develop or create the project schedule as well as the tools and techniques that are to be employed to monitor and control the Design and Construction of the youth facility. Developing a schedule management plan is a critical phase in project planning that ensures you start, monitor, control, and complete projects successfully. A well-developed schedule plan will help to achieve the expected results at the right time and deliver a successful project outcome.

Schedule Management Approach& Schedule Process

As for any construction project, a Gantt chart is the preferred method to outline and schedule tasks with their timelines. It is a tool that illustrates work completed over a period of time in relation to the time planned for the work. It typically includes two sections: the left side outlines a list of tasks, while the right side has a timeline with schedule bars that visualize work, simply, the easiest and most straightforward way to set up schedules. The table in the project schedule section of this document is in alignment with the deliverables identified in the project's Work Breakdown Structure (WBS) from the approved WBS constructed as part of the Scope Management planning effort.

The Project Manager and Assistant Project Manager will work closely to review the assigned project tasks, and the entire project team must agree to the proposed work package assignments, durations, and schedule. The schedule will have to be reviewed and accepted by the Project Sponsor, in this case, the Social Investment Fund.

Roles and Responsibilities for Development of Schedule

The Project Manager is to create and manage the schedule for the project, coordinate tasks, and observe the timelines of scheduled assignments.

The project team will also review and validate the proposed schedule and perform assigned activities once the schedule is approved.

The PM will also collaborate with technical experts, and other professionals in the project management team to oversee the implementation of the schedule.

Project Schedule

The project schedule indicates what needs to be done, which resources must be utilized, and when the project is due. It's the timetable that outlines start and end dates and milestones that must be met for the project to be completed on time. It produces a schedule for the execution of the project, monitoring and controlling by analyzing activity sequences, durations, resource requirements and schedule constraints. Some components to be considered are:

1. Defining the project milestones
2. Identifying and sequencing activities
3. Estimating durations

The key benefit of this process is that it generates a schedule with planned dates for completing project activities and the project team can review the activities they were assigned with the respective start and finish date. Revising and maintaining the project schedule on an ongoing basis is key to sustaining a realistic and achievable schedule.

Schedule Duration

Chart 14: Activity Duration Estimates (Source: Author of the study)

Task ID	Activity Name	Duration (Days)	Start Date	End Date	Resource Description
	Project: Construction of a Youth At- Risk Facility	**303 days**	**Sept 1, 2023**	**June 30th , 2024**	
1.1	**Preliminary Planning**	**38 days**	Sept. 1st , 2023	October 8th , 2023	Project Sponsor, Architect, Assistant Project Manager, Project Manager and Team members.
1.1.1	-Architectural Advice & Design	15 days	Sept 1st , 2023	Sept. 15th , 2023	Project, Sponsor, Architect, Assistant Project Manager, Project Manager and Team members, Sub consultants.
1.1.2	-Submit Designs for review, Changes & acceptance	10 days	Sept, 16th	Sept. 26th , 2023	Project, Sponsor, Architect, Assistant Project Manager, Project Manager and Team members, Sub consultants
1.1.3	Regulatory bodies approval: Design, plumbing and architectural	10 days	Sept. 27th 2023	October 6th , 2023	Central Building Authority , City Council
1.1.4	Project Sponsor Reviews Project Charter	2 days	October 7th , 2023	October 7th , 2023	Project Sponsor, Project Manager
1.1.5	-Project Charter Signed & Approved	1days	October 8th , 2023	October 8th , 2023	Project Sponsor, Project Manager
1.2	**Preconstruction Phase**	**45 Days**	**Otober 9th , 2023**	**Nov. 24th , 2023**	
1.2.1	-Set up office site	14 days	Oct. 9th , 2023	Oct. 22nd , 2023	Architect, Assistant Project Manager, Project Manager and Team members
1.2.3	-Install temporary service	12 days	Oct. 23rd , 2023	Nov. 5th , 2023	Utility agencies
1.2.4	-Project team kick off meeting	2 day	Nov 6th , 2023	Nov. 8th , 2023	Project, Sponsor, Architect, Assistant Project Manager, Project Manager and Team

					members, Sub consultants
1.2.5	-procurement of materials- 1st phase	15 days	Nov. 7th , 2023	Nov. 21st , 2023	Procurement team, Project Manager
1.2.6	-Mobilization	2 days	Nov. 22nd , 2023	Nov. 24th 2023	Vendors, contractors, Site Manager
1.3	**Foundation & Ground Floor**	**65 Days**	Nov 25th , 2023	Feb 9th , 2024	Masonry workers, Site laborers Contractor, Architect (supervision)
1.3.1	-Excavate foundation trenches & reinforcement	15 days	Nove. 25th , 2024	Dec. 9th , 2023	Masonry workers, Site laborers Contractor, Architect
1.3.2	-Ground plumbing & sewage	5 days	Dec 10th , 2023	Dec 15th , 2023	Masonry workers, Site laborers Contractor, Architect
1.3.3	-Pour columns, foundation walls & floor slabs	10 days	Dec 16th , 2023	Dec 26th , 2023	Masonry workers, Site laborers Contractor
1.3.4	-lay blocks with opening walls	10 days	Dec 27th , 2023	January 14th , 2024	Masonry workers, Site laborers Contractor, Architect,
1.3.5	-Floor compactions & steel works	10 days	Jan 15th , 2024	Jan 25th , 2024	Masonry workers, Site laborers Contractor,
1.3.6	-Pour first floor and cure	15 days	Jan 26th , 2025	Feb 9th 2024	Masonry workers, Site laborers Contractor
1.4	**Walls & second floor**	**65 days**	**Feb 10th , 2024**	**April 25th , 2024**	
1.4.1	-Lay blocks for walls and installation of conduits &electrical	14 days	Feb 10th , 2024	Feb 24th , 2024	Masonry workers, Site laborers Contractor,
1.4.2	-Fabricate & erect rebar's for beams	12 days	Feb 25th , 2024	March 9th 2024	Masonry workers, Site laborers Contractor,
1.4.3	-Pour concrete for 2nd flooring & cure	15 days	March 10th , 2024	March 25th , 2024	Masonry workers, Site laborers

					Contractor,
1.4.4	-Construction of Columns and rails for 2nd floor	14 days	March 31st 2024	April 14th , 2024	Masonry workers, Site laborers Contractor,
1.4.5	Stairway and cure	10 days	April 15th , 2024	April 25th ,2024	Masonry workers, Site laborers,Contractor,
1.5	**Roofing Installations& Finishing**	**75 days**	**April 26th , 2024**	**July 11th , 2024**	Site laborers,Contractor,
1.5.1	-Form roofing structure	10days	April 26th , 2024	May 6th , 2024	Site laborers,Contractor,
1.5.2	-Install Zincs & Guttering	15 days	May 7th , 2024	May 21st , 2024	Site laborers, Contractor,
1.5.3	-Installation of solar system	5 days	May 22nd , 2024	May 27th , 2024	Site laborers, Contractor,
1.5.4	Electrical works	4 days	May 28th , 2024	June 1st , 2024	Electrician
1.5.5	-Electrical Safety and Security.	10 days	June 2nd , 2024	June 12th , 2024	Site laborers, Contractor,
1.5.6	- Install air condition	5 days	June 8th , 2024	June 13th , 2024	Contracted company
1.5.7	-Install windows & Doors	4 days	June 14th , 2024	June 18th , 2024	Contracted company
1.5.8	-Fire Protection System	2 day	June 15h , 2024	June 20th , 2024	Installation company
1.5.9	Paint & Tiles	20 days	June 21st , 2024	July 11th , 2024	Site worker
1.6	**-Project Close out**	**15 days**	July 16th , 2024	June 30th , 2024	Architect, Assistant Project Manager, Project Manager and Team members
1.6.1	-Review punch list	2 days	June 16th	June 19th , 2024	Assistant Project Manager, Field Superintendent
1.6.2	-Site clean up	6 days	June 18th , 2024	June 23rd , 2023	Site laborers,
1.6.3	-Final Inspection	3 days	June 24th , 2024	June 26h , 2024	Architect, Project Sponsor, Project Manager and Team members
1.6.4	Permission to occupy facility	4 days	June 27th , 2024	June 30th , 2024	Project Sponsor, Project Manager, Central Building Authority

Schedule Control

Schedule control means the Project Manager is to monitor activities and tasks to ensure they are proceeding as planned. However, it is more than just monitoring status; it also means updating your project processes and managing change. Submitting schedule change requests and reporting schedule status in accordance with the project's communications plan will be left to the project manager.

The schedule will be reviewed and updated every fifteen days or as necessary or due to any unforeseen reason. The project team must participate in any schedule updates and must communicate any changes to the actual start/finish dates to the project manager. Stakeholders must also maintain awareness of the project schedule status and review schedule change requests submitted by the project manager.

The Project Manager also reports schedule deviations and, if necessary, provides the Project Sponsor with options for getting the project schedule back on track and under control. The Project Sponsor has the authority to approve schedule changes brought forward.

Schedule Changes and Threshold

Once a schedule change is required, the Project Manager and the team meet to review and evaluate the change. The project team determines which tasks are affected, calculates the variance, and generates a list of possible alternatives for consideration. If, after the evaluation is complete, the Project Manager determines that any change exceeds the established thresholds or boundaries, a change request must be submitted and approved by the sponsor.

Change request to the project sponsor for approval is required under any of the two following conditions.

- The proposed change is estimated to reduce the duration of an individual work package by 8% or more, or increase the duration of an individual work package by 10% or more.
- The change is estimated to reduce the duration of the overall baseline schedule by 10% or more, or increase the duration of the overall baseline schedule by 8% or more.

Any change requests that do not meet these thresholds may be submitted to the project manager for approval.

Once the change request has been reviewed and approved, the project manager is responsible for adjusting the schedule and communicating all changes and impacts to the project team, project sponsor, and stakeholders. The project manager must also ensure that all change requests are archived in the project records.

Cost Management Plan

Project Name: Youth Development Center for the at Risk Youth of Belize City
Project Number: YDCBZ001

BELIZE
INTRODUCTION
COST MANAGEMENT APPROACH
PROJECT COST & MEASURING APPROACH
COST VARIANCE RESPONSE
COST ESTIMATION
PROJECT BUDGET

4.8 Cost Management Plan

Introduction

The cost Management is essential to control and monitor the budget of a project. In using this, the Project Manager along with the project team can estimate costs, allocate resources to the right areas, and control spending.

