UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

FINAL GRADUATION PROJECT

Project Management Plan for the Creation of a Business Incubator Model for the City of Belmopan

Keyla Magaña

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Jorge Trejos

TUTOR

Bolivar Solórzano

REVIEWER No.1

Eduardo Lima

REVIEWER No.2

Keyla Magaña

STUDENT

STUDENT'S SIGNATURE

DEDICATION

The imagination is a factory of unlimited resources, and the world an exciting playground with unlimited possibilities.

- Sean Patrick

I dedicate this thesis to my mother who assured me there is nothing I can't do. To Edras and Sueden who were with me through it.

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My sincere gratitude goes to my tutor Jorge Trejos who provided knowledge only a person with a passion for Project Management can provide. To my aunt Rosio Burgos for all her Technical support. Thank you goes to Ralston Frazer, City Administrator and friend who always encouraged me, and to the Local Economic Development staff who were always supportive.

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ABBREVIATIONS AND ACRONYMS

Actual Cost	AC
Belizean Dollar	BZD
Belmopan Business Association	BBA
Belmopan City Council	BMPCITCO
Belmopan's Local Economic Development Strategy	BLEDS
Belmopan Municipal Development Plan	BMDP
Belize National Development Framework	Horizon 2030
Caribbean Local Economic Development Project	CARILED
Cost Performance Index	CPI
Cost Variance	CV
Earned Value	EV
Earned Value Management	EVM
Federation of Canadian Municipalities	FCM
Final Graduation Project	FGP
Human Resources	HR
Information Technology	IT
International Standards Organization	ISO
Local Economic Development	LED
Micro Small and Medium Enterprise	MSME
National MSME Policy	NMSMEP
Performance Measurement Baseline	PMB
Planned Value	PV
Probability and Impact Matrix	PXI
Project Management Body of Knowledge	*PMBOK® Guide*
Project Management Information Systems	PMIS
Project Management Institute	PMI
Reconstruction Development Corporation	RECONDEV
Resource Breakdown Structure	RBS
Schedule Performance Index	SPI

Social Institute of Belize	SIB
Total Quality Management	TQM
United States Dollar	USD
University of Belize	UB
Work Breakdown Structure	WBS

EXECUTIVE SUMMARY (ABSTRACT)

The City of Belmopan, incorporated as a municipal structure in the year 2000, is the administrative capital of the Caribbean and Central American Country of Belize. This relatively new city has been focusing in providing a contemporary approach to service delivery to its residents. The Council no longer focuses solely on maintenance and infrastructure issues, but has acknowledged the relevance and importance of promoting the economic growth of the individual citizenry. Since 2015, it has been focusing in providing the business community with services aimed towards the promotion of Local Economic Development (LED). The new focus in managing the city and its citizens targets micro, small and medium enterprises and recognizes them as engines for the economic prosperity of the city. As the entity representing the embodiment of community progress, it is onerous on the local government's authority to promote business development services piloted through project management practices.

However, in practice, the project management maturity of the municipality is minimal. Generally, recognized best practices outlined by the Project Management Institute (PMI) were a new element considered by the local government body and its administration for the development and planning of municipal projects. Projects implemented did not take into consideration the important value of having a properly outlined project management plan. Neither did they consider the contributing factor that project management plans play in overall project success. Without a guiding map, the projects implemented lacked the sound planning components that provide a competitive advantage to the execution of projects. Herein lay the major problem needing a solution.

This final graduation project was developed with the ultimate purpose of defining a project management plan that will serve to facilitate the development and subsequent implementation of a Business Incubator Model for the City of Belmopan. The development of the project management plan was developed and defined following standards and practices outlined by the Project Management Institute. The project management plan that will result in a business incubator model, contributes to the sound execution of the Local Economic Development Strategic Development Plan 2015-2020 that envisions a Belmopan in which the adequate planning of pilot initiatives provide a robust foundation for project implementation. The plan was developed in a concise but thorough manner to compliment and ascertain actions to carry out the initiative.

It was because of this that the general objective of this final graduation project was the development of a Project Management Plan for the creation of a Business Incubator Model for the City of Belmopan in Belize. The plan was developed in order to contribute to building a strong micro and small enterprise ecosystem that would in turn support job creation and would therefore generate economic development for the city. To develop this plan, various subsidiary management plans were drafted. These included the Scope Management Plan, Stakeholder Engagement Plan,

Communications Management Plan, Resource Management Plan, Quality Management Plan, Risk Management Plan Schedule Management Plan, and Cost Management Plan. Together all these subsidiary plans create the overarching project management plan that served to describe in detail how a model for a business incubator will be achieved. However, for the purposes of this project the executing, controlling, and closing process groups will not be utilized. The sound rationale behind this decision was because a separate project will be debeloped for the creation, construction, and implementation of the business incubator. It is in that project that execution and monitoring will be carried out. Another exclusion of importance is the omission of Project Integration Management and Project Procurement Management, integration was not because the development of a Project Management Plan already falls under the purview of integration under the activities carried out in the planning group (*PMBOK® Guide* 6th Edition, 2017 p25), and was supported due to the linear sequence in subsidiary plan development, Procurement Management on the other hand was excluded from the scope by the project sponsor, as it was established that only human and physical resources within the municipality were allowed to be used for this plan development.

The development of this project management plan utilized various research methodologies inclusive of analytical, quantitative and qualitative research methods. The subsidiary management and engagement plans were developed on the premise of critical thinking and analytical perspectives to bring an adequate determination of what would work best for the development of the project management plan. The entreprenuerial ecosystem, the relationship between sponsors and stakeholders,and the authenticities of the Belmopan community were carefully taken into consideration.The qualitative methodology provided a narrative description that was the solid foundation for most of the application of the analytical and critical thinking perspectives. On the other hand to be as precise and as accurate as possible quantitative methods were utilized for items directly involved with the scope, time, cost and quality of the project.

To conclude it has been ascertained that the Belmopan City Council is in need of implementing project management best practices to solidify their project development and execution capacities. The creation of this project management plan, compromised of each individual subsidiary management plan and provided insight on what are quantifiable requirements neccesary develop a business incubator model. Is is anticipated that during execution of the plan, the model of the business incubator will be attained providing a solid foundation for an important project that will consolidate the City of Belmopan as an entreprenuer and business-friendly city. Also, is expected that the development of this plan will be the basis on which other project management plans will be created and will contribute significantly towards the organization’s quest in promoting local economic development.

The recommendations per plan provide a basis as to what additional material would reinforce it. This will allow for the overall growth in project management optimization. The implementation of the recommendations would solidify not only this plan but the overall project management capacities within the human resource spectre of the council. It is recommended that the council strengthen their project management maturity by tailoring each subsidiary management plan to the project in hand, and by so doing increase the rate of project success. That will lead to a municipality is versed in project management best pratices and offer contemporary and essential services to its citizenry.

1. INTRODUCTION

1.1. Background

The City of Belmopan, also known as “the Garden City”, is one of the smallest capital cities in the world. The city incorporated as a municipality in 2000, has become one of the fastest growing municipalities in the country with an average growth rate of 6.26% per year, well above the nation’s average of 2.05% (SIB, 2017). The Garden City, located in the heart of the country, hosts the administrative buildings, the national University of Belize and, is the seat of government. It is also the centre of diplomatic activity. The municipality serves as a nationwide hurricane shelter for times of disaster. These features contribute to the rapid annual growth-rate, and pose distinctive threats, as well as significant opportunities to the local economy.

Figure 1: Image - Aerial View of the City of Belmopan (Urban Master Plan, 2017)

Since 2015, the municipality has taken a hands-on approach in fostering an enabling environment for the business ecosystem. In 2017, it institutionalized Local Economic Development as a municipal department, which would focus solely on facilitating an optimal environment for the execution of business within the City. In so doing, the municipality acknowledges the vital role it plays in supporting businesses and fostering Micro, Small & Medium Enterprise (MSME) start-up and expansion that will increase income and reduce unemployment.

In its pursuit to boost the local economy, the municipality, through its participatory approach principle, developed a 5 year Local Economic Development Strategy. This strategy embodies special emphasis projects which will contribute to the overall LED goal. One of the projects that was identified through this venture was the Business Incubator. Business Incubators serve as transitional physical spaces in which small, and start-up businesses get access to a location in which they can promote their product or service, and have direct access to business support services. The incubators offer crucial services at minimal or no cost to the start-ups to facilitate their growth period during their start-up phase, this is usually the most difficult phase. By offering business support services, incubators stimulate and assist the growth of businesses, thereby affecting the local economic landscape of the community in a positive manner.

The development of a business incubator model aligns with the city's commitment to building a thriving economy as can be seen in the Belmopan's Local Economic Development Strategy (BLEDS) vision. "The City of Belmopan…Youthful, vibrant, peaceful, environmentally friendly and diverse community, serving as Belize's Administrative and Educational Centre, fostering a robust and sustainable economy and offering the highest quality of life." (BLEDS, 2015). There is a much needed, specialized focus on the relationship between the municipal services and the direct effect they can have on the economy of the city.

The development of a project management plan for the creation of a business incubator model also aligns with the Belize National Development Framework Horizon 2030. Pillar number 3 (Horizon, 2030 p23) speaks to the national government's desire for a resilient economy. Some of the key economic goals relate to the development of a strong, small business sector, a strong work force, and a strong corpse of entrepreneurs. The national government through Horizon 2030 acknowledges that in order to make this a reality, strong and strategic management plans are necessary for projects to increase the rate of success of business related projects.

The National MSME Policy 2008 furthermore demonstrates the national and local government's commitment to improving micro, small and medium enterprises by stating their importance in the following excerpt. *"MSME development has moved slowly but deliberately towards the top of the public discourse and agenda in Belize…the prevailing opinion is that MSME's represent a very important share of the economic activity in Belize, and are considered an important employer in the labour force."* (NMSMEP, 2008). In lieu of this, the local government of Belize is advocating for the development of a Project Management Plan for the Creation of a Business Incubator Model to serve as the roadmap necessary for future project implementation.

1.2. Statement of the problem

The project management maturity at the council is minimal. Hence there has been less than optimum application of project management best practices within the planning, delivery and execution of municipal related projects. Projects planned are executed without a proper project management plan and without an appropriate roadmap. Projects carried out lack appropriate structure. Herein lies the major problem. In addition, the lack of structured project management plans pose a significant threat to the success rate of municipal projects.

In practice, project management plans are a new concept to the administrative arm of the municipality; there is no specific requisite that makes them an organizational tool for project development. The Local Government Authority, as the entity responsible for the implementation of community, infrastructural and social projects is depriving itself of an opportunity to maximize its efficiency. As the primary administrator of human and financial resources, it is imperative that the council prioritizes and focuses on ways to be more effective when it comes to project management as it embarks on both internationally funded projects and also projects owned by the municipality.