The Project Manager will be accountable for managing and reporting on the project's costs during the duration of the project. During the month-to-month project meeting, the Project Manager will meet with management to current and review the project's budget and spending for the previous month. Performance will be measured using earned value. The allocated funds allotted for the project through the Social Investment Fund is $250,000.00 Belize Dollars. As a result, the desired project must fall within the allocated funds.

Cost Management Approach

The cost management approach will assist in estimating, allocating, and controlling cost during the period of the project. Earned Value Management (E.V.M) calculations will be utilized to measure, manage and monitor the financial performance of the project. This will provide a snapshot of the youth center to determine if the project is ahead or behind schedule, and over or under budgeted. This will be done by calculating the EVM of the project by multiplying the percentage completed by the total project budget. The Project Manager is accountable for bookkeeping for cost deviations and offering the Project Sponsor with options for getting the challenge back on budget once the project is off budget. The Project Sponsor has the authority to make modifications to the project to keep within budget.

Project Cost and Measuring Approach

To manage the cost of the design and construction of the facility four metric indices from the Earned Value Management technique will be utilized. The approach for cost performance measurement is to use Earned Value Management (EVM) for measuring and controlling the project costs. The four (4) metrics include:

- Cost Variance (CV)
- Schedule Variance (SV)
- Cost Performance Index (CPI)
- Schedule Performance Index (SPI

Cost Metric	Green (Watch)	Yellow (Alert)	Red (Critical)
CPI	0.90 ≤ CPI ≤ 1.05	Less than 0.85 or Greater 1.10	Less than 0.80 or Greater 1.15
SPI	0.90 ≤ SPI ≤ 1.05	Less than 0.85 or Greater 1.10	Less than 0.80 or Greater 1.15

Figure 13: Cost Metric (Source: Compiled by Author)

- If CPI is over 1.00 it means it's under-budgeted, and if it's below 1.00 it's over-budgeted.
- SPI less than 1 indicates that the project lags from the schedule due to less earned value than planned value. SPI greater than 1 indicates the project is leading the time. It happens when the earned value is greater than the planned value.

Indication	**Response**
Green (Watch)	Project Manager is to highlight areas of concern and closely monitor
Yellow (Alert)	Project Manager to tighten cost control and expenditure
Red (Critical)	Project Manager is to perform project cost overview, inform stakeholders and present corrective actions to Sponsor for approval

Figure 14: Indication and Response (Source: Author Own Elaboration)

Cost Variance Response

Once the cost variance is identified, the Project Manager will give the Project Sponsor alternatives for corrective measures and will hand over a formal Cost Variance Corrective Action Plan to the Project Sponsor no later than three business days. The plan should outline the steps required to bring the project back under budget, along with how the plan's activities will be evaluated for efficacy. The overall Change Control Process for the project must be followed if the corrective measures to be performed lead to a change. Upon acceptance, the Cost Variance Corrective Action Plan will become a part of the Project Schedule and the project will be updated to reflect the counteractive actions.

Cost Estimation

The cost estimation for this project accounts for each element required for the project—from materials to labor—and calculates a total amount that determines a project's budget. The process contains the forecasting of financial and other resources needed to complete the project within the defined scope. These estimates were derived based on expert judgment made using information known at a given point in time and past projects, and include the identification and consideration of costing alternatives to initiate and complete the project. A ‘bottom-up’ approach was also used for preparing a detailed cost estimate of each cost component involved with each project activity. In the cost estimation process, cost trade-offs and risks were also taken into consideration.

Total Project Cost:

The table below outlines the design and construction cost for the Youth Facility

Chart 15: Project Construction Cost (Source: Author of the study)

	At Risk Youth Center for the Department of Youth Services		
Item	**Description**	**Cost**	
1	**Foundation**		
	-Materials	$7,000	
	-Labor	$5,040	$12,040
2	**Columns**		
	Materials	$7,500	
	Labor	$5,625	$13,125
3	**Ground , 1st Floor and Roof Beam**		
	-Materials	$24,500	
	-Labor	$18,375	$42,875
4	**Floor slab**		
	-Materials	$20,900	
	-Labor	$15,675	$36,575
5	**Windows & Doors**		
	-Materials	$9,000	
	-Labor	$6,750	$15,750
6	**Roof & Ceiling**		
	-Materials	$20,000	

	-Labor	$15,000	$35,000
7	**Walls, Stairs & Rails**		
	-Materials	$12,000	
	-Labor	$9,000	$21,000
8	**Finishing**		
	-Materials	$8,000	
	-Labor	$5,760	
9	Installation (AC, Solar, Electrical, Fire System)	$8,500	$22,260
10	Design & Approval Expenses		$5,000
	Total project cost estimate		**$203,625**

Project Budget

The budget for this project is detailed below. Costs for this project are presented in various categories:

Chart 16: Cost Overview (Source: Author of the study)

#	Description	Amount
1	Total Project Cost (excluding contingency)	$203,625
2	Contingency Reserve	$20,362.50
3	Total Project Cost Estimate (Baseline Amount) *[Cost Estimate + Contingency Reserve]*	$223,987.50
4	Management Reserve (10% of the Project Cost Estimate)	$22,398.75
5	**Total Project Budget**	**$246,386.25**

- The total budget shown in figure 4 indicates that the project cost falls within the funds allocated for the project by the Belize Social Investment Fund.

Risk Management Plan

Project Name: Youth Development Center for the at Risk Youth of Belize City
Project Number: YDCBZ001

4.9 Risk Management Plan

Introduction

This risk management plan will assist to identify, evaluate and plan for possible risks that may arise within the project management process. The risk factors stem from a variety of sources, including financial uncertainties, legal liabilities, technology issues, and management errors.

In light of this, the plan's goal is to create the basis within which the project team and other important stakeholders will identify risks and create a mitigation or risk response strategy to focus on the practical application of concepts of Project Risk Management.

Nonetheless, as with any project, a level of uncertainty will exist, and management needs to be prepared for such potential risks and create a responsive plan to each risk. A risk analysis is recognized as an important tool in project management and assists managers in achieving project goals in terms of time, cost, and quality.

Risk Management Approach

An approach to mitigate risk must be established, which consist of identifying the risks, analyzing the risk, and developing a risk response plan. A preferred method to be taken is that the team will score, and ranked the various risks. The most likely and highest impact risks are to be added to the project schedule to ensure that the Project Manager take the necessary steps to implement the mitigation response at the appropriate time during the schedule. A risk register will be developed to track and monitor the identified risks that may impact the project. By identifying risks early in the project, the team can take proactive steps to mitigate or avoid these risks and ensure the project’s success.

Risk Identification

The risk identification process is identifying and defining the potential risks, assessing the likelihood and impact of each risk, and developing a mitigation plan for the risk, especially the critical ones identified. There are several techniques that can be used to identify the risks, three of which will be utilized which is to brain storm, historical data expert judgment.

- **Expert Interview**

Expert Interviews were held which revealed several risks which were then mitigated by making changes to the project plan. The remaining risks are included in the Risk Register.

- **Risk Assessment Meeting**

A risk assessment meeting was held with key team members and stakeholders. The risks identified during this meeting were added to the project plan and Risk Register.

- **Historical Review of Similar Projects**

The project team reviewed the history of similar projects in order to determine the most common risks and the strategies used to mitigate those risks.

These techniques were applied to determine the risk factors during the creation of the subsidiary plans, and a comprehensive risk register was compiled as shown in chart 18 below. The risk register will be maintained by the Project Assistant under the responsibility of the Project Manager. The categories of risks relevant to this project, but not limited to them; cost, planning, stakeholder, procurement, and scheduling. A member of the project team will be assigned a risk to monitor and report to the Project Manager.

Roles and Responsibilities

The table below demonstrates the roles and responsibilities designed for this risk management plan.

Chart 17: Risk Management Roles & Responsibilities (Source: Author of the study)

Role	Responsibility
Project Manager	Acts as Risk Manager. Identify risks and their categories, analyse the impact of each risk and makes recommendations, continually monitors the activities for potential risks.
Project Team	Responsibility for Risk Management and Internal Control. It is responsible for deciding the risk strategy after identifying risks, analysing them and create a risk register. They are also responsible during execution, for monitoring risk triggers, responding to risks, identify and evaluate new risks.
Risk Owner	Assist in defining the risk response plan and ultimately accountable for ensuring the risk or the assigned risk is managed appropriately.
Project Sponsor	All risk should be presented to the project sponsor along with is mitigation plan.

Risk Prioritization

Risk prioritizing is the process and aim of identifying the most critical risks so they can be addressed first. Priorities will be set using the likelihood of a risk and the potential impact it poses on the success of the project. A major purpose of prioritizing risks is to form a basis for allocating resources to mitigate the risk. Therefore, to prioritize and determine the level of risk, a probability and impact matrix was utilized to determine the placement of each risk.

Risk Register Scores

Score	Priority	Key/Code
.01 - .07	Low	
.08 - .20	Medium	
.24 and above	High	

Probability and Impact Matrix Showing Risk Score (Probability x Impact)

		Threats					Opportunities				
Probability	0.90 V. High	0.05	0.09	0.18	0.36	0.72	0.72	0.36	0.18	0.09	0.05
	0.70 High	0.04	0.07	0.14	0.28	0.56	0.56	0.28	0.14	0.07	0.04
	0.50 Med	0.03	0.05	0.10	0.20	0.40	0.40	0.20	0.10	0.05	0.03
	0.30 Low	0.02	0.03	0.06	0.12	0.24	0.24	0.12	0.06	0.03	0.02
	0.10 V. Low	0.01	0.01	0.02	0.04	0.08	0.08	0.04	0.02	0.01	0.01
		0.05 V.low	0.10 Low	0.20 Mod	0.40 High	0.80 V.H	0.80 V.H	0.40 High	0.20 Mod	0.10 Low	0.05 V. low
		Negative Impact									Positive Impact

Figure 15: Probability and Impact Matrix (Source: Compiled by Author)

Risk Register

Chart 18: Risk Register (compiled by Author of the Study)

RBS CODE	**Risk Description**	**CATEGORY**	**PROBABILITY**	**IMPACT**	**LEVEL OF IMPACT**	**CONSEQUENCE**	**RISK RESPONSE STRATEGY**
Y1	Increase in cost of building materials	Finance	.3	.4	.12 Med	Revisiting of contractual agreements, funds will deplete causing projects delay	Need to access contingency fund or request funding through SIF
Y2	Failure to procure materials in time	Procurement	.3	.5	.12 Med	Project delays, cancelation of contracts from supplier, time overrun	Ensure more than one supplier is identified.
Y3	Poor design of the facility for infrastructural works	Planning	.2	.2	.4 Low	Poor quality work	Have design plan reviewed by key experts and subcontractors before final acceptance of design
Y4	Project Schedule is not clearly defined & understood	Scheduling	.4	.4	.16 High	Will lead to delays Delays can occur when the project's scope isn't clearly defined. This will create confusion and poor project direction.	Hold scheduling workshops with the project team so they understand the plan and likelihood of missed tasks is reduced. Share the schedule and go through upcoming tasks at each weekly project progress meeting.
Y5	Poor Stakeholders participation	Stakeholder	.3	.3	.9 Med	Can create barriers to success, key inputs may be left out and poor decision making may take place due to	Review stakeholders plan and identify key stakeholders and brief them in the importance of their participation.

Y6	Hurricane and or Natural disaster	Planning	.3	.5	.15 High	Damage to property, material, and equipment, major project delays.	Check if insurance is in place. Familiarize project team with emergency procedures. When cost effective put back up systems in place Utilize weekend days, 8 hours per day, and additional weekday hours, up to 4 hours more on normal time, to bring schedule back on track.
Y7	Delay in the release of project funds	Financial	.2	.3	.6Med	Can affect project timelines and milestones, vendors and stakeholders may lose interest in the project.	Have constant meeting to keep project sponsor up to date with project, ensure all milestones are met so that all plans are in place to receive disbursement.
Y8	Accidents in site	schedule	.3	.4	.12	Can cause schedule to be behind if project expertise becomes injured and new personnel's has to be hired	An insurance plan can be put in place for injury on the job.
Y9	Environmental Impacts	Planning	.2	.3	.6	Loss of sensitive vegetation or possible breeding, foraging and dispersal habitat for threatened species outside known impact area.	Seek advice from department of the environment.
Y10	Site Area	Planning	.2	.3	.6	Belize city is known to be below sea levels and shallow sand beds can identified during site investigation which will cause higher seepage rates and instability or be inappropriate for concrete structures.	Ensure proper planning and utilize key experts to do ground testing or if area is prone to flooding.
Y11	Change orders	Planning	.3	.5	.15	This can create a chaos if the change request is not communicated with key personnel's within the project	Ensure that all change request forms are utilized.
Y12	Lack of permits	Scheduling	.2	.4	.12	Slowing down of project until documentation is in place	Be sure to engage in all building approving bodies, Central Building

Risk Monitoring

The project team will meet every two weeks or as necessary to monitor and evaluate the risk at hand, and question—“is the response effective?” The team will also engage in risk audits to examine the risk responses' effectiveness and determine whether changes are required. Risk monitoring will be a continuous process throughout the life of this project. As a risk approaches the project schedule, the project manager will ensure that the appropriate risk manager provides the necessary status updates which include: the risk status, the identification of trigger conditions, and the documentation of the results of the risk response. The risk register will be reviewed at regular intervals and updated as necessary. This will aid in identifying new threats and detecting changing patterns in existing risks, which allows for a more active approach to risk management.

Quality Management Plan

Project Name: Youth Development Center for the at Risk Youth of Belize City
Project Number: YDCBZ001

BELIZE

INTRODUCTION
QUALITY MANAGEMENT APPROACH
QUALITY ASSURANCE AND ACTIVITIES
QUALITY CONTROL AND ACTIVITIES
PROJECT AUDIT
ROLES AND RESPONSIBILITIES

4.10 Quality Management Plan

Introduction

The purpose of this document is to create a quality management plan that describes the standards, roles, responsibilities, methodologies, tools and activities for quality management for the design and construction of a youth facility. The plan also utilizes the previously constructed plans to set standards that will regulate the quality of goods and services being delivered during the design and construction process. Three main stages of project quality management will be outlined as follows:

- Quality planning
- Quality control
- Quality assurance

The plan was developed and approved during the project planning phase to confirm major deliverable/milestone, acceptance criteria and manage approved project processes through the life of the project. The Project team will provide verification and validation of all project deliverables to be completed by the team

Quality Management approach

The quality management approach describes how quality will be managed from design to construction. This includes the specific processes, procedures, techniques, standards and responsibilities to be applied. All project specific quality standards for design and construction processes shall be defined, documented and understood by the Project Team. The Project Plan shall include all the quality documentation, which should be progressively transferred to operations.

- **Project Specifications**

Specifications developed by key experts (electrician, plumber etc.) are a must-read for those executing the work of the Youth Centre. This will provide an understanding of the requirements for delivery. For example, the concrete specification tells what grade of concrete for the construction.

- **Inspections**

  Inspections will be implemented for approval from the Project Manager before proceeding to the next step/phase. The Project Manager then communicates this information to the Project Team and Sponsor for an official sign off. The Project Manager and or Architect should carry out surveillance inspections for observation of ongoing works. For instance, they may talk to the Construction Engineer if they notice anything unsatisfactory or non-conforming.

Any member of the project team can identify quality improvements. For the purpose of determining the cost and benefit of any improvement, each recommendation shall be examined in order to establish its impact on the project upon implementation of an improvement, the Project Manager shall update any project documentation to contain improvements and should update organizational documentation which is affected by them.

Quality Assurance& Activities

Quality Assurance (QA) involves activities related to monitoring the effectiveness of the Quality Plan and checking that the work progresses within specified tolerances. These activities are the responsibility of the Project Manager.

Monitoring

- Checkpoint reviews on individual deliverables to ensure compliance with scope.
- If non-conformance is identified, the Project Manager will meet with the project team and define a plan to correct it.

The action defined in the plan will be included in the project actions log and tracked in the weekly status meetings, led by the Project Manager.

Tolerances

Tolerances are a range of variances from what was approved within which the Project Manager has freedom to act, without additional approvals from the Project Steering Committee or Project Sponsor. Any change whether internal or external to the Project that could impact the scope, schedule or cost has to be assessed by the Project Manager to determine whether the change is within or outside the tolerance limits. The Project Manager will schedule regularly occurring project, management, and document reviews. In these reviews, an agenda item will include a review of project processes, any discrepancies and/or audit findings and a discussion on process improvement initiatives.

Quality Control& Activities

Quality Control (QC) is used to detect variations and correct them. The project team has QC tasks and is involved in reviews and validations (tests). The Project Manager will monitor the effectiveness of the QC procedures and observe the review and testing processes. While QC discovers defects that must be corrected, the Project Manager follows up on the progress of the changes and corrective measures.

The following are types of QC activities to be considered for use during the project execution:

- **Walkthroughs:** Informal reviews requiring no advance preparation typically used to confirm understanding, test ideas and brainstorm.
- **Inspections**: Reviews of an individual deliverable, used to evaluate correctness, based on specified criteria.
- **Checkpoint reviews:** Reviews held at predefined points in the life cycle that evaluate whether certain quality factors are being adequately addressed in the system.

Project Audit

To ensure a well-managed and controlled project from design to completion, a light-weight audit process will be applied to project activities and tasks. The project audit strategy will be to implement audit activities that are simple, systematic, and iterative. The audit plan will examine and analyze the project team's execution of project processes to identify any issues, concerns, challenges, and/or opportunities and report them to the project manager to address. The goal of the audit process is to maximize the success of a project. The process is intended to ensure that project decision making is effective (every decision made produces a desired outcome), project activities are adequately performed and managed, and project governance and risk management meet requirements.

The Figure below is the quality audit log that will be used:

Planned Quality Review Date	Activity Reviewed	Issue(s)	Resolution

Figure 15. Quality Audit (Source: Author of the study)

Quality Management Roles and Responsibilities:

Chart 19: Quality Roles & Responsibilities (Source: Author of the study)

Roles	Responsibility
Project Sponsor	• Responsible for approving all quality standards for the Project • Review quality reports and assist in resolution of escalated issues • Sign off authority on the final acceptance of the project deliverables • Review and approve deliverables • Approve change requests • Review assurance and quality logs, monitor deliverables
Project Manager	• Collaborate with the project team in the development of quality metrics and standards • Schedule and perform evaluations of process quality assurance reviews • Update the Quality Management Plan and maintain the overall quality standards for the design and construction of the center. • Ensures the implementation of QA activities throughout the project • Review assurance and quality logs, monitor deliverable
Project Team Members	• • Assist the Project Manager in executing the Quality Plan and QA activities • Participate in QA reviews as required

	• Develop, implement and review corrective actions for non-compliance issues as requested • Collaborate with the project team in the development of the quality plan, including quality metrics and standards • Ensure resolution of non-compliance instances and escalate any issues that cannot be resolved within the project • Identify lessons learned that could improve processes for future products
Contractors & Sub Contractors	• Review and acceptance of deliverables. • Adhere to the design and construction plan • Report any issue to the lead contractor or project manager • Report and inconsistencies with the design and construction
Project Steering Committee	• Project Oversight

Quality Control Measurements:

All processes must be measured and fall within the established standards. The below logs will be used by the project team to conduct measurements, and will be maintained for use as supporting documentation for the project's acceptance.

Quality Assurance Log

Exception ID Number	Review Date	Process Reviewed	Findings	Resolution	Resolution Date
QA--1	1.10.23	Procurement of cement	PSI was not as agreed	Inform supplier to return product	1.12.23
QA--2	1.11.23	Issue log	No documentation logged	Calls urgent meeting with project team, contractors and site workers.	1.11.23

Figure 16: Quality Assurance Log (Source: Author of the study)

Quality Control Log

Exception ID Number	Review Date	Deliverable Reviewed	Findings	Resolution	Resolution Date
QC--1	April 3rd, 24	Fire safety Installation	2 smooker missing	Call meeting with installation company, review contract and procurement terms	April 5th , 2023
QC--2	May 4th , 24	Roofing	Less screws used	Review procurement of roofing screws, meet with contractor to install screws were necessary.	May 6th , 2023

Figure 17: Quality Control Log (Source: Author of the study)

If discrepancies are found, the Project Manager or Assistant Project Manager will meet with the key personels and review the identified discrepancies.

5. CONCLUSIONS

The document addressed the ten knowledge areas as specified by the Project Management Institute to specify how the project will be carried out, monitored and controlled. The plans cover all aspects of best practice in managing projects for the purpose of designing and constructing an At- Risk Youth Development Center; an effort to convince central government, GOB, that the project aims to deliver many benefits to young people as it seeks to promote the rehabilitation and reintegration of youth in conflict and also focus on producing productive men and women of society. A center that will satisfy all safety, environment and building standards through sustainability.

Below are the results of the Project Plan to develop the Deign and Construction of the Youth Center created by the Planning Unit of DYS.