The absence of project management plans as reference documents at the Belmopan City Council (BMCITCO) can also serve as an opportunity to be seized. The non-existence of such document allows the thorough implementation of best practices that have been successfully validated by the Project Management Institute. This provides a blank canvas to tailor a project management plan that can be used as a reference for future project planning. This in turn will contribute to the overall project management maturity of the council, and will significantly contribute to appropriate project planning. Above all, it will enhance the satisfactory implementation of projects, systematic monitoring and control of each venture. All of this will contribute to a competitive advantage for project success.

1.3. Purpose

In order to provide holistic business incubator services, the local authority must first develop a Project Management Plan for the Creation of a Business Incubator Model. The creation of this Project Management Plan is the primary purpose of this undertaking. The development of said plan will delineate specific guidelines and benchmarks for the successful implementation of the project. It will provide the municipality with a well-designed blueprint that will serve as a roadmap to create the incubator model for the City of Belmopan.

The plan will delineate in detail, how the project will be conducted and systematically monitored throughout its life cycle. It will be structured to allow it to respond to changes in the environment, and it will be agile to project a way forward as the project goes through its progressive elaboration. Taking into account that the municipality is accountable to its stakeholders, then the elaboration and execution of a well-developed management plan becomes paramount.

The project management plan will be designed in such a way that when the execution phase is at hand, the plan will serve as the primary baseline resource. If used effectively, it will serve to improve the efficacy of the project management team as it allows for a participatory approach of stakeholders through a guided framework for providing a much-needed service. The plan will directly guide the scope of the project, cost of execution, the schedule, quality control, communication factors, risk challenges, and stakeholder participation. Integration and procurement management were not included and the rationale behind this can be seen in page xi. All of the above provide a meticulous, strategic and detailed design of the management plan which is fundamental for the overall success of the project, as it will present a platform to serve as a cemented foundation for the operation of the incubator model.

1.4. General objective

To develop a Project Management Plan for the creation of a Business Incubator in Belmopan City, Belize in order to build a strong, micro and small enterprise ecosystem that supports the creation of jobs and opportunities that promote economic development.

1.5. Specific objectives

1. To develop a Scope Management Plan to establish the parameters of what will be included within the project. It will outline how the scope will be defined and developed.

2. To establish a Stakeholder Engagement Plan to indentify the stakeholders who will directly be impacted or who have the potential to impact project execution.

3. To draft a Communication Management Plan to establish how project information will be managed, and how mediums and targets will be addressed.

4. To create a Resource Management Plan that will guide the project on how to categorize, allocate, manage, release and maximize resources.

5. To develop a Quality Management Plan that will outline how the quality methodologies and standards will be implemented in the development of the business incubator model.

6. To develop a Risk Management Plan to establish risk management interventions and delineate how these actions will be structured and accomplished throughout the project.

7. To elaborate a Schedule Management Plan that will establish the criteria and the activities to develop, monitor and control the project schedule.

8. To create a Cost Managemement Plan to establish how costs will be planned, structured and managed in order to align to the allocated municipall budget.

2. THEORETICAL FRAMEWORK

2.1 Company/Enterprise framework

2.1.1 Company/Enterprise background

The City of Belmopan is one of the only two planned cities built in the Americas in the twentieth century (Kearns, 1973, p 187). The development and construction of a new capital is always a very ambitious undertaking with social, political, economic and cultural implications in a country's society. Belize was formerly known as British Honduras when the capital city was inaugurated in 1970. The main reason for the designation of a new capital city was done to ensure security from the threats of hurricanes which plagued Belize City, the former capital of Belize.

During the period of 1970 to 2 000, the Reconstruction Development Corporation (RECONDEV) was the statutory agency designated to manage the affairs of Belmopan. During the period in which the city was managed without an established local government system, the residents intensely requested a change towards a municipal government structure. It was because of this, that a popular referendum was held in 1999. It was during this referendum that the residents voted in a majority towards the change of Belmopan into a municipality with the full fledged authority of a local government.

It was under the Statistical Instrument number 12 of 2000, that the National Government hereto delegated the complete management authority to a City Council. The City was formally incorporated in the year 2000 under the Belmopan City Council Act, Chapter 86. The Local Government body was established under a perpetual succession system, where a Mayor and six Councillors would form the executive body as elected officials and where the daily operations of the city would be presided by the Mayor, City Administrator and the Administrative Arm. (Belmopan City Council Act, 2000, p 10)

The Local Government Authority is currently responsible for managing 8,100 acres of land, inclusive of the 12 administrative sections in Belmopan. This typology of subdivisions was developed to better manage the affairs of the city. These 12 sections are subsequently subdivided into precincts, which are essentially the neighbourhoods of Belmopan. Section E, corresponds to Central Belmopan and it is an area comprised of the ring road, where most of the cities activities take place and where the incubator will be hosted. (BMDP, 2014, p13)

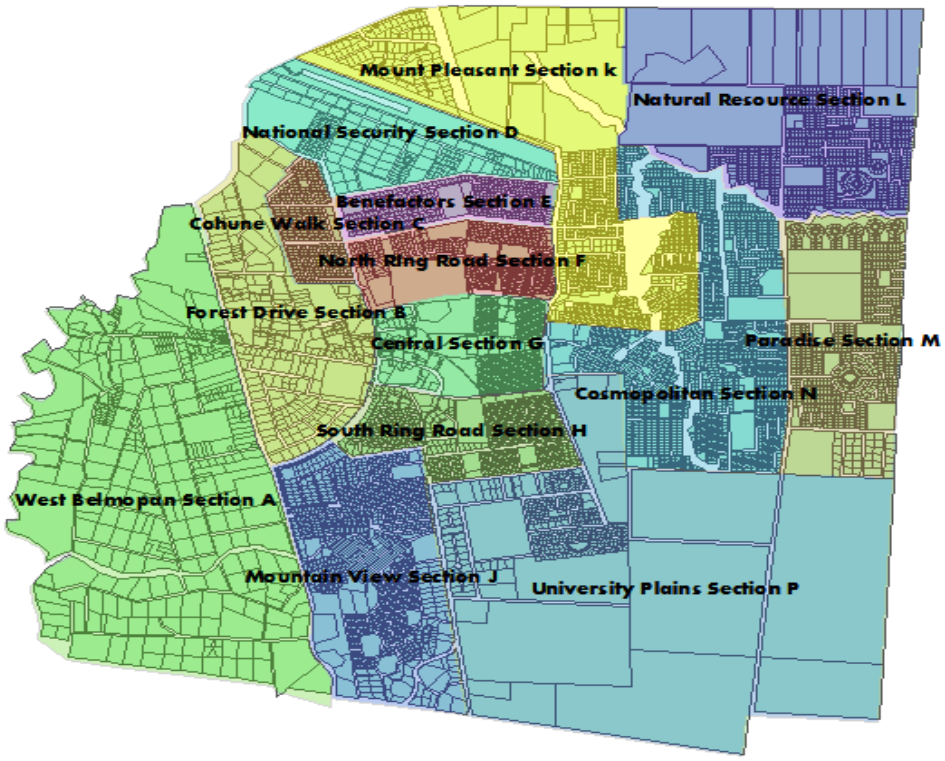

Figure 2: Map – Administrative Division of Belmopan (BMDP, 2014)

The daily management and operation of the entire City is currently the sole responsibility of the Belmopan City Council. The National Ministry that directly presides over all municipalities inclusive of the City of Belmopan is the Ministry of Labour, Immigration, and Local Government.

2.1.2 Mission and vision statements

An organization's vision and mission are enduring statements of purpose that distinguish them, and provide a roadmap that defines the quest and what can be achieved. Both the mission and vision are tools of intent used to strategically align the organization on a trajectory to success.

The vision on which an organization is based, provides the driving force that enables it to visualize and articulate what the organization wants as its future. It is important to have a well-defined vision that will serve as a compass marking the course forward towards longevity and posterity. In lieu of this, the Belmopan City Council has established their vision as:

Vision

"Our Vision for Belmopan is a safe, clean, green, quiet, healthy and modern city developed on the basis of co-ordinated urban planning under a master plan which provides equal opportunity for all residents to realize their human potential and to raise their children in a family-oriented environment." (BMPCITCO HR Policy, 2016)

In addition, the Harvard Business Review in its December (2012) publication stated *"…the mission statement gives people a sense of how their efforts will contribute to the lives of the customers, communities, and the world they impact*" These statements should be living concepts that should trickle from the executive, to an organization's management, into all its human resources. Hence, the Belmopan City Council has outlined its mission as follows:

Mission

"The Belmopan City Council will provide infrastructure, services and an environment conducive to growth and development and enhancement of the quality of life for the people. The Council is committed to being Transparent, Accountable, Efficient, Professional and Courteous and to showing respect and concern for individual

dignity while stimulating participation and cooperation within the community." (BMPCITCO HR Policy, 2016)

The Development of a Project Management Plan for the Creation of a Business Incubator Model focuses on a very important aspect of the vision, which is a coordinated and planned approach to development. The municipality has placed significant efforts towards the development and creation of planning methodologies that would assist overall city planning. In this instance, special focus is given to the development of a project management plan for the subsequent implementation of a special project.

It is crucial that the mission resounds within the human resources of the municipality so that the development and execution of the project management plan is seen as a service that provides added value to the overall efforts and strategic pursuit of the City Council. The project management plan will be a tool to foster growth and development that can be ascertained in a logical and coordinated approach, for the delivery of community-based services.

2.1.3 Organizational structure

The Belmopan City Council operates on a traditional hierarchical organizational structure, where authority and power is delegated from the top tier positions in the hierarchy to subsequent levels. In practice, the individual positions directly respond to their superiors, and provide guidance on execution to the secondary and tertiary positions. Administratively, the Belmopan City Council has one chief City Administrator that directs and leads the strategic alignment of the council towards its goals, oversees the daily operations of the council, and is the direct connection between administration and the council’s executive compromising of the Mayor and Councilors.