1. A Project Charter includes a detailed statement outlining the scope, an approximate schedule, a budget estimate, anticipated risks, key stakeholders, assumptions, and constraints, of the project.
2. A Scope Management plan was developed, describing in detail how the project will be defined, developed, monitored, controlled, and verified and the work to be done to meet all the requirements of the project. This deliverable was created for a specific objective along with the WBS, roles and responsibilities of stakeholders.
3. The Project Communication Plan was designed to include all interested parties and develop their role and responsibilities by use of a template for easy identification. A communication matrix was also created detailing all project stakeholders a systematic approach outlining who needs to communicate with whom in order for your project to be completed.
4. A Resource Management Plan has been drawn up that will initiate a process to choose, acquire, manage and release resources for the estimation of activity assets and allocation of resources.
5. A comprehensive Procurement Management Plan was developed describing the procurement approach, identification, constraints,types of necessary contracts to be

used, and performance matrix criteria,all to ensure the successful delivery of goods and services.

6. The Stakeholder Management Plan, which has been developed to identify, classify, manage, and engage stakeholders throughout the project. A Stakeholder Register and Stakeholder Analysis have been developed to provide more information and the level of engagement of each stakeholder for a more effective engagement .
7. A Schedule Management Plan or Schedule Managerment Plan was developed highlighting the processes used to determine a scheduling method. The approach, duration, milestones and control process to ensure that the project remains within its scope.
8. A Cost Management Plan was developed to ensure that the project remained within its specific budget; therefore, an approach to manage cost was developed, along with its variances, esitmations and budget.
9. The Risk Management plan was created to outline all possible risks, along with their responses, the management approach towards mitigating those risks, prioritized risk are to be given utmost priority as outlined in the risk matrix register .
10. Quality Management Plan was the last objective to be developed since it ensures compliance based on the previously constructed plans. It outlines themanagement approach, standards,quality assurance, quality control, and the quality control measures that are to be applied in all cases in order to ensure that the quality of the center is built in accordance.

6. RECOMMENDATIONS

Upon completion of the Project Management Plan and review of the results, the following recommendations were developed by the Planning Unit from DYS for the Belize Social Investment Fund.

1. Once the scope is updated, all related costs and subsidiary plan affected by the change should also be updated to ensure projections, practices and processes reflect the change.
2. Overall project documentation is important not only to ensure eventual project success but also to track progress, facilitate communication among the stakeholders, and assist in good general governance. Therefore, all knowledge area plans are necessary and should not be omitted.
3. DYS' Planning Unit team should implement a project database or management information system for smooth accessibility to important data and to facilitate research.
4. A comprehensive geotechnical investigation plan consisting of a permeability test, groundwater monitoring and test pits; should be completed to ensure site area suitability. Belize City is considered to be below sea level and is known for failed project due to sea level; therefore, testing is important to ensure projects safety measures are observed.
5. Since the Project Management Plan was developed by the Planning Unit, The Coordinator should be considered a member of the project team to ensure that the

team conducts all project planning related activities in order to enhance the proper management of the project during its lifecycle.

6. It is mandatory that the Department of Youth Services carry out a survey to collect data that represents the need for the youth center, a survey using a wider youth and other stakeholders' population to define and justify the need to design and construct such facility and make informed decisions or draw conclusions.
7. Sustainability needs to be integrated in a practical and meaningful way into different knowledge. It is recommended that a sustainability plan be developed since this is an SDG. The initiative should be prioritized based on impact, effort, cost and feasibility. It should consider processes, materials, people, policies and projects related to energy, waste, and the design and construction of packaging, supply chain, transportation, food, water, and community and employee well-being.

7. VALIDATION OF THE FGP IN THE FIELD OF REGENERATIVE AND SUSTAINABLE DEVELOPMENT

Regenerative design is becoming the new darling of the sustainability movement. The objective is to create a building that is self-sustaining and produces positive impacts. It requires designers to embrace a vision of architecture that is "doing good" rather than merely "less bad." (Morton, March 18, 2022)

This strategic plan for the Department of Youth Service encapsulates a few of the sustainable development goals, such as: ending poverty, zero hunger, health and well- being, and access to education, as pillars for developing its programs. The facility aims to provide equitable and sustainable improvement of the quality of life of all young persons, and especially the most vulnerable or at-risk youth of society. The project supports the sustained development of young people and delivers productive citizens, who in turn will develop the country and sustain a better standard of a better standard of living for all.

According to the Solar Impulse Foundation, sustainable construction aims to reach a high level of performance in terms of the environmental, economic, and societal impacts of the concerned buildings. The facility also takes into consideration these factors and will apply design practices to work towards achieving net-zero carbon, water, and waste in many facets of the built environment. It will be designed to make use of solar panels to capture energy from sunlight. The use of electricity from solar will contribute to clean air, less use of fossil fuel, and release of carbon dioxide and pollution of the atmosphere; hence, reducing the carbon footprint, and to collect water through a recycling system to reduce the cost of water consumption. According to a World Green Building Council report, savings in a sustainable

building can be very significant: from 25 to 35% energy savings, and up to 39% water savings compared to a conventional building.

The construction of a sustainable youth center aims to bring comfort and health to its occupants though the use of materials of high sanitary and environmental quality.

P5 Analysis

The tool, P5 analysis helps to determine the impact on the sustainable development of the project process and the project product. P5 provides a measurable framework programs, and projects that are relevant to sustainability reporting.

P5 Impact Analysis
Impacts

This impact will improve the project's outcome(s) from a sustainability perspective.
5 = Strongly agree 4 = Agree 3 = Neutral 2 = Disagree 1 = Strongly disagree

Category / Subcategory / Element	Description (Cause)	Potential Impact	Impact Score Before	Proposed Response	Impact Score After	Change
2.1 Product Impacts						
2.1.1 Lifespan of the product	The construction of the youth facility will be designed to integrate the physical and digital infrastructures that provide optimal services in a reliable, cost effective, and sustainable manner with a reliable and efficient solar , ac, electrical and fire system for energy saving an effiency	Maintenance can be neglected Long-term proven technology with low operational risks and maintenance expenses.	2	obtain the e service of key experts for the to upkeep the maintainnce of solor and other electrical systems and other efficient state of the art equipment	5	3
2.1.2 Servicing of product	State of the art building with energy saver and other electrical systems	Qualified expertise for knowledge of upkeep and maintainance	2	Higher key experts for upkeep of state of the art equiptment	4	2
2.2 Process (Project Management) Impacts						
2.2.1 Effectiveness of project processes	Timley and proper inspection from approving bodies for compliance	Having poor constrution of poorly installed equipment for efficiency	3	paused at every phase to ensure proper inspection by authorities, or hold stragetic meeting with key expertise	5	2
2.2.2 Efficiency of project processes	The implemenation of proper practices utilizing expert judgment	Delay of project deliverables	3	Ensure proper vetting process of employees for competencies	4	1
2.2.3 Fairness of project processes	The implemenationof the Communication management plan which included emails, meeting , emails and internal communication	poor communication and this can lead to many misunderstandings causing mistakes or completing tasks incorrectly or not on time	4	Improve meens of communication and implemented to use of whatsapp groups which seems to be an easier and faster mean of communication and have biweekly meetings as opposed to monthly	5	1
		Product and Process Average	**2.8**		**4.6**	**1.8**
3 People (Social) Impacts						
3.1 Labor Practices and Decent Work						
3.1.1 Employment and staffing	Inadequate staff with technical competence to ensure effective implementation of project components	Key areas of the project may not be efficiently executed.	5	Professional training on energy saving equipment, climate resilient building.	2	-3
3.1.2 Laborfmanagement relations	N/A					
3.1.3 Project health and safety	Poor safe to work procedures and Illegal dumping of waste	Occupational related accidents and incidents, illness related to waste	3	Implementation of Safe to Work procedures by the Project Manager in compliance with Health and Safety Procedures and Operational guidelines as governed by the country.	1	-2
3.1.4 Training and education	Contractors/builders/architects/engineers may have limited knowledge on state of the art equipment	Limited training		To empower & Trained contractors/builders/architects/engineers to be equipt with the necessary skills to work in highly technological spaces		
3.1.5 Organizational learning	failue the share lessons learned and good working practices	Limited benefits of process improvements and implementation	3	Share best practices and lessons learned from other areas in initial stages	1	-2

3.1.6	Diversity and equal opportunity	Recruitment of gender balanced staff	Employees can feel alienated from the organization	3	Eliminate barriers to gender-specific recruitment	1	-2
3.1.7	Local competence development	Heavy reliance on out-of-country outsourcing	Braindrain and locals do not beenfit from employment and remian unemployed	4	Ensure that priority is given to residents in the areas covered under the project	1	-3
3.2	**Society and Customers**						
3.2.1	Community support	Community members not interested in stakeholder engagements	Apathy among residentslcommunit members in relation to the project	2	Widespread communication engagement and awareness campaigns	4	2
3.2.2	Public policy compliance	Minimial focus on reporting to stakeholders on compliance matters	Decreased accountability to public and community stakeholders	3	Incorporate transparency and accountability measures,(internallya nd externally of the project)	4	1
3.2.3	Protection for indigenous and tribal peoples	N/A					
3.2.4	Customer health and safety	Customers have a right to non-hazardous products	Legal actions can be taken against the project and its executing agency	2	Health and Safety Commpliance procedures and guidelines developed for the team; collaborate with Ministry of health	4	2
3.2.5	Product and service labeling	N/A					
3.2.6	Market communications and advertising	Limited communication modes used to approach advertising and public awareness to reach stakeholders	Stakholders are unaware of the changes implemented under the project.	1	Ensure that communication plan is developed and follwoed using various modalities and mediums to communicate changes under the project.		-1
3.2.7	Customer privacy	Youth do not feel safe at the facility	At risk youths may have issues getting along with each other due to previous conflicts	4	Increase maximum security and screen at risk youth before they utilize the facility, coordonate with the police deparmtent	1	-3
3.3	**Human Rights**						
3.3.1	Non-discrimination	Non-equity of work duties	Undefined project scope and deliverables	1	Enforce the zero tolerance on non-discrimition behavior	3	2
3.3.2	Age-appropriate labor	Underaged employees working on contruction activities	Incompliance with child labor laws	1	Ensure that requisite IDs and background check documents are produced (due dilience checks are carried out)	2	1
3.3.3	Voluntary labor	N/A					
3.4	**Ethical Behavior**						
3.4.1	Procurement practices	Budget creep for resources under project and not be within quiality standards	Delay in project schedule,implementation and benfits derived	2	ensure proper procurement planning by taking into account the availibilty on local and external market. Engage with local material suppliers to publicize the project's support for sustainability and share accurate information about the project's activities.	4	2
3.4.2	Anti-corruption	Suppliers bidding process is not well documented and share with family and friends	Lack of trust from the investors and potential bidders	1	Implement shared software with investors and avoid conflict of interest; hold procurment meetings	2	1
3.4.3	Fair competition	Contracts for private companies not fairly advertised and distributed	Unfair awarding of contracts and attraction of the right talent	1	Engage with material suppliers to publicize the project's support for sustainability and share accurate information about the project's activities. Post general procurment notices to national, regional and international websitesprocurement typel method.	3	2
				People Average	**2.4**	**2.4**	**-0.2**
4	**Planet (Environmental) Impacts**						
4.1	**Transport**						
4.1.1	Local procurement	Availability of resources, goods and services in the local market	There may be a lack of variety available locally, limited quantity for a project of that magnitude	3	With proper planning and notices, local service providers can prepared to supply variety and quantity necessary	5	2
4.1.2	Digital communication	The need for improved communication infrastructure and digital practicies	Reduced travel and convenient and efficient communication	2	youths will be able to make themselves more available, they will have more time to be productive and maintain a healthier sustainable life.	4	2
4.1.3	Traveling and commuting	Young persons having to commute long distances on a daily basis.	Decreased number is youth access the facility	2	provide transportation	5	3
4.1.4	Logistics	Ineffective implementation of policies and practicies that would reduce air pollution and traffic congestion	Reduction in products and materials that cannot be reused, cleaner environment and reduced cost in transport	3	A cleaner safer space to be productive	4	1

4.2 Energy							
4.2.1	Energy consumption	Reduce energy consumption by using energy efficient supplies and materials	Lower energy cost with minimal environmental impact	2	Implement energy efficient design practivies and investing in energy efficient materials, fixtures and supplies	5	3
4.2.2	CO2 emissions	Proper management of practices and procedures put in place to manage and reduce the carbon footprint from project activities.	Contributes to the health and safety of employees as well as help minimize the effects of natural disasters and slow down the process of climate change	3	Invest in alternative energy where energy can be reused and conserved simultaneously	4	1
4.2.3	Clean energy return	Implement processes to generate clean energy and secondary energy sources options.	Reduce the amount of fuel needed for electricity and reduction of green house gas emissions	2	Invest in an alternative energy source	4	2
4.2.4	Renewable energy	Implement natural practicies to generate renewable energy recourses throughout the project	Reduction in impact of climate change and less air and water pollution	2	Sustainable energy efficient practices as well as educating staff of the importance of energy efficiency within the office space	5	3
4.3 Land, Water, and Air							
4.3.1	Biological diversity	Consideration of living organisms within our eco-system throughout the lifecycle of the project	Healthy and productive eco system that is able to thrive in a resistant environment	4	Healthy environment that protects natural resources and utilizes them in a productive way	5	1
4.3.2	Water and air quality	Preservation of the impact on the water table and naturally flowing bodies of water in surrounding areas or in close proximity	Helps to preserve the natural elements and encourages design and planning around these elements	3	Integrated natural elements the project and improved air quality	5	2
4.3.3	Water consumption	Controlled and necessary use of water during construction phase as well as implementation of water peserving practicies	Lower environmental damage and reduce cost of water use on the project	2	Invest in grey water treatment and water saving practicies	5	3
4.3.4	Sanitary water displacement	The proper management and handling of water run off and grey water treatment	Reduction and revention of water related illnesses	2	Healthier staff where production can be maintained	5	3
4.4 Consumption							
4.4.1	Recycling and reuse	Implementation of waste minimizing policies and responsible use of materials	Protects the natural resources and reduce pollution	2	Utilization of reusable natural products and materials within the project and work space	4	2
4.4.2	Disposal	Enforce proper disposal practicies to reduce contamination and illness	Irresponsible disposal can cause contamination of the soil, air and water	2	Responsible and reliable disposal system that preserves the environment	4	2
4.4.3	Contamination and pollution	Utilization of eco friendly materials and products to reduce contaminants	Contamination of our eco system and increased sicknesses and diseases	3	Utilization of materials and products that do not contaminate the environment	4	1
4.4.4	Waste generation	Implement practicies that actively reuse and recycle products to reduce environmental impact	Attract unwanted pests and induce harmful bacteria and viruses	2	Encourage waste minization by promoting a circular economy withing the company	4	2
				Planet Average	**2.4**	**4.5**	**2.1**
			10000				
5 Prosperity (Economic) Impacts							
5.1 Business Case Analysis							
5.1.1	Modeling and simulation	A physical, as well as Mathematical Modeling and Simulation done in order to show the Project Sponsors and Stakeholders, the potential viability of the product against any alternatives.	Provides the Project Sponsors and Stakeholders, with the reason why the Project/Product should be invested in.	4	Invest (buy-into) in Project	5	1
5.1.2	Present value	The future value of the facility will be greater than its present value; the investment of worthwhile	Provides the stakeholders with financial proof that the project/product is favorable.	4	Buy-in to project	5	1
5.1.3	Direct financial benefits	Copletion within estimated budget of USD$125,000.00 Completion within scheduled time of days Reduction in annual Utility costs & reduction in energy consumption	Helps to secure future funding, should the Product seek to secure either private or public funding.	4	Implement project, instead of alternative	5	1
5.1.4	Return on investment	The Project can use the Cash Flow Return on Investment (CFROI), to look at its performance, considering inflation.	Proves to Investors that the Project/product can achieve financial sustainability	4	Maintain a positive ROI by communicating the strategic goals to the stakeholders, so each can play their part	5	1
5.1.5	Benefit-cost ratio	NA					
5.1.6	Internal rate of return	NA					
5.2 Business Agility							
5.2.1	Flexibility/optionality	Utilization of alternate energy sources in times when renewable energy may not be available	May pay tremendous amount in electricity and generator fuel for short-term	3	Try to plan in advance to plan for the production or acquisition of renewable energy in the long run	5	2
5.2.2	Business flexibility	Utilizing more digital infrastructure Use of advanced smart technology	Reduction in human resoure costs. Improvement in communication infrastructure	4	Keep abreast of and utilize new technologies, and ensure that staff is also trained in these emerging areas for operational purpose, as well as young perons	5	1
5.3 Economic Stimulation							
5.3.1	Local economic impact	Promoting resource conservation, including energy efficiency, renewable energy, and water conservation features	Improved renewable energet	4	Promote awareness of sustainable energy and recycling through education, to youths and staff	5	1
5.3.2	Indirect benefits	Creating a healthy and comfortable environment Providing beautification and recreational facilities for all youths.	collaborate in NGOs and other agencies to promote capacity building in youths , especially in academics and entreprenuerhship	4	Maintain community participation Provide Scholarships for at young persons across the country.	5	1
				Prosperity Average	**3.9**	**5.0**	**1.1**
				Overall Average	**2.7**	**3.9**	**1.1**

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APPENDICES

Appendix 1: FGP Charter

CHARTER OF THE PROPOSED

FINAL GRADUATION PROJECT (FGP)

1. Student name

Indira Loague

2. FGP name

A Project Management Plan to design and construct smart building to be used as a youth development center for the at risk youth population in Belize City.

3. Application Area (Sector or activity)

Construction

4. Student signature

5. Name of the Graduation Seminar facilitator

Roger Valverde Jimenez

6. Signature of the facilitator

7. Date of charter approval

February 26th , 2023

8. Project start and finish date

January 9th , 2023	July 9th , 2023

9. Research question

What programs and smart features are necessary for a youth development center that will attract young persons to the facility?

10. Research hypothesis

The construction of a smart development center will produce more disciplined and productive youths while reducing the crime rate in Belize?

11. General objective

To develop a design and construction of a youth development center that will integrate smart applications and sustainability whilst adhering to the guidelines of the Central Building Authority.

12. Specific objectives

1. To articulate communication plan that will be used as a guide to disseminate the proper information in timely manner or as requested.
2. To design a resource management plan to assign expertise, and other resources to different work areas or packages and to track efficiency.
3. To develop a project charter to plan for efficiency and effectiveness in the execution of the project
4. To develop a procurement management plan to issue contractual works to vendors to that are in line with the project requirements whilst procuring sustainable goods and services.
5. To create a stakeholder's management plan to identify stakeholders and effectively engage them throughout the project life cycle based on their level of interest and impact to the project.

6. To generate a schedule management plan to prioritize task based on importance and urgency and track work packages.

7. To develop a risk management plan to identify potential low, medium, and high risk and address responses to those risks.

8. To design a scope management plan to ensure that the project is executed as per smart, budget, and time requirements.

9. To develop a quality management plan to meet policies, criteria, and procedural expectations when construction a smart sustainable building.

10. To create a cost management plan to ensure that works and the allocation of resources are within budget.

13. FGP purpose or justification

The purpose of developing a Project Management Plan for the Design and Construction of a Youth Development facility is for the purpose of bringing young people together for capacity building whilst strengthening their capabilities; specifically the at risk youths. Young persons in Belize makes up seventy percent of its population with the age range being 14 to 29 years old.

To date, there is no single integrated facility where young persons can go to access resources that should be available to them such as vocational learning and training, music, sports, entrepreneurship, tutoring, information technology, culinary arts, mentorship, and other certified programs.

The idea for such a project stems from the crime situation in Belize, mainly in Belize City where young men and women are engaged in criminal activities or are at risk to being affected due to their socio economic condition.

Therefore, to bring this facility to light, the project management plan will be developed to pilot the execution and control phases such as the project's goals, objectives, and scope of work, milestones, risks and resources. The building will be designed to integrate the physical and digital infrastructures that will provide the necessary services to young people so that they become productive and self-sustainable citizens of Belize.

14. Work Breakdown Structure (WBS). In table form, describing the main deliverable as well as secondary, products or services to be created by the FGP.