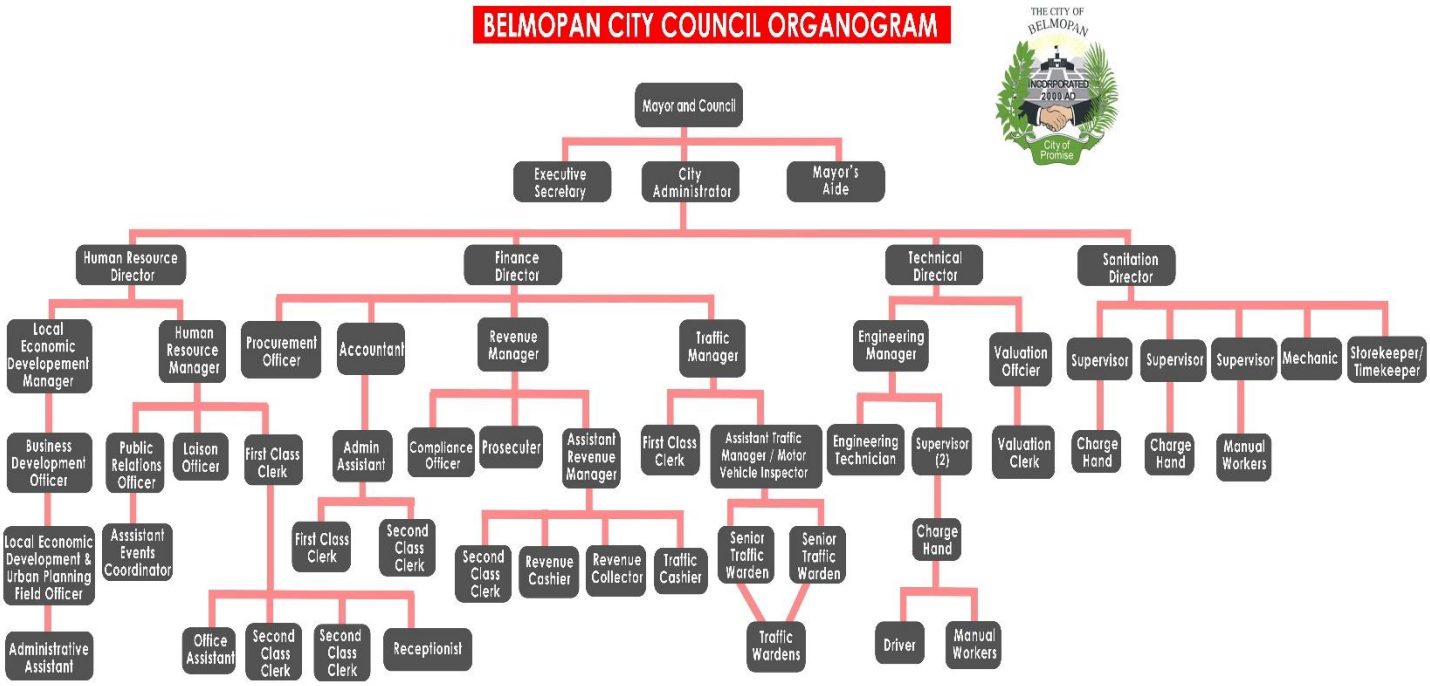

Figure 3: Administrative Organogram for the Belmopan City Council (BMPCITCO HR Department, 2018)

As seen in the above figure, the City Council has four technical directors, namely Human Resources, Finance, Technical and Sanitation. These directors directly manage individual operational departments inclusive of Local Economic Development, Human Resources, Accounting, Revenue, Traffic, Engineering and Valuation.

The municipal department, that will directly be responsible for the development of the Project Management Plan for the Creation of a Business Incubator Model, will be the Local Economic Development Department (LED). Under the purview of the LED Department it is that business related projects are executed and overseen. Therefore, this entity will spearhead the implementation of the viable incubator model project to its completion. When special LED Projects like this are being implemented

the LED Manager directly reports to the City Administrator thus enabling a direct line of communication with the highest administrative authority who can resolve issues or maximize opportunities through its direct connection to the executive.

During the planning stage of the project management plan, the LED Manager will be in direct communication with the municipal Directors, and other Managers on a needs basis. The expertise of engineers, urban planners, business advisors, revenue, procurement and accounting will be indispensable for the overall completion of a well-rounded plan. Officers under the LED Department will serve as the project management team who will facilitate information during the development of the plan.

2.1.4 Products/Services Offered

Traditionally the Municipality provides citywide maintenance services such as, infrastructure development, inclusive of streets and drains, their upkeep and maintenance, provision of building, liquor licenses, trade licenses, driving licenses, billboard permits, upkeep and maintenance of public urban spaces, including markets, civic centre, parks, and various sporting facilities, collection of debris and garbage, and the organizing of various city events.

In modern times municipalities worldwide, including municipalities in Belize have been changing there focus from mere maintenance, operational and functional duties to a more contemporary approach. The municipality of Belmopan has aligned to these innovations. The move to a method of service provision, the local authority is a champion of development, a broker of alliances, facilitator in partnerships, a champion in community progress, and an advocate in local economic development. (CARILED, 2016). This new focus in managing cities provides an opportunity in which municipalities can provide new and creative services to start up micro and small businesses.

It is with this in mind that the city will develop a plan for the creation of a business incubator model, which will provide the foundation to yet another added municipal service. Other services provided by the city through its business development desk since 2017 include, business development training, trade license application process assistance, business advising, graphic designing, assistance in marketing, specialized mentorship, access to the Belmopan Business Association (BBA), step by step guidance in establishing their business, and financial literacy trainings.

2.2 Project Management concepts

2.2.1 Project

The concept of projects has been around for several hundreds of years. Quite often, great innovative projects were not classified or named as such, depending on the time in history. What exactly is the definition of a project? The Project Management Institute describes it as “a temporary endeavour undertaken to create a unique product, service or result” (*PMBOK® Guide* 6th Edition, 2018, p1).

To clarify the meaning even further, we will succinctly analyse the jargon utilized. A temporary endeavour suggests that the activities undertaken have a beginning and ending date. The ending date will be marked by the achievement of a result or the creation of a product or service. To fulfil the unique need, the project’s objectives must be attained for its success. In the event that project managers arrive at the realization that the objectives cannot be achieved then an alternative plan needs to be developed. The temporary nature of the endeavour does not mean it is short lived; many projects are carried for years; however, it is agreed upon that it will most definitely have an end. The transient nature does not signify that the product, service or result will be short-lived. Rather it means that the result will be specially solving a problem or maximizing an opportunity.

The uniqueness of projects means that products, services or results to be achieved should directly accomplish a special and strategic element of an organization; in this case, the development of a project management plan for the creation of a business incubator model, will satisfy the municipality's quest for purposefully planning for development, utilizing a generally recognized project management methodology. Projects are drivers for change and provide value added to the implementing organization that executes them. Projects will always be thought of as being effective and characterized by best practices that will lead to achieving a desired output, regulated by a specific timeframe in order to produce a specific deliverable.

2.2.2 Project management

In its application, project management is the utilization of the appropriate and designated competencies, knowledge, skills tools and techniques used as references for the implementation of activities that will result in the objectives and requirements designated under projects. It was in the mid-twentieth century that project management began to be recognized as a profession (*PMBOK® Guide* 6th Edition, 2018, p1). Currently, project management is deemed as indispensable for the execution of projects. The best practices outlined by the Project Management Institute are used as stalwarts in the successful management of projects.

There are two general rubrics used for the practice of project management. One embraces generally recognized practices, and the other, good practices. The generally recognized practices are standard that are applicable amongst project management practitioners and which can be applied or tailored to the vast majority of projects; on the other hand, good practice entails the particular repetition of an activity or process increases the success rate of components or overall projects. (*PMBOK® Guide* 6th Edition, 2018, p2).

Applying both good and recognized practices provides an opportunity to increase the level of attainment of project objectives. During the development of this Final

Graduation Project (FGP), we will be applying the project management that embraces good practices for the development of the project management plan. The development of this plan is an integration of key subsidiary plans that will provide the foundation for project execution. When mature organizations apply project management practices, there is a 92% success rate on business outcomes. (Pulse of the Profession, 2017, p2). It is with this high success rate in mind that the City Council is seeking the development of this document.

2.2.3 Project life cycle

Projects are developed and implemented through a project life cycle that provides a management framework to be followed. Irrespective of the type of project or the work to be carried out, the life cycle framework is continuously applied. Much like an organism's natural life cycle, projects have an initiation and end; the Project Management Institute describes the "Project life cycle as a series of phases that a project passes through from its start to its completion" (*PMBOK® Guide* 6th Edition, 2017, p 18). The generic phases, which are included in the project life cycle, include the starting of the project, organizing and preparing, carrying out the actual work, and project completion.

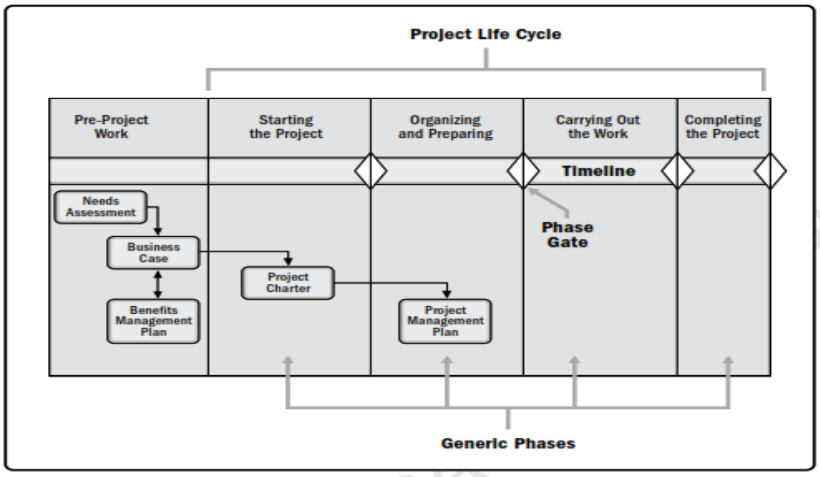

Figure 4: Image of the Project Life Cycle, (*PMBOK® Guide* 6th Edition, 2017)

As shown in the above image the Project Management Plan is done in the Organizing and Preparing phase of the project life cycle. Its development is made subsequent to the development of the project charter, which was the method followed in this FGP. In this instance, the Belmopan City Council acknowledges that the development of the project management plan for creation of a business incubator model fits within the organizing and preparatory stage. The plan will be developed prior to execution, and will assist in monitoring and controlling the project's execution. For the purposes of this project, the phases of the cycle will be used in a sequential order to determine if this model fits the planning methods used by the City. The decision to develop a project management plan was based on a concise needs assessment, which outlined that planning was essential, and a requirement for future implementation.

2.2.4 Project management processes

The application and effective management of the project life cycle is carried out by the execution of various activities that when conglomerated based on field of knowledge area; make up the project management processes. These processes are described as "A Systematic Series of activities directed towards causing an end result where one or more inputs will be acted upon to create one or more outputs" (*PMBOK® Guide* 6th Edition, 2017, p18).

There are various types of processes that produce end outcomes that can be linked to other processes by becoming inputs to their successors, or in the end become project deliverables or deliverables for project phases. The application of these detailed items provide substance to project development as they look at specifics that make up the core of the information to be included in a project. A description of the three types of project management processes is provided in the chart below.

Chart 1: Types of Project Management Processes (*PMBOK® Guide* 6th Edition, 2017)

Predefined Processes	Periodic Processes	Continuos Processes
These processes are either utilized one time during the project or can be carried out at certain predetermined points during the project. Examples include the Develop Project Charter and Close Project.	These processes are done intermittently at set intervals during a specific period in the project's life. An example is the Acquire Resources which is done as per the need of resources.	These processes are carried out constantly throughout the project's life cycle. These can be seen clearly if rolling wave planning is utilized. Some clear examples fall under the monitoring and control processes .As many of these are done from the start to the project's closure.

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Upon analysis, the development of this Project Management Plan will make use of the 3 types of processes which directly fall under initiation and planning. At certain intervals the project will be utilizing processes which are set to occur in determined points, others will be done periodically and, the continuous processes will be utilized as part of progressive elaboration.