1. FGP
    1.1 FGP profile
        1.1.1 Introduction
        1.1.2 Theoretical framework
        1.1.3 Methodological framework
        1.1.4 Preliminary bibliographical research
        1.1.5 Annexes
        1.1.5.1 Schedule
        1.1.5.2 Bibliography
    1.2 FGP development
        1.2.1 **Project Management plan**
            1.2.1.1 Project Charter
            1.2.1.2 Scope Management Plan
            1.2.1.3 Communication Management Plan
            1.2.1.4 Resource Management Plan
        1.2.1.5 Procurement Management Plan
            1.2.1.6 Stakeholders Management Plan
            1.2.1.7 Schedule Management Plan
            1.2.1.8 Cost Management Plan
            1.2.1.9 Risk Management Plan
        1.2.1.10 Quality Management Plan
        1.2.2 Chapter V Conclusion
        1.2.3 Recommendation
        1.2.4. Tutors Approval
    1.3 Reading by Reviewers
        1.3.1 Reviewers Assignment Request
            1.3.1.1 Assignment of Two Reviewers
            1.3.1.2 Communication
            1.3.1.3FGP Submission to Reviewers
    1.4 Reviewers Works
        1.4.1.1 Reviewers 1: FGP Reading
        1.4.1.2 Reviewers 1: Report
        1.4.1.3 Reviewers 2: FGP Reading
        1.4.1.4 Reviewers 2: Report
    1.5 Adjustment
        1.5.1 Report for Reviewers
        1.5.2 FGP Update
        1.5.3 Second Review by Reviewers

1.6 Presentation to Board of examiners evaluation.

15. FGP budget

The estimated cost based on information gathered to complete the FG is $600USD
This includes:

Telephone, Transportation, Printing, Mailing, Internet connection, Software acquisition, Food, Hotel.

16. FGP planning and development assumptions

1. The Student will be able to apply knowledge learned from the Master's Program and apply it to the Final Graduation Project.

2. Funding for the Final Graduation Project will be available to meet printing, shipping and all other associated cost.

3. All project deliverables will be met since all information needed from organizations, ministries and agencies should be available.

4. The scope for the Final Graduation has been set by UCI and will not be modified.

17. FGP constraints

CONSTRAINTS:

1. Unwillingness of stakeholders to participate in surveys to obtain information needed of the FGP; this will delay the scope of work, deliverable and even validity of information.

2. The maximum time allotted for the completion of the FGP is constricted and will restrict information gathering.

3. The cost associated to carry out the FGP is unpredictable and cannot truly be budgeted for due to economic changes such as fuel prices, printing and transportation and shipping costs.

4. The quality of the FGP is determine by the evaluators of UCI and not solely on the student.

18. FGP Development Risk

RISKS:

1. The Covid 19 pandemic is rising again in Belize; this may cause a delay to the access of information needed for the FGP. Visitation to different agencies for information may be limited.

2. Reliability of shipping agencies mailing of the GFP; whenever a package is stored or in transit it could be damaged, lost or stolen. The loss of the FGP document is likely to be costly for the student to resend and the cause a delay in the final deliverable.

3. Carrying out an FGP during the hurricane season can cause a delay with the acquisition of information and feedback from stakeholders.

4. Implementing a project management plan assuming that the technical and infrastructural skill will be available.

19. FGP main milestones

Milestones are related to deliverables on the second level (deliverables) and third level (control accounts) of the WBS of section 14 of this Charter. At the same time the deliverables are related to the specific objectives (in the case of the FGP please include the times for the tutorship reviews as well as for the readership).

Deliverable	Estimated start date	Finish estimated date
Project Charter	January 9 , 2023	February 10t 2023
Work breakdown structure	January 23 , 2023	February 3 2023
Chapter 1: Introduction	February 3 ,2023	February 9t , 2023
Chapter II: Theoretical Framework	February 10, 2023	February 15, 2023
Chapter III: Methodological Framework	February 16 2023	February 21, 2023
Executive Summary	February 17, 2023	February 18, 2023
Annex: Bibliography Schedule	February 22, 2023	March 25, 20234
Tutor Assignment	March 26, 2023	March 27, 2023
Adjustments of Chapters	March 27, 2023	April 1, 2023
Chapter IV: Developments	April 2, 2023	May 15, 2023
Project Management Plan:	April 2, 2023	May 15, 2023
Project Charter	April 2, 2023	April 5, 2023
Scope Management Plan	April 6, 2023	April 9th 2023
Communications Management Plan	April 10, 2023	April 13th 2023
Resource Management Plan	April 14, 2023	April 16th 2023
Procurement Management Plan	April 17, 2023	April 20, 2023
Stakeholders Management Plan	April 21, 2023	April 25th, 2023
Time Management Plan	April 26, 2023	April 29, 2023
Cost Management Plan	April 30, 2023	May 6, 2023
Risk Management Plan	May 7, 2023	Mary 10, 2023
Quality Management Plan	May 11, 2023	May 15, 2023
Chap V. Conclusion	May 16, 2023	May 18, 2023
Chapter VI: Recommendation	May 17,2023	May 18, 2023
Tutor Approval	May 23, 2023	May 31, 2023
Reading by Reviewers	May 31, 2023	June 2, 2023
Reviewers Assignment Request	May 31, 2023	June 4, 2023
Assignment of two reviewers	May 31, 2023	June 2, 2023
Communication		

Deliverable	**Start Date**	**End Date**
FGP Submission to Reviewers	June 2, 2023	June 4, 2023
Reviewer 1:	June 5, 2023	June 20", 2023
FGP Reading	June 5, 2023	June 10, 2023
Reader 1 Report	June 16, 2023	June 20, 2023
Reviewer 2 :	June 5, 2023	June 10, 2023
FGP Reading	June 5, 2023	June 10, 2023
Reader 2 Report	June 16, 2023	June 20, 2023
Adjustments	June 21, 2023	July 1, 2023
Report for Reviewers	June 21, 2023	June 30, 2023
FGP Update	June 22, 2023	June 27, 2023
Second Review by Reviewers	June 28, 2023	July 1, 2023
Presentation to Board of Examiners	July 2, 2023	July 4, 2023
Final Review by Board	July 2, 2023	July 7, 2023
FGP Report	July 8, 2023	July 9th , 2023

20. Theoretical framework

20.1 Estate of the "matter"

According to the Wiley Online Library, 2017 "Youth development centers (YDCs) are located both in the community and in residential facilities. These centers provide treatment, education, leadership development, and rehabilitative services to juveniles. Rooted in positive youth development, the approach upholds the belief that youth are our most important asset."

The project seeks to implement a sustainable design to reduce negative impacts on the environment, and the health and comfort of persons utilizing the building, thereby improving building performance and reduce consumption of non-renewable resources, minimize waste, and create healthy, productive environments. According to the article, sustainability in construction, published September, 2022, refers to Sustainable construction as "building with renewable and recyclable resources and materials. During construction projects, care must be taken to reduce waste and energy consumption where possible and protect the natural environment around the site."

The Project Management Plan focuses on Youth Development Center is to be based in Belize City which has the highest rate of at-risk youth, due to poverty and gang related issues. The building will be design to incorporate Academic and Vocational Education, Health and Wellness, Entrepreneurship and Job Preparations, Sports & Recreation which are in line with the operational pillars of the Department.

20.2 Basic conceptual framework

Project management Plan, Central Building Authority certification, sustainable designs and construction, etc.

21. Methodological framework

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
To develop a Project Charter which will detail a statement of the scope, objectives, and participants in a project.	Project Charter	Primary Review of programs Meeting with Management Secondary PMBok PMI database	Analytical	Expert judgment. Data gathering Brainstorming Checklists Focus groups Interviews.	Limited information from project plan to complete the project charter
To design a Scope Management Plan to ensure that the project is executed as per smart, budget, and time requirements.	Scope Management Plan	Primary Meeting Minutes for review, information and action. Secondary PMBOK	Analytical	Focus groups Surveys Expert Judgment Data Analysis Data Gathering	A time to gather all necessary information to develop the scope management plan to be cannot be collated in the time span and is a lengthy process
To articulate a Communication Plan that will be used as a guide to disseminate the proper information in timely manner or as requested.	Communication Management plan	Primary: Sending updated information via email and	Descriptive	Expert Judgment Communication Methods Information management Communication Skills	Unavailability of key personnel to get information

		during meeting. Secondary PMBOK Guide Newspapers		Data Representation	
To design a Resource Management Plan to assign expertise to different work areas or packages and to track efficiency.	Resource Management Plan	Primary Personal interview with key personnel, in design and construction Secondary: PMI, 2016, 2017	Analytical	Data Representation Interpersonal and Team Skills Virtual team and training Pre-assignment	Budgeted cost for labor subjected to change due to various reason
To develop a Procurement Management Plan to issue contractual works to vendors to that are in line with the project requirements whilst procuring sustainable goods and services.	Procurement Management Plan	Primary: Personal interview with key personnel, in design and construction Meeting with DYS personnel	Descriptive	Expert Judgment Data Analysis Data Gathering Source Selection Analysis Advertising Bidder Conferences	Not enough agents available to choose materials from

		Secondary: Internet Research on Procurement			
To create a Stakeholder's Management Plan to identify stakeholders and effectively engage them throughout the project life cycle based on their level of interest and impact to the project.	Stakeholders Management plan	Primary One on One meeting with Key stakeholders Secondary Internet Information PMBOK Guide	Analytical	Stakeholders Analysis Power and interest Power and influence Influence and impact	Stakeholder requirements and level of interest changes
To generate a Schedule Management plan to prioritize task based on importance and urgency and track work packages	Schedule Management plan	Primary emails, texts and calls to save time and receive quick information	Quantitative	Leads and Lags Critical Path Method Schedule Network Analysis Leads and Lags	Time to develop the Schedule Management plan was not sufficient

		Secondary PMI database			
To create a Cost Management Plan to ensure that works and the allocation of resources are within budget	Cost Management	Primary Interview, Observations, Questionnaires, Correspondence, Books, Newspaper Articles Secondary Review Articles	Quantitative	Cost Analysis Expert Judgment Data Analysis Decision Making	Limited information costing Cost are subject to change
To develop a Risk Management Plan to identify potential low, medium, and high risk and address responses to those risks.	Risk Management Plan	Primary Reports such as statistical data, Newspaper Articles accessed via the internet Secondary Review construction articles	Analytical	Risk Categorization Expert Judgment Data Analysis Data Gathering Audits	Limited resources on risk for construction smart buildings
To develop a Quality Management Plan to meet policies, criteria, and procedural expectations when construction a smart sustainable building.	Quality Management plan	Primary Interview, Observations, Questionnaires, Corresponde	Descriptive	Design of experiments Cost of Quality Expert Judgment Decision Making	Unavailability of key experts to check quality

		nce, Books, Newspaper Articles Secondary Review Articles			Mixed information on preferred quality

22. Validation of the work in the field of the regenerative and sustainable development.

Regenerative design is becoming the new darling of the sustainability movement. The objective is to create a building that is self-sustaining and produces positive impacts. It requires designers to embrace a vision of architecture that is "doing good" rather than merely "less bad." (Morton, March 18, 2022).

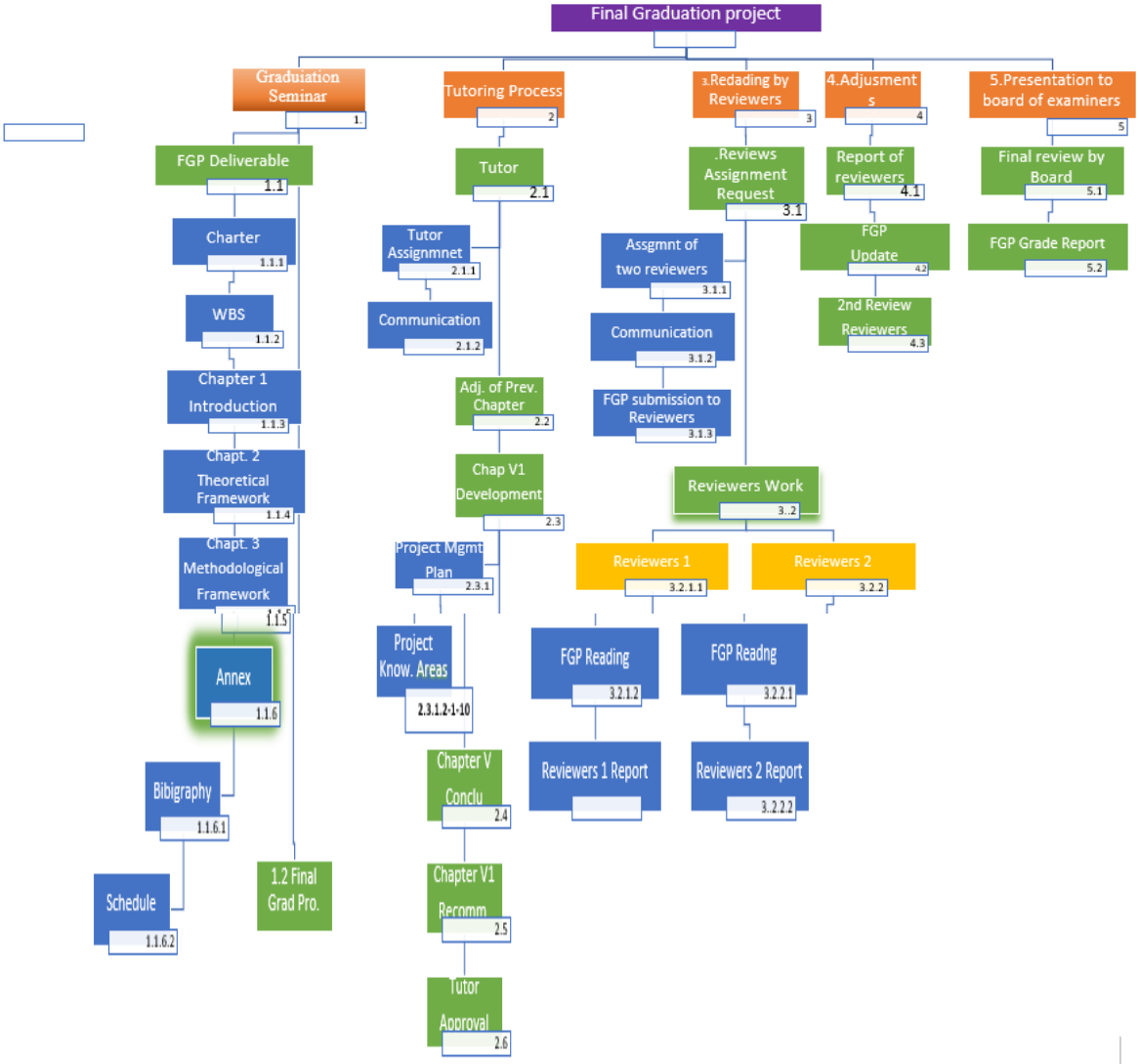
This strategic plan for the Department of Youth Service encapsulates on a few of the sustainable development goals such as: ending poverty, zero hunger, health and well- being, and access to education, as pillars to developing its programs. The facility aims to provide equitable and sustainable improvement of the quality of life of all young persons, and especially the most vulnerable or at-risk youth of society. The project supports sustained development of young people and delivering productive citizens who in consequent will develop the country and sustain a better a better standard of living for all.

According to the Solar Impulse Foundation, sustainable construction aims at reaching a high level of performance in terms of the environmental, economic and societal impacts of the concerned buildings.

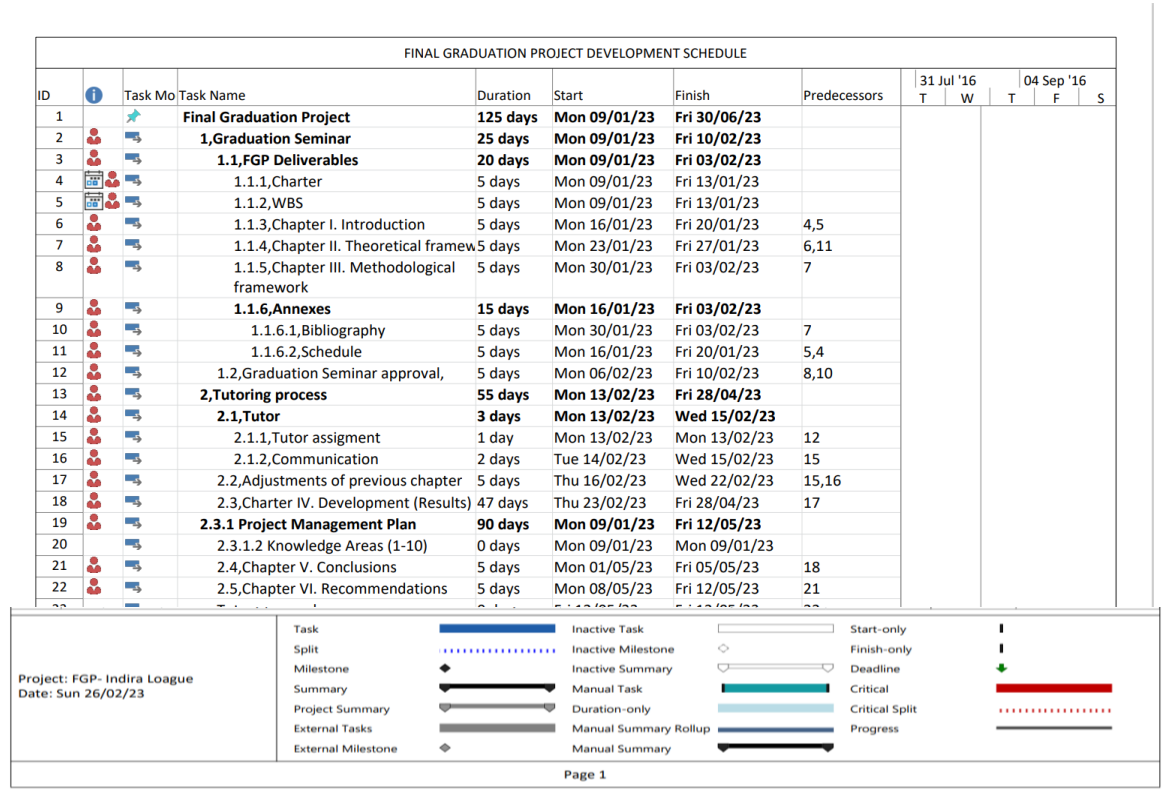
The facility also takes into consideration these factors and will apply design practices to work towards achieving net-zero carbon, water, and waste in many facets of the built environment. It will be deigned to make use of solar panels to capture energy from sunlight; hence, reducing the carbon footprint, and to collect water through a recycling system to reduce the cost of water consumption.
The construction of a sustainable youth center aims to bring comfort and health to occupants by the use of materials of high sanitary and environmental quality.

Appendix 2: FGP WBS

- WBS must include tasks from the complete FGP life cycle, starting from the graduation seminar and ending with the presentation to Board of Examiners.
- Must be created in WBS Chart pro tool or other layout approved on the WBS practice standard.



Appendix 3: FGP Schedule



FINAL GRADUATION PROJECT DEVELOPMENT SCHEDULE

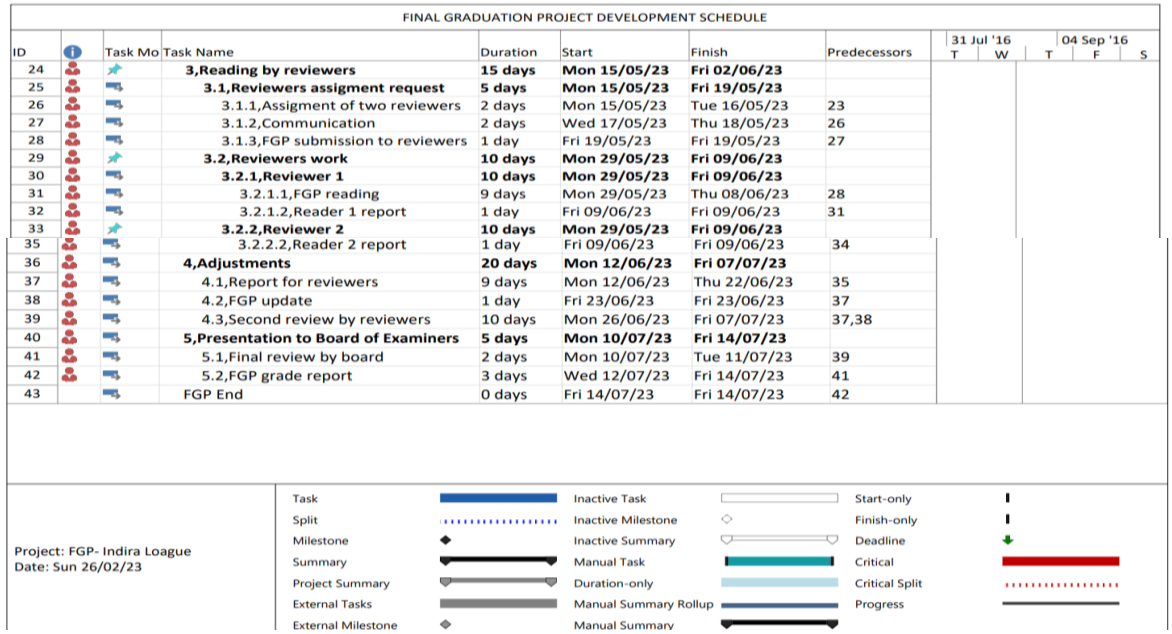
ID	Task Mo	Task Name	Duration	Start	Finish	Predecessors
1		**Final Graduation Project**	**125 days**	**Mon 09/01/23**	**Fri 30/06/23**	
2		**1,Graduation Seminar**	**25 days**	**Mon 09/01/23**	**Fri 10/02/23**	
3		**1.1,FGP Deliverables**	**20 days**	**Mon 09/01/23**	**Fri 03/02/23**	
4		1.1.1,Charter	5 days	Mon 09/01/23	Fri 13/01/23	
5		1.1.2,WBS	5 days	Mon 09/01/23	Fri 13/01/23	
6		1.1.3,Chapter I. Introduction	5 days	Mon 16/01/23	Fri 20/01/23	4,5
7		1.1.4,Chapter II. Theoretical framew	5 days	Mon 23/01/23	Fri 27/01/23	6,11
8		1.1.5,Chapter III. Methodological framework	5 days	Mon 30/01/23	Fri 03/02/23	7
9		**1.1.6,Annexes**	**15 days**	**Mon 16/01/23**	**Fri 03/02/23**	
10		1.1.6.1,Bibliography	5 days	Mon 30/01/23	Fri 03/02/23	7
11		1.1.6.2,Schedule	5 days	Mon 16/01/23	Fri 20/01/23	5,4
12		1.2,Graduation Seminar approval,	5 days	Mon 06/02/23	Fri 10/02/23	8,10
13		**2,Tutoring process**	**55 days**	**Mon 13/02/23**	**Fri 28/04/23**	
14		**2.1,Tutor**	**3 days**	**Mon 13/02/23**	**Wed 15/02/23**	
15		2.1.1,Tutor assigment	1 day	Mon 13/02/23	Mon 13/02/23	12
16		2.1.2,Communication	2 days	Tue 14/02/23	Wed 15/02/23	15
17		2.2,Adjustments of previous chapter	5 days	Thu 16/02/23	Wed 22/02/23	15,16
18		2.3,Charter IV. Development (Results)	47 days	Thu 23/02/23	Fri 28/04/23	17
19		**2.3.1 Project Management Plan**	**90 days**	**Mon 09/01/23**	**Fri 12/05/23**	
20		2.3.1.2 Knowledge Areas (1-10)	0 days	Mon 09/01/23	Mon 09/01/23	
21		2.4,Chapter V. Conclusions	5 days	Mon 01/05/23	Fri 05/05/23	18
22		2.5,Chapter VI. Recommendations	5 days	Mon 08/05/23	Fri 12/05/23	21