Project Management Process Groups

The 49-project management processes each fall under a distinctive aggrupation. The groups are: the Initiating Process Group, Planning Process Group, Executing Process Group, Monitoring and Controlling Process Group, and Closing Process Group. (*PMBOK® Guide* 6Th Edition, 2017). The processes that fall under the respective groups are selected based on a rational and consistent grouping based

on their relation to the completion of specific project objectives. The project management process groups and their description are the following:

Chart 2: Project Management Processes Groups *(PMBOK® Guide* 6th Edition, 2017)

Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
Processes under this group are done to outline and define a new project or a project phase and to get the go ahead to commence.	Processes are crucial for project development as they directly outline the scope, deliverables and course of actions for successful project completion	Process here are tasked to implement the work necessary	Processes which supervise and react to the performance of a project, if changes are needed these are initiated in these processes.	Processes utilized to close the project phase or the entire project.

For the development of the Project Management Plan, the process groups that will be the focus will be the initiating and planning process groups. The development of the subsidiary plans that make up the overall project management plan are found within the purview of the planning process group. One of the subsidiary plans include Risk Management which also has a correlation to the monitoring and controlling process group, minor emphasis will be given to these process groups on a per needs basis. It is important to reiterate that the executing and closing process groups will not be utilized in this project proposal but will be used during the implementation of the subsequent project that will directly deal with execution.

2.2.5 Project management knowledge areas

The most recent 6th Edition of the A Guide to the Project Management Body of Knowledge published in 2017 includes 10 knowledge areas. These are: Integration Management, Scope Management, Schedule Management, Cost Managemement, Quality Management, Resource Management, Communication Management, Risk Management Plan, Procurement Management, and Stakeholder Engagement. In the newest edition, 3 name changes were made to conform to the reality of project management in practice. There was a change from Time Management renamed as Schedule Management, Human Resource Management to Resource Management, and Stakeholder Engagement instead of Stakeholder Management (*PMBOK® Guide* 6th Edition, 2017, p23-24). This was done in an effort to align more with projects needs.

The Knowledge Areas are based on the competent and proficient knowledge which is needed to carry out projects. Each knowledge area is fundamentally broken into segments inclusive of the inputs needed, the tools and techniques utilized and the outputs it should deliver. (*PMBOK® Guide* 6th Edition, 2017 p22-23). Each area also includes various processes and practices that should be done in accordance to their neccesary level of application. These knowledge areas interact with each other and many of the outputs serve as inputs to subsequent areas.

The knowledge areas by distinction have in their initial stages, a planning component which produces as an end output one of the various project subsidiary plans, when integrated they form the Project Management Plan. For the purposes of this project proposal we will develop components related to eight knowledge areas with the exception of Integration this was so because the development of a Project Management Plan already falls under the purview of integration under the activities carried out in the planning group (*PMBOK® Guide* 6th Edition, 2017 p25), and Procurement Management which was excluded from the scope by the project sponsor, due to the resources designated to be used as a part of the project.

The table below will provide a succint description of the knowledge areas and their application.

Chart 3: Project Management Knowledge Areas (*PMBOK® Guide* 6th Edition, 2017)

Knowledge Area	Description
Project Integration Management	Is utilized for integration, combination, and unification purposes of processes and activities inside Project Management Process Groups.
Project Scope Management	This area deals with the project work, it includes the processes needed to detail all work required for succesful completion.
Project Schedule Management	Focuses on the timely deliverable and completion of the project inclusive of all the processes related.
Project Cost Management	Includes the processes neccesary to maintain a management over budgetary allocations so that these stay within approved parameters.
Project Quality Management	Involves the organizations quality policies in the overall work that the project is developing, provides a quality focus on the requirements so that the stakeholders involved are satisfied.
Project Resource Management	Focuses on identifying, acquiring, and managing the neccesary resources for a succesful project.
Project Communications Management	Is responsible for the processes to facilitate communication inclusive of its collection, creation, distribution, storage, retrieval, management, control, monitoring and disposition.
Project Risk Management	Deals with planning, identifying, response planning and response implementation and the continuos monitoring of project risks.

Project Procurement Management	Details neccesary processes for the purchase and acquisition of external products, services, and results needed for the project.
Project Stakeholder Engagement	Identifies people, groups, and organizations who are potential impactors, or impactees of the project undertakings. Adequate strategies are developed during this area.

Because of the sequential nature for the development of this Business Incubator Model Project Management Plan, eight of these knowledge areas will be applied with the exception of the Project Integration and Procurement Management.This is due to the sequential nature of the project management plan development, and also that most of the work to be undertaken falls under the planning process group. It is within the purview of their suggested inputs, tools and techniques that a comprehensive approach will be developed and this will result in the neccesary subsidiary plans that will make up the Project Management Plan. During their application, it is expected that the utilization of these knowledge areas will yield the quantifiable and qualitative implementative model.

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

2.3.1 Progressive Elaboration

During the development and subsequent implementation of this particular Project Management Plan, progressive elaboration will be utilized; this method refers to the “iterative process of increasing the level of detail in a project management plan as greater amounts of information and more accurate estimates become available” (*PMBOK® Guide* 6th Edition, 2017 p715). This will assist in a continuous modification of the plan as the estimates, for schedule, resources, cost, and others become more available. The use of progressive elaboration provides a continuous enhancement and improvement of information as more highly and detailed information becomes

accessible to both the team and the project manager. In essence, the project management plan has the ability to become more accurate as time progresses.

Also, a participatory approach will be utilized to continuously involve key project stakeholders, so that they can provide feedback, this in turn provides a greater degree of quality and can provide a greater adaptation to changes. However, when the project management plan becomes baselined, the change requests will need to pass through the Perform Integrated Change Control Process. (*PMBOK® Guide* 6th Edition, 2017 p185).

3. METHODOLOGICAL FRAMEWORK

3.1 Information sources

Information sources are crucial for the development of quality research and analytical documents. For the purpose of this project, and according to the validation of the oxford dictionaries, information has been defined as “facts provided or learned about something or someone” (Oxford Dictionaries, 2017). On the other hand, sources have been demarcated as either “a place, person, or thing from which something originates or can be obtained” or “an entity that provides information” (Oxford Dictionaries, 2017). Both definitions have a direct correlation as they refer to the acquisition of a particular knowledge, deriving from a specific origin.

The quality of research and in this case project development is heavily dependent on the quality of the sources of information utilized as reference for the progressive elaboration of the content and the project management plan. During the drafting of the project charter, special emphasis was given to the pre-selection of material and information to be used. The two sources of information used during this FGP include the primary and secondary sources of information, the various examples of these kinds of sources will be outlined to show their use in the project development.

3.1.1 Primary sources

The Harvard Library classifies primary sources of information as “sources that provide first-hand testimony or direct evidence concerning a topic under investigation” (Harvard Library, 2017). These sources are determined by the characteristic of being first-hand information, either seen or witnessed, or by the experience gathered in a direct and personal account or form. Primary sources are often considered of great value as they provide direct insight into a pertinent topic. They are considered crucial mediums because great analytical value can be retrieved from them.

These type of sources tend to be produced upon a determined occurrence of activities but can include as autobiographies, memoirs and oral history. Other sources of primary information can include original documents, which encompass diaries, speeches, manuscripts, letters, interviews, official records, pamphlets, meetings notes and footage, creative works such as poetry drama, and novels are considered primary sources along with relics and artefacts.

The primary sources of information which are utilized for this FGP include, interviews with business development practitioners, interviews and meetings with business incubator managers, manuscripts of models, interviews with micro small and medium enterprises, stakeholder consultative sessions, urban planning charrettes, meeting notes, testimonial footage from service users, and the creative works of businesses such as business plans.

3.1.2 Secondary sources

As a compliment to primary sources of information, are the secondary sources, these are “sources created by someone who did not experience first-hand or participate in the events or conditions being researched” (Harvard Library, 2018). Although secondary sources are not gotten from direct experience they rely heavily on research and a critical analysis of what can substantiated and utilized. In essence, the secondary sources conduct a thorough analysis on the primary sources and from there they derive the information. Some researchers tend to refer these types of sources as “one or more steps removed from the event” (Harvard Library, 2018).

Among the examples of secondary sources included as part of the development of this project management plan are scholarly articles on business incubators, business incubator model articles, analysis on the behaviour of business incubator clients, the Federation of Canadian Municipalities (FCM) lessons learnt on local government and incubators, best practices provided by the Project Management Institute (PMI), and

knowledge gathered through A Guide to the Project Management Body of Knowledge (*PMBOK® Guide* 6th Edition).

The chart below provides a concise and succinct description on the specific objectives of the project and their primary and second sources of information respectively.

Chart 4: Information Sources – (FGP Author, 2018)

Objectives	**Information sources**	
	Primary	**Secondary**
To develop a Scope Management Plan to establish the parameters of what will be encompassed within the project. It will outline how the scope will be defined and developed.	One on one session with the project sponsor, meeting with potential business incubator clients, meetings with business incubator managers.	*PMBOK® Guide* 6th Edition, PMI best practices, scholarly articles on business incubator models.
To establish a Stakeholder Engagement Plan to indentify the stakeholders who will directly be impacted or have potential to impact project execution	Stakeholder Consultative Sessions, focus groups, urban planning charrettes, individual one on one meetings.	Scholarly business incubator articles, business incubator case studies, Belmopan resource mobilization strategy, LED Strategy.
To draft a Communication Management Plan to establish how project information will be managed, the mediums and the target.	Stakeholder's consultative session, individual meeting with stakeholders, project management team session.	*PMBOK® Guide* 6th Edition, BMPCITCO Communications Draft Plan.

To create a Resource Management Plan that will guide the project on how to categorize, allocate, manage and release resources.	Meeting with project management team, meeting notes from previous business incubator manager, meeting with Human Resource Manager.	*PMBOK® Guide* 6th Edition PMI Best practice reports, and Belmopan Resource Mobilization Strategy.
To develop a Quality Management Plan that will outline how the quality methodologies and standards will be implemented in the development of the business incubator model.	Brainstorming session with project management team. Interview with business incubator managers, manuscript of business incubator models, interviews with MSME's who are potential clients are.	*PMBOK® Guide* 6th Edition, quality handbooks, and case studies.
To develop a Risk Management Plan to establish risk managemnt activities how they will be structured and performed throughout the project.	Meetings with project management team, selected stakeholders, and project manager.	*PMBOK® Guide* 6th Edition, stakeholders overview notes, roles and responsibilities documentation.
To define a Schedule Management Plan that will establish the criteria and the activities to develop, monitor and control the project schedule.	Meeting with Project Manager, Sponsors, selected stakeholders, and service or product providers.	*PMBOK® Guide* 6th Edition, data analysis reports, PMI best practice articles, FCM best practices report.

To create a Cost Managemement Plan to establish how the costs will be planned, structured and controlled to remain within the municipal budget allocated.	Meeting with Project Manager, Sponsors, selected stakeholders, and service or product providers.	*PMBOK® Guide* 6th Edition, data analysis reports, estimates.

3.2 Research methods

Research methods are indispensable to conduct investigation that will yield in relevant analytical information. The Business Dictionary goes to describe research methods as “The process used to collect information and data for the purposes of making informed decisions. The methodology may include publication research, interviews, surveys, and other research techniques, that could be both present and historical information”. (Business Dictionary, 2018).

The development of this FGP will make use of research methods that will be the mediums by which significant questions will be answered in relation to respective deliverables being sought. In essence, research methods are the methods or techniques that are used to carry out a research. They are the avenue by which the researcher is aided in the development and investigation of information. A concise definition of the research methods used in this FGP will be presented in the following section.

3.2.1 Analytical method

This research method utilizes facts and information available, and conducts a critical analysis and evaluation regarding the material and information. (Kothari, 2004). This analytical method provides a combination of both scientific based and formal processes to problem solving providing an acute analysis. Some of the steps included in this method include the identification of the problem to be solved,

choosing the appropriate process, utilization of the process to conduct analysis of the solution or opportunity design. It also includes and tests the variables, performs experiments, accepts, rejects or modifies the hypothesis, implements the solution, and if needed repeats the steps to continuously improve and take as much out of the opportunity provided.

3.2.2 Qualitative method

The qualitative method provides a description of particulars; this method makes use of interviews, observations, documentation, and overviews. In the qualitative method, it is the description of the status of what is, that provides information necessary that can be used as reference in the conduction of research. (Kothari, 2004). Qualitative research is concerned primarily with items related directly to the quality or kind of something. Thorough analysis of the qualitative method can result in information of substance. Some of the characteristics of qualitative research include narrative description, identification of major subjects and topics, and generalization.

Chart 5 Research Methods (FGP Author, 2018)

Objectives	Research methods	
	Analytical Method	**Qualitative Method**
To develop a Scope Management Plan to establish the parameters of what will be encompassed within the project. It will outline how the scope will be defined and developed.	An analysis will be conducted on the requirements outlined by both the sponsor and the end service user, critical thinking is to be used to determine the overall project scope, and to distinguish what would not be a part of the work.	The descriptive nature in relation to the kind and quality of an item is to be used. The narrative description used in this method provides a holistic overview of what needs to be included as the scope.

To establish a Stakeholder Engagement Plan to indentify the stakeholders who will directly be impacted or have potential to impact project execution	The engagement of stakeholders is very dependent on the quality of analysis. Special focus needs to be placed on the critical analysis of the extent of possible involvement and the benefits or effects these can have, at a predetermined part of the project's life cycle or to the project on a whole.	The qualitative method will be used to ascertain in a direct fashion the expectations of stakeholders, and to discern between their levels of interest, either positive or negative. This will be described explicitly so that the information can be of use when engaging stakeholders. This will also assist in providing information to the development of other subsidiary management plans.
To draft a Communication Management Plan to establish how project information will be managed, the mediums and the target.	Critical thinking in analysing the, who the how, and the why of communication is indispensable for the precise development and application of any communication plan.	Through the research techniques utilized under the qualitative analysis a good foundation will be provided to the plans content, this will also influence analytical decision-making.

To create a Resource Management Plan that will guide the project on how to categorize, allocate, manage and release resources.	The allocation categorization and management of resources is highly dependent on the scrutiny of available resources and the time they are expected to be used. Strategic considerations need to be taken, as resources are critical for project development more so in the case of planning, the use of subject matter experts and technical personnel is vital.	Succinct narrative descriptions are the best way to outline the roles and responsibilities of the human resources.
To develop a Quality Management Plan that will outline how the quality methodologies and standards will be implemented in the development of the business incubator model.		This research method in its epicentre has a direct correlation with this specific deliverable. Focus will be given to the quality requirements and the provision of detailed descriptions to fulfil them.
To develop a Risk Management Plan to establish risk managemnt activities and how they will be structured and	Critical thinking on how to prioritize and discern alternatives is crucial for project success. There will be a proactive	Responses should be retrieved from a detailed source to accommodate specific needs. Their description and thorough

performed throughout the project.	analysis on options to be implemented before negative risks occur to diminish the effect on project success. An analysis of risk-taking inherent to strategic thinking will be done to predetermine these scenarios and responses.	information should make risk response easier to implement on a needs.
To define a Schedule Management Plan that will establish the criteria and the activities to develop, monitor and control the project schedule.	Analysis is to be given to the items in the schedule to discern between likely and most realistic times of activity and overall project completion.	
To create a Cost Managemement Plan to establish how the costs will be planned, structured and controlled to remain within the municipal budget allocated.	An analytical approach is needed to ensure that a balanced decision is made as to the direct administration of costs, so that there is a maximization of cost effectiveness.	The description provided in the qualitative method provides a foundation by which other areas can gather more accurate information in regards to the costing.

3.3 Tools

Tools, in all aspects have been utilized as a way to carry out a desired output or deliverables. They are by virtue used as something in particular that can assist in performance to achieve something that is sought after. The Project Management Institute through its Body of Knowledge describe tools as “something tangible, such

as a template, or software program, used in performing an activity to produce a product or a result" (*PMBOK® Guide* 6th Edition, 2017). The tools to be utilized in the development of the Project Management Plan for the Business Incubator Model are described with their respective standard definitions below:

- **Project Charter -** The project charter is defined as a document issued by the project sponsor that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities. (*PMBOK® Guide* 6th Edition, p34)
- **MS Project 2016 –**This was developed by Microsoft and is designed to assist a project manager in developing a plan, assigning resources to tasks, tracking progress, managing the budget, and analysing workloads. (MS Office, 2016)
- **Scope Statement -** The project scope statement is the description of the project scope, major deliverables, assumptions, and constraints. The project scope statement documents the entire scope, including project and product scope. It describes the project's deliverables in detail. (*PMBOK® Guide* 6th Edition, p154)
- **Project Management Information System (PMIS) –** This provides access to information technology (IT) software tools, such as scheduling software tools, work authorization systems, configuration management systems, information collection and distribution systems, as well as interfaces to other online-automated systems such as corporate knowledge base repositories. (*PMBOK® Guide* 6th Edition, 2017, p94)
- **Template –** Something that serves as a model for others to copy. (Oxford, 2017) In the particular case of the Project Management Plans, its makes reference to the templates utilized as models for the development of all the subsidiary management plans.
- **Work Breakdown Structure (WBS Template)** – Template of the Hierarchical decomposition of work (*PMBOK® Guide* 6th Edition, 2017, p180)

- **Standardized guidelines/templates –** are utilized for development, exchange, storage, and retrieval of information (*PMBOK® Guide* 6th Edition, 2017, p369)
- **Risk Register** - provides information on threats and opportunities that may impact project execution (*PMBOK® Guide* 6th Edition, 2017, p93)
- **Risk Report –** This provides information on sources of overall project risk along with summary information on identified individual project risks. (*PMBOK® Guide* 6th Edition, 2017, p93)
- **Stakeholder Register (Template) –** Contains information about identified stakeholders that includes but is not limited to, identification information, assessment information and stakeholder classification (*PMBOK® Guide* 6th Edition, 2017, p514)

Chart 6: Objective and Tools (FGP Author, 2018)

Objectives	Tools
To develop a Scope Management Plan to establish the parameters of what will be encompassed within the project. It will outline how the scope will be defined and developed.	Project Charter Template, Scope Management Plan Template, WBS Template
To establish a Stakeholder Engagement Plan to indentify the stakeholders who will directly be impacted or have potential to impact project execution	Stakeholder Engagement Plan Template, PMIS – for information collection, Stakeholder Register Template
To draft a Communication Management Plan to establish how project information will be managed, the mediums and the target.	Communication Management Plan Template, PMIS – for distribution systems, Standardized Guideline Templates.

To create a Resource Management Plan that will guide the project on how to categorize, allocate, manage and release resources.	Resource Management Plan Template, tracking systems
To develop a Quality Management Plan that will outline how the quality methodologies and standards will be implemented in the development of the business incubator model.	Quality Management Plan Template, Roles and Responsibilities Template, audits and surveys.
To develop a Risk Management Plan to establish risk managemnt activities and how they will be structured and performed throughout the project.	Risk Management Plan Template, Risk Register, Ms Project – Risk Tracking.
To define a Schedule Management Plan that will establish the criteria and the activities to develop, monitor and control the project schedule.	Ms Project – Scheduling Software, Scope Statement, Schedule Management Plan Template
To create a Cost Managemement Plan to establish how the costs will be planned, structured and controlled to remain within the municipal budget allocated.	Cost Management Plan Template, Project Charter, and PMIS – for cost, MS Project – costing tools.

3.4 Assumptions and constraints

Project assumptions and constraints play a defining role in the iterative detailing of the project's scope. Initially high-level assumptions and constraints were recorded in the project charter. This provided an overview of potential contributing factors. However, what are assumptions and constraints? Assumptions are referred to factors in the planning process that are considered true, real, or certain, without proof or demonstration (*PMBOK® Guide* 6th Edition, 2017, p699).

Assumptions have a close relationship with risk identification. The assumption log is a high-level document that helps in the recording of all assumptions and constraints identified during the entire project's life cycle. This includes project risks, which are then utilized to identify risks. The validity of assumptions are then examined through data analysis. The analysis determines if they are going to be pinpointed as a full-fledged project risk, or left as an assumption or as a constraint. The interrelated nature of assumptions and risks is so common that it is sometimes referred to as two sides to a coin. In some instances assumptions can be perceived as low-level risks. For purposes of project management, assumptions can be lived with, but risks need to be managed.

On the other hand, a constraint is a limiting factor that affects the execution of a project, program, portfolio, or process (*PMBOK® Guide* 6th Edition, 2017, p701). In project management the classic triple constraints are within the scope, time, and cost areas. However, there has been the inclusion of quality as a limiting factor in the development of a project. Both assumptions and constraints were firstly defined during the initiation stage, but have been refined and detailed more as the project planning progresses. However, the assumptions and constraints are to be continuously analysed to determine the project's reality at a predetermined time to ensure their validity or to be proactive in regards to the measures to be taken.