31 Jul '16 | 04 Sep '16 — T W T F S

Project: FGP- Indira Loague
Date: Sun 26/02/23

Task	Inactive Task	Start-only	
Split	Inactive Milestone	Finish-only	
Milestone	Inactive Summary	Deadline	
Summary	Manual Task	Critical	
Project Summary	Duration-only	Critical Split	
External Tasks	Manual Summary Rollup	Progress	
External Milestone	Manual Summary		

Page 1



FINAL GRADUATION PROJECT DEVELOPMENT SCHEDULE

ID	Task Mo	Task Name	Duration	Start	Finish	Predecessors
24		**3,Reading by reviewers**	**15 days**	**Mon 15/05/23**	**Fri 02/06/23**	
25		**3.1,Reviewers assigment request**	**5 days**	**Mon 15/05/23**	**Fri 19/05/23**	
26		3.1.1,Assigment of two reviewers	2 days	Mon 15/05/23	Tue 16/05/23	23
27		3.1.2,Communication	2 days	Wed 17/05/23	Thu 18/05/23	26
28		3.1.3,FGP submission to reviewers	1 day	Fri 19/05/23	Fri 19/05/23	27
29		**3.2,Reviewers work**	**10 days**	**Mon 29/05/23**	**Fri 09/06/23**	
30		**3.2.1,Reviewer 1**	**10 days**	**Mon 29/05/23**	**Fri 09/06/23**	
31		3.2.1.1,FGP reading	9 days	Mon 29/05/23	Thu 08/06/23	28
32		3.2.1.2,Reader 1 report	1 day	Fri 09/06/23	Fri 09/06/23	31
33		**3.2.2,Reviewer 2**	**10 days**	**Mon 29/05/23**	**Fri 09/06/23**	
35		3.2.2.2,Reader 2 report	1 day	Fri 09/06/23	Fri 09/06/23	34
36		**4,Adjustments**	**20 days**	**Mon 12/06/23**	**Fri 07/07/23**	
37		4.1,Report for reviewers	9 days	Mon 12/06/23	Thu 22/06/23	35
38		4.2,FGP update	1 day	Fri 23/06/23	Fri 23/06/23	37
39		4.3,Second review by reviewers	10 days	Mon 26/06/23	Fri 07/07/23	37,38
40		**5,Presentation to Board of Examiners**	**5 days**	**Mon 10/07/23**	**Fri 14/07/23**	
41		5.1,Final review by board	2 days	Mon 10/07/23	Tue 11/07/23	39
42		5.2,FGP grade report	3 days	Wed 12/07/23	Fri 14/07/23	41
43		FGP End	0 days	Fri 14/07/23	Fri 14/07/23	42

31 Jul '16 | 04 Sep '16 — T W T F S

Project: FGP- Indira Loague
Date: Sun 26/02/23

Task	Inactive Task	Start-only	
Split	Inactive Milestone	Finish-only	
Milestone	Inactive Summary	Deadline	
Summary	Manual Task	Critical	
Project Summary	Duration-only	Critical Split	
External Tasks	Manual Summary Rollup	Progress	
External Milestone	Manual Summary		

Appendix 4: Philologist Letter

Department of English
Banana Bank
Belmopan City
Belize, Central America

June 22, 2023

Universidad Para La Cooperacion Internacional
Avendia 15, Calle 35
Barro Escalante, San Jose 10101
Costa Rica

To Whom it May Concern:

Re: Philological Review of Indira Loague's Thesis Submission

I have read and reviewed the Final Graduation Project entitled "A Project Management Plan Design and Construct An At-risk Youth Development Center in Belize" prepared by Ms. Indira Loague and submitted in partial fulfilment of the requirements for the Master's in Project Management (MPM) Degree at UCI.

I have considered the standard of academic writing and the use of English in the document. I find the language and expression therein to be lucid and precise. Syntax is sophisticated and correct throughout. Spelling is accurate and the register appropriate for work at this level. Overall, the fluency of writing is proficient, precise and mature. The scholarly apparatus is accurate, consistent and well-judged. The document appears complete and logically organized.

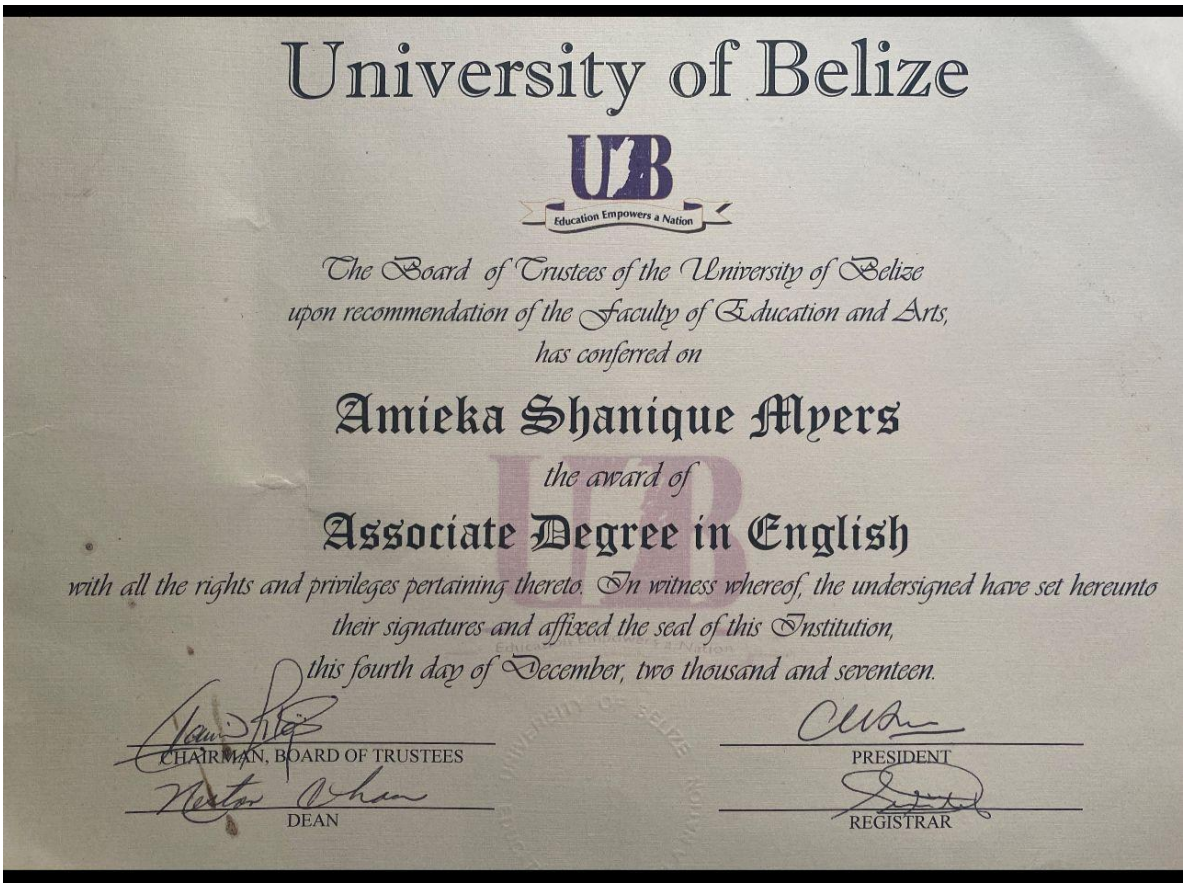
Should any further information regarding these comments be required or should the thesis committee wish to discuss any aspect of my evaluation, I would be available to assist.

Sincerely,

A.Myers

Amieka Shanique Myers
English Lecture
Department of English
Belmopan Baptist High School

Appendix 4: Philologist Qualification



University of Belize

Education Empowers a Nation

The Board of Trustees of the University of Belize
upon recommendation of the Faculty of Education and Arts,
has conferred on

Amieka Shanique Myers

the award of

Associate Degree in English

with all the rights and privileges pertaining thereto. In witness whereof, the undersigned have set hereunto their signatures and affixed the seal of this Institution, this fourth day of December, two thousand and seventeen.

CHAIRMAN, BOARD OF TRUSTEES

PRESIDENT

DEAN

REGISTRAR