Chart 7 Assumptions and Constraints (FGP Author, 2018)

Objectives	Assumptions	Constraints
To develop a Scope Management Plan to establish the parameters of what will be encompassed within the project. It will	It is assumed that the project requirements will remain constant and will not affect the overall project scope.	Limited time to develop a comprehensive scope, taking into consideration the time provided to complete

outline how the scope will be defined and developed.	It is assumed that the project sponsor has provided all requirements for the development of the scope for the creation of the project management plan for the business incubator model. It is assumed that no project exclusions will be included to the final scope and project work.	the project management plan
To establish a Stakeholder Engagement Plan to indentify the stakeholders who will directly be impacted or have potential to impact project execution	It is assumed that the stakeholders are correctly identified and classified. It is assumed that the information on stakeholders will be used as knowledge to encourage the stakeholder's engagement level.	Availabity of stakeholders might fluctuate and might not be within the final project management planning timeframe.
To draft a Communication Management Plan to establish how project information will be managed, the mediums and the target.	It is assumed that the adequate mediums of communication will be determined.	Limited availability of high-end technology and software that would better

		disseminate information.
To create a Resource Managemen Plan that will guide the project on how to categorize, allocate, manage and release resources.	It is assumed that the Organization has sufficient human resources to assist as experts in the project management plan. It is assumed that additional non-human resources are going to be available during plan development.	The availability of subject matter experts to provide knowledgeable information as part of the core substance for the plan development.
To develop a Quality Management Plan that will outline how the quality methodologies and standards will be implemented in the development of the business incubator model.	It is assumed that the quality plan will have all quality specifications required for a rigorous Project Management Plan.	The number of available business incubator models that can serve as quality best practices is limited.
To develop a Risk Management Plan to establish risk managemnt activities how they will be structured and performed throughout the project.	It is assumed that the researched information will suffice to ascertain the significant majority or all essential risks	Cognizant recognition of the underlying factors that contribute to events being potential risks.
To define a Schedule Management Plan that will establish the criteria and the	It is assumed that the activities and their buffers in the schedule	The project management plan must be fully

activities to develop, monitor and control the project schedule.	will be consistent and will not affect the overall schedule. It is assumed that the project start and end date are enough to develop the project management plan.	completed by the assigned time as per the UCI guidelines.
To create a Cost Managemement Plan to establish how the costs will be planned, structured and controlled to remain within the municipal budget allocated.	It is assumed that the approved budget along with its reserves will be sufficient for project management plan development.	The municipality has stated that no budgetary accommodations other than the approved budget will be considered.

3.5 Deliverables

Project Deliverables are foundational elements of project management. According to the Project Management Institute, deliverables are a unique and verifiable, product, result, or capability to perform a service that is required to be produced to complete a process, phase or a project. (*PMBOK® Guide* 6th Edition, 2017, p704). There is a direct correlation between projects, which are done to create and produce that specific product, service or result. It is also important to specify that deliverables are a direct requisite of conducting a process, phase of project.

During the development of this FGP, we will be conducting several project management processes, which are required to produce the specific deliverables, which in the end support our main deliverable, the creation of a Project Management Plan for the Creation of a Business Incubator Model for the City of Belmopan. By

executing the project management processes, we will be a step closer to achieving our overall deliverable. To so do we need to use process specific inputs and implement the necessary project management tools and techniques that will produce the deliverables.

The tangible end deliverables of the processes under this FGP can be described as unique results, under which specific documents such as subsidiary management plans fall. Another characteristic of deliverables is that even though projects by virtue are impermanent, their end deliverables can exist beyond that of the project life. The specific deliverables for this project include the scope, cost, resources, schedule, risk, quality, communication management plans, and the stakeholder engagement plan respectively. The combination of all of these individual plans will make up the project management plan by which the project is expected to be implemented.

Chart 8 Deliverables (FGP Author, 2018)

Objectives	Deliverables
To develop a Scope Management Plan to establish the parameters of what will be encompassed within the project. It will outline how the scope will be defined and developed.	Scope Management Plan – a component of the project management plan that focuses on the entirety of the results to be provided by the overall project.
To establish a Stakeholder Engagement Plan to indentify the stakeholders who will directly be impacted or have potential to impact project execution	Stakeholder Engagement Plan – is a component of the project management plan that uses strategies to engage stakeholders and to promote their active involvement in the project.
To draft a Communication Management Plan to establish how project information will be managed, the mediums and the target.	Communication Management Plan – is developed to warrant that the suitable and applicable message is delivered to the right stakeholder; this is done

	through the specific identified mediums and channels.
To create a Resource Management Plan that will guide the project on how to categorize, allocate, manage and release resources.	Resource Management Plan – a component of the project management plan that will focus on the human resources and the physical resource management is inclusive of the identification of the resources, outlining the acquisition of resource and the roles and responsibilities.
To develop a Quality Management Plan that will outline how the quality methodologies and standards will be implemented in the development of the business incubator model.	Quality Management Plan – a component of the project management plan that is geared towards satisfying the quality requirements and objectives of the project.
To develop a Risk Management Plan to establish risk managemnt activities and how they will be structured and performed throughout the project.	Risk Management Plan – is a component of the project management plan that concentrates on the activities to be carried out for the effective administering of risks.
To define a Schedule Management Plan that will establish the criteria and the activities to develop, monitor and control the project schedule.	Schedule Management Plan – a component of the project management plan that deals with the activities and their duration to manage the work effectively.
To create a Cost Managemement Plan to establish how the costs will be planned, structured and controlled to remain within the municipal budget allocated.	Cost Management Plan – a component of the project management plan that gives a description of how the costs will be administered.

4. RESULTS – Project Management Plan for the Creation of a Business Incubator Model for the City of Belmopan.

4.1. Scope Management Plan

The Scope Management Plan for the Creation of the Business Incubation Model for Belmopan will serve to directly establish the parameters of what will be encompassed within the project. It will outline how the scope will be defined and developed and it will also clarify parameters which are outside of the project's scope. This plan will include the processes to establish the project scope statement, the creation of the work breakdown structure based on the detailed project scope statement. It will also include the scope baseline which will be approved and maintained throughout the project, and it will also outline the formal acceptance of the project deliverables. The scope for this project will succintly and clearly be defined so as to increase the level of understanding and use by the project team. The methodology and manner of development was based on the needs of the project.

4.1.1Project Scope Statement

The project scope statement for this project management plan was developed taking into consideration the major deliverables, and was built on keen deliberation on the project assumptions and constraints which were drafted in the project charter and were progressively refined in this document. The assumptions, constraints and risks were all developed in more detail, as more information was available. This provided a better understanding of the underlying factors that could affect the product and project scope.

The scope is made of four major elements. These are the project scope description, which is progressively elaborated during each iteration, the project deliverables which are the requirements that need to be satisfied for the project to be complete.

It also includes the acceptance criteria that outlines the requirements that are needed for the deliverables to be approved and accepted, and the scope exclusions that are items that fall outside the parameter of project and scope execution.

This project scope statement was elaborated through the defined scope process under the Scope Management Knowledge Area. It is within the define scope that this statement was developed utilizing expert judgement, interpersonal and team skills in the form of facilitation working session with key stakeholders such as the project sponsor, business advisors and MSME's. The product scope describes the functions that will characterize the result, namely, the subsidiary management plans that make up the project management plan.

The scope plan will serve to outline all the work necessary to achieve the end project result. The schedule plan will function as the roadmap for the adequate scheduling and management of activities based on predetermined time periods. The cost management plan will define the budgetary allocations and the manner in which they will be utilized. The quality plan will establish the quality parameters and how to satisfy quality project related requirements. The resource plan will be used to manage the human and physical resources and how these how they will be acquired and their respective roles and responsibilities. The communication plan will be utilized to communicate with stakeholders and tailor the message to be transmitted to maximize the added benefit of relationships. The risk management plan will focus on administering and managing risks appropriately to exploit positive opportunities and minimize and counteract negative items. Lastly, the stakeholder engagement plan will be used to actively engage the project actors.

On the other hand the project scope is all the work that will be carried out to deliver the products. In this instance, this would be the end result of the project management plan that will be achieved through the completion of the subsidiary management plans. All of the work required to achieve this is outlined in the work breakdown structure section of this scope management plan.

Deliverables

The project outcomes will be achieved through the attainment of identifiable project results. Those verifiable products are the subsidiary management plans that make up the project management plan. For the purpose of this project the deliverables are thoroughly described in Chart 8 and are outlined as an itemized list below.

Deliverable 1: Scope Management Plan
Deliverable 2: Stakeholder Engagement Plan
Deliverable 3: Communications Management Plan
Deliverable 4: Resource Management Plan
Deliverable 5: Quality Management Plan
Deliverable 6: Risk Management Plan
Deliverable 7: Schedule Management Plan
Deliverable 8: Cost Management Plan

Acceptance Criteria

The acceptance criteria is indispensable to be able to verify that the deliverables sought meet the required conditons. Only when the conditions have been corroborated are these deliverables accepted. The criteria to accept the subsidiary management plans that will aggregate to make the end result of the project management plan for the creation of the business incubator model are these.

Chart 9 Mandatory Criteria Checklist (FGP Author, 2018)

	Mandatory Criteria	✓
1	All the work outlined in the scope baseline is to be satisfactorily completed	
2	No work outside the scope is to be executed	
3	Timely execution of activities within the parameters of the schedule	

4	The plan for stakeholder engagement encourages various levels of participation throughout the project life cycle	
5	Quality items will focus on the requirements neccesary for each individual plan for the business incubator model	
6	A succint and clear plan on cost management is developed	
7	A concise plan to effectively communicate information to stakeholders will be elaborated	

The acceptance criteria mentioned above must be attained and marked as approved in the checklist. After it is ensured that the criteria is attained the project sponsor and manager will provide their signature of approval.

_____	_____
Keyla Magaña	Ralston Frazer
LED Manager - Project Manager	City Administrator
Belmopan City Council	Belmopan City Council

Project Exclusions

As vital as the scope is, major project scope exclusions are of paramount importance. They explicity state what is outside the parameters to be developed, it also directly assists in managing stakeholders expectations. It is important to state that for this project management plan we have 3 major exclusions which are the following:

Exclusion 1: This project does not make inclusion of the execution or closing process groups utilized in project management. It is expected that the project execution will be done following the guidelines of the project management plan but under the overall implementative authority of a subsequent project.

Exclusion 2: Another exclusion is the operational guidelines of the business incubator model. This project will only focus on a plan that will guide the selection of a model to be used but not the daily operational guidelines. The operational guidelines for the Incubator will be developed by the assigned Business Incubator Manager and will be their first task prior to the opening of the Incubator.

Exlusion 3: The project sponsor has required that there will be no use of third party service or goods providers. The human and physical resources to be utilized by this project management plan development will all be resources that the municipality already has. Thus no procurement management plan will be elaborated as part of the project management plan.

Roles and Responsibilities

It is of paramount importance to assign roles and responsibilities within the scope, this provides accountability to the process and serves to ensure that entities and persons ensure their commitment to the process. By establishing this, greater focus is given in the management of scope.

Chart 10: Scope Roles and Responsibility (FGP Author, 2018)

Name	Role	Responsibility
Belmopan City Council	Project Sponsor	-Gives authority to the project manager to use city council resources to implement activity work. - Meets with project manager to review acceptance criteria. - Acceptance or denial of final project deliverables - Representative of the BMPCITCO in the form of the City Administrator is the Chairman of LED-PAC
Keyla Magaña	Project Manager	-Provides recommendation to the sponsor regarding scope change requests

		-Inform relevant parties on scope changes -Facilitates the use of resources to the project team members for them to carry out project work. -Meets with project sponsor to review acceptance criteria -Is responsible for management and oversight of implementing project activities -Responsible for the delivery of project objectives
Urceline Garnett, Kyle Pascascio, Lucin Sho	Project Team	-Execute activities to carry out project scope. -Identifies possible scope issues and relay matters to the manager.
Belmopan MSME's	Stakeholder	-Identifies project needs -propose scope changes
University of Belize	Stakeholder	-Identifies project needs -propose scope changes
Local Economic Development Project Advisory Committee (LED-PAC)	Steering Committee	-Approve with recommendations, defer, or deny changes to scope. (Chairperson of this committee is the City Administrator who is the BMPCITCO representative) -Supervises project work and project management activities through the authority of the project sponsor -Project champions who assist in securing project funds for future implementation. -Resolves scope related issues which are directed to them by the project manager.

4.1.2 Work Breakdown Structure

The Work Breakdown Structure (WBS) for the project management plan for the creation of the business incubator model, was drafted to subdivide the project deliverables into smaller and more manageable portions, using the method of

decomposition. This particular WBS was developed using items from the scope statement and requirements outlined by the sponsor. The WBS demonstrates the total and complete scope of work to be done by the project team it provides a vision of how the deliverables will be completed, and along with the WBS dictionary, it will provide accountability in the delivery of the work.

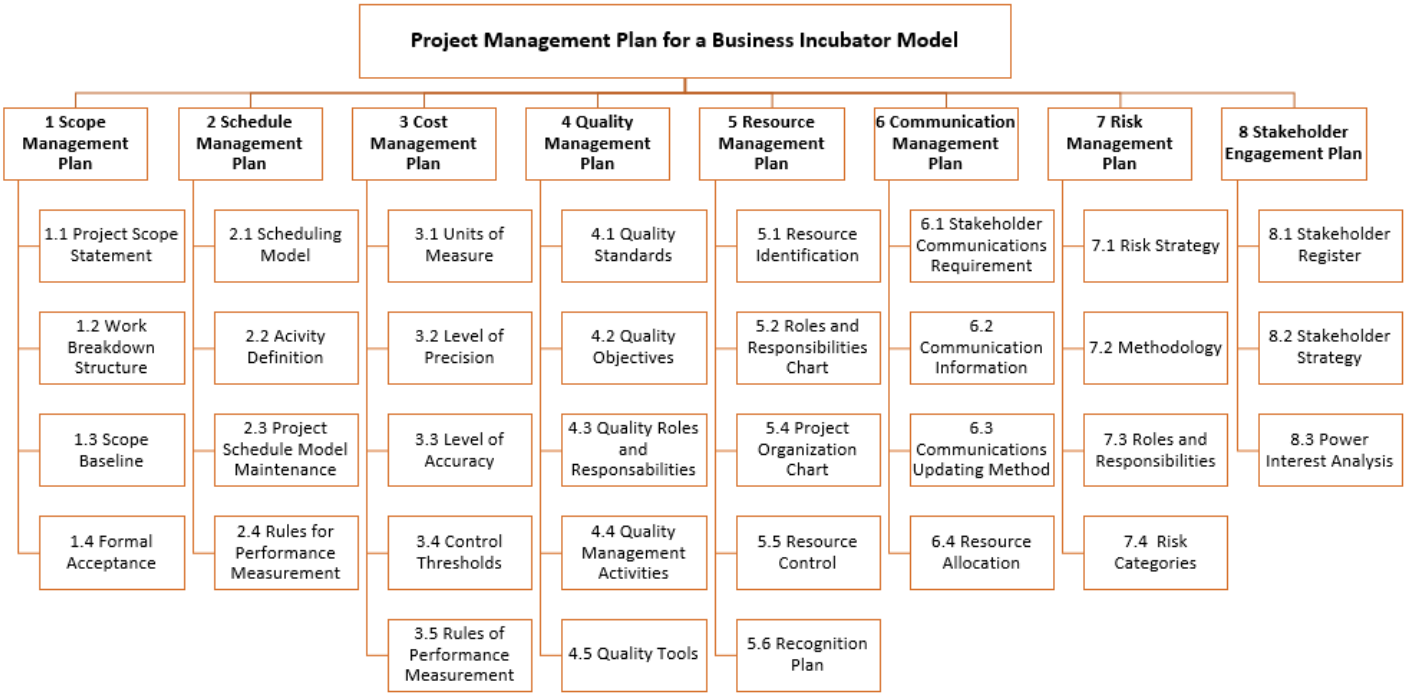


Figure 5: WBS for the Project Management Plan for the Creation of the Business Incubator Model

The above WBS items were all specifically chosen from the A Guide to Project Management Body of Knowledge under the planning process group which is present in each knowledge area, which then focuses on the subsidiary management plans as outputs. The *PMBOK® Guide* lists items under each subsdiary management plan which act as the main reference for the various management plans. It is based on this list of best practices that the WBS items were chosen, this was done taking into consideration the items that would be of most value to the creation of a business incubator model. It is in the content of the various items that the direct correlation

between the subsidiary management plans and the creation of the business incubator becomes apparent. The WBS items will serve as a guiding reference that will facilitate in content development for the model of the business incubator for Belmopan.

WBS Dictionary

The WBS dictionay fully supports the WBS by providing detailed information on the work, this information is provided on a components basis thus providing well rounded information on the work to be completed. The WBS can be seen in this document as appendice 5.

4.1.3 Scope Baseline

The scope baselinefor this project is the approved version of the scope statement, the WBS and WBS Dictionary. All of these supporting items were developed taking into consideration the level of detail neccesary so as to implement and carry out the various activities neccesary to take this project into fruition. The baseline will be utilized to compare and control the scope throughout the project. After the approval of the project sponsor on the final scope baseline, changes can only be changed through the formal change control procedure.

To formally initiate the agreed scope change control process, the stakeholder requesting that change must do so following the Change Request Form (Appendix 4). This request form is to be submitted to the project manager who will conduct an analysis on the needs and justification behind the change. The project manager will ascertain if there is value added in this new initiative or if it will counteract a potential risk-bearing situation. The project manager then provides a recommendation to approve, approve with recommendations, reject or defer the change. The entity responsible for approving or declining the change based on the project manager’s recommendation is the Local Economic Development Project Advisory Committee

(LED-PAC) that has responsibility over matters such as the formal change control process. The approved change is then included and amendments are made to all corresponding project documents.

4.1.4 Formal Acceptance of Project Deliverables

The validation of the project scope is done through a comparison between the actual .deliverables and the agreed project scope baseline. In so doing, the project management plan for the business incubator model will be validated through the validate scope process of the Project Management Institute.

The process to formally accept deliverables is first initiated as the acceptance criteria are met. The deliverables should all be completed to ensure that the acceptance criteria are met. The project manager and the project sponsor will meet to review that all deliverables stated in the acceptance criteria are succesfully met. The purpose of the meeting will be to ensure the satisfactory delivery up to the completion iof the project. After all parties in the meeting, namely, the project sponsor and the project manager agree that the deliverables are met as per the acceptance criteria checklist, the project sponsor proceeds to formally sign the letter of closure and in so doing ends the project.

4.2. Stakeholder Engagement Plan

Previous project management plans took an approach to stakeholders management rather than engagement. However, this plan will be solely focused on the engagement planning of stakeholders which is based on the ability of influencing stakeholders, building relationships, seeking commitment, and having a two-way communication. This is done in the pursuit of engaging them in actively participation in achieving the desired end result through a more active and robust participatory approach to planning

The subsidiary plan for the overall project management plan will delineate the methodology used, consisting of the various tools and techniques utilized, the stakeholder register which is vital for stakeholder identification, their subsequent classification based on the level of interest and power, a concise analysis on why, and a section on stakeholder strategy. The identification of said strategies is a vital component of the plan and seeks to involve the stakeholders in the development of the plan. The plan will focus on specific strategies and approaches to engage with the internal and external stakeholders of this project.

4.2.1 Identify Stakeholder Methodology

The development of this stakeholder engagement plan was done bearing in mind the use of three main components: expert judgement, meetings, and data gathering techniques. The expert judgement was used for the identification of stakeholders which have been engaged in similar local economic development initiatives. It is with the understanding of the role that they play within the entrepreneurial ecosystem that they were engaged. The indentified stakeholders will provide significant insight and recommendation as to the model that they recognize as the best tailored prototype to be used for the incubator. As private sector advocate, and providers of business development capacities both the Belmopan Business Association and the Univeristy of Belize will provide professional and experienced opinion on matters related to the

project management plan that will serve to create the incubators model and the subsequent implementation of the model.

Meetings between the project management team and the project team resulted in the identification of key external stakeholders, as well as the methods of communication between those that are internal. Benchmarking was also used to pinpoint stakeholders who were used in similar instances in other business incubator models and specifically those that could be engaged through the project management plan development.

4.2.2 Stakeholder Register

The identification process of stakeholders is important to establish the actors who have influence, interest and power, throughout project development leading on to the results. The main output of this process is the stakeholder register. The stakeholder register is a concise matrix that facilitated the pinpointing of main stakeholders. The register below includes three areas including information identification, the information on assessment, and the stakeholder classification.

In the identification information section the name of the stakeholders and their roles and their status are outlined. The assessment information section will provide information on the stakeholder and their expectations and how they can potentially influence the project. The classification section outlines if the stakeholder is either external or internal and the impact, influence, power and interest levels of each stakeholder. As the project progresses additional information on possible new stakeholders is going to be added to the register. This will be in line with the use of the progressive elaboration methodology of this project management plan.

The register also identifies stakeholders and their main expectations for the Project. Knowing each individual stakeholders expectations makes it easier to have a model that is used by the MSME’s in Belmopan. Belmopan has been recognized as the

municipality in Belize with the most active community participation processes. It is expected that the stakeholder register will be fully utilized to engage with the various actors and as such will facilitate a model that can be used for subsequent incubator implementation. All this was crucial to the development of the requirements. The register also outlines the best methods of communication and understanding for the role each stakeholder plays. The register serves as a vital component to the elaboration of the stakeholder strategy.

Chart 11: Stakeholder Register Matrix (FGP Author)

Stakeholder Register Matrix						
Project	**PMP for Business Incubator Model**					
Sponsor	**Belmopan City Council**					
ID	**Stakeholder**	**Internal /External**	**Roles & Responsibilities**	**Main Expectations**	**Communication Methods**	**Influence /Impact**
1	Belmopan City Council	Internal	Provide the financial resources for project management plan development,	Project Management Plan that will serve to facilitate the execution of a Business Incubator and a replicable project management plan for the institution's future use. The project must be within schedule and budget.	Memorandums, Meetings, Email Updating Sessions	This stakeholder has the main influence on the project and their actions carry out the most impact.

2	Project Manager	Internal	Responsible for project oversight	Delivery of a quality project management plan through the cooperation of all stakeholders involved.	Meetings Memorandums	Are influential because of the role they play as leader in project execution
3	Project Team	Internal	Executed work to achieve the project management plan deliverable	Carry out successfully the activities that compromise the project management plan	Memorandums Meetings Planning Charrettes	Being able to successfully carry out the project activities has a direct impact on the project being able to meet its criteria.
4	Belmopan MSME's	External	Vested actor who is the primary beneficiary of the project	A project management plan that will facilitate the implementation of a business incubator that will be of their direct benefit	Stakeholder Consultation Meetings Onsite visit Surveys	The decisions that are made in the project management plan will directly impact this sector, their influence should be substantially considered in the projects development
5	University of Belize	External	Keen interest in the application of	Enhanced entrepreneurial	Consultative Meetings	They have minimal impact

			entrepreneurial tools and techniques for real life application and the effects on the economic landscape	ecosystem that can facilitate the transition from students to entreprenuers and business owners	Email	on the project but can have an impact on the project management plan due to their experience in various MSME's related topics
6	Belmopan Business Association	External	Lobbying group that represents the primary beneficiaries, it provides insight on what are their specific requirements.	The provision of an additional business development service through the Belmopan City Council	Consultative Meetings Email Surveys	As a lobbyist group in favour of MSME's they can have direct influence and impact on the policies and actions undertaken by the council in the project.
7	Federation of Canadian Municipalitie-s	External	Provide guidance on best practices for business incubator models	To assist in the promotion of local economic development initiatives in Belize through a business incubator model	Email Video calls	Their best practices are influential in the development of the PMP.

4.2.3 Power Interest Analysis

The categorization of stakeholders is done subsequent to their identification; this is done based on the power they can possibly exert on the project and their level of interest. The analysis is done taking into consideration both positive and negative power to influence the project, in direct contrast to their level of interest. This is done through a basic quadrant scale of low and high, depending on the stakeholders location in the grid. You can either, keep satisfied, manage closely, monitor or keep informed a particular stakeholder. It is based on the sound analytical information that the stakeholder prioritized. The analysis using this method also assists in knowing the relationship between the project and its stakeholders, what the basic requirements that need to be communicated are, and how it is that the interaction should proceed.

The classification goes as follows:

High power and High Interest – Manage Closely: These are the stakeholders with the most power and have a vetted interest in the project; they are decision makers and contribute directly to the project's success.

High Power and Low Interest – Keep Satisfied: Although these stakeholders do not have a keen interest in the project they can still exert tremendous influence due to the high power they have. These stakeholders should be kept satisfied.

Low Power and High Interest – Keep Informed: These stakeholders provide insightful information that can be beneficial to the projects development. Good communication ensures that the relationship garners good results.

Low Interest and Low Power – Monitor: Due to the minimal interest and power that these stakeholders have they do not need persistent and high communication. However, they should be monitored in case there are changes.

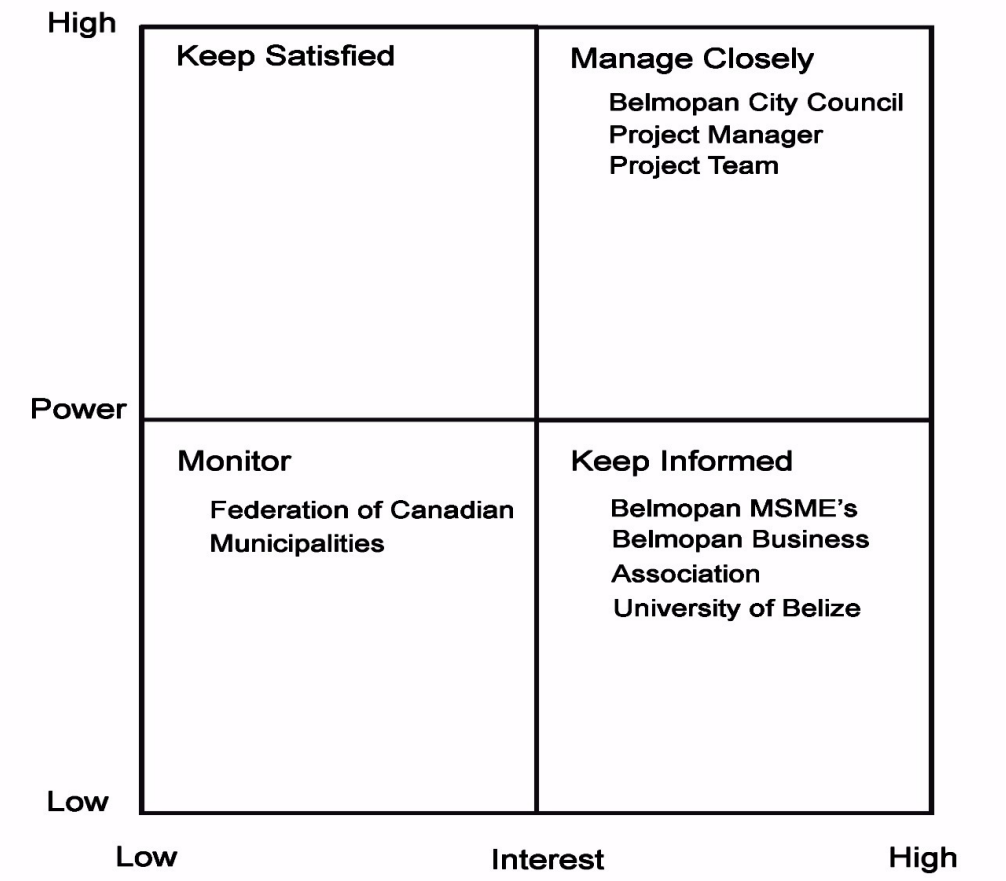


Figure 6: Power Interest Grid (FGP Author, 2018)

Belmopan City Council – High Interest High Power – Manage Closely: As the main project sponsor, they have direct oversight over the scope, cost, and schedule of the project. Although they are an internal stakeholder it is imperative to know their role and plan accordingly as their relationship has direct influence on the overall project outcomes.

Project Manager – High Interest High Power – Manage Closely: As the person responsible for executing the project work that results in the projects deliverable, the level of interest is high. They can have influence over the deliverables so their power is high as well. They directly impact the work products that make up the project scope.

Project Team – High Interest High Power – Manage Closely: The project team is responsible for executing the daily operational work. They assist the project manager in developing the project management plan and as such their information feeds into the PMP content. Their level of interest is high and their power to impact is high as well.

Belmopan MSME's – High Interest Low Power - Keep Informed: The Belmopan private sector is the primary beneficiary in this endeavour as it is them who will reap the results of a well-developed and executed project management plan. Their interest is in seeing the project management plan developed and subsequently executed. However, for the purposes of this Project, they have low power in the overall changes or inclusion in the plan.

Belmopan Business Association - High Interest Low Power - Keep Informed: As the foremost activist entity for small and medium businesses in Belmopan it is imperative for them to know the work being undertaken by the council to facilitate business promotion. They also can provide insightful information that could be fed into the PMP.

University of Belize (UB) - High Interest Low Power – Monitor: The University of Belize has a high interest in this project as they are a main actor in the Belize Entrepreneurial Ecosystem. It is important to monitor the work they carry out with business development and the models or practices that can be included in the PMP.

Federation of Canadian Municipalities – Low Interest Low Power: They will be providing guiding documents and best practices modalities that can serve as tailored replicable models for the business incubator and thus will be feeding into the project management plan. Their role as providers of information denotes low power and similarly a lesser degree of interest. However they will continuously be monitored for any insight they can provide.

4.2.4 Stakeholder Strategy

The engagement strategy of stakeholders comprises of the stakeholder analysis based on their current project engagement, and the desired and ideal level of engagement. This will provide some insight into the status and how they can be engaged and transition from their actual level of engagement to one that is necessary and beneficial for the project. The stakeholder engagement assessment matrix provided below, will succinctly outline just that.

Chart 12: Stakeholder Engagement Assessment Matrix (FGP Author)

Stakeholder	Unaware	Resistant	Neutral	Supportive	Leading
Belmopan City Council					C-D
Project Manager					C-D
Project Team				C-D	
Belmopan MSME's			C	D	
Belmopan Business Association			C	D	
University of Belize			C	D	
Federation of Canadian Municipalities			C	D	

Legend: C- Current level of engagement, D- Desired level of engagement

Chart 13: Individual Stakeholder Strategies (FGP Author)

Possible Strategic Actions		
Stakeholder	**Mitigation Strategies**	**Proactive Strategies**
Belmopan City Council	-In the eventuality that the sponsor loses interest in the project the project manager will develop a	-Continuously engage and provide results as the project management plan advances, engaging

	report showing the quantifiable benefits and the impact that the implementation of a business incubator model project management plan can have in the economic landscape of the municipality.	and receiving input in the progressive elaboration of the plan. Meetings are scheduled to occur at the end of every project iteration ie, after the completion of every subsidiary management plan.
Project Manager	-Will implement the mitigation strategies and their actions	-Will proactively monitor the engagement levels of stakeholders periodically by updating the engagement assessment matrix -The sponsor has agreed to offer incentives in the form of days in lieu to the project manager to effectively engage and conduct the project work.
Project Team	-Along with the project manager, monitor the engagement level of the external stakeholders, through the assessment matrix and through informal interactions asking about their perception on the project.	-Lobby with the project sponsor to provide days in lieu to all the project team and a financial compensation in the form of a bonus to the most actively engaged member to complete research on scope as

		scheduled and accurately.
Belmopan MSME's	- An incentive to fill out surveys and questions will be the raffling of a 20 x 20 space for the upcoming Belmopan Business Expo, with a value of $200.00 BZD. -Free graphic design package inclusive of brochures, banners, and other promotional material at a value of $600.00 BZD for participants of consultative meetings.	-Carry out onsite visits to businesses to get their input. This will be more efficient as many of them have mentioned that although meetings are important the best way to get information is through on site visits. This will not be done only to get input for development but to carry out amendments as well.
Belmopan Business Association	-In the eventuality that their engagement diminishes or is not achieved at the predetermined level the LED-PAC chairperson will amicably request their compliance as per the Memorandum of Understanding between the council.	-Suggest the inclusion of the development of the project management plan as a part of the official yearly activities done by the BBA, and promote it in their newsletter to make them accountable to the process.
University of Belize	-Appeal to their commitment to the entrepreneurial	-Establish a formal agreement with the university to provide

	ecosystem in Belize by providing examples of students who have become part of the business incubator models in other countries who have practiced.	technical support on their areas of expertise for project development.
Federation of Canadian Municipalities	- Switch from emailing to video conferencing to facilitate the amount of effort time needed to be provided by technical experts.	-To prevent the diminishment of the engagement agreed, the municipality will seek a formal letter of commitment with the Canadian municipalities offering to share best practices.

4.3 Communication Management Plan

The communications management plan will guide and support communications activities undertaken in the support of project management plan for the creation of the business incubator model. This plan has been developed with the complete support and for the use of the municipality for project undertaking. The plan will guide and unite the efforts towards a common approach for the communication of the project management plan. It is through the efficient implementation and follow through of the plan that it is expected that the communications needs of this project will be met, thus providing an edge in the successful completion of the activities.

This plan will contain the stakeholder communications requirements, the communication information, the method to update the communication, and the resources to be allocated for the communication to be implemented. More in depth information on the communication items in question will be developed in the communication information section which will comprise of a significant portion of this subsidiary plan. Another crucial part of this plan is the section that deals with the internal stakeholders, considering that this project entails the delivery of a sound project management plan, the internal stakeholders are crucial in achieving the results and thus the communication to be utilized is of utmost importance.

4.3.1 Stakeholder Communications Requirement

The stakeholder engagement plan and the communications management plan are two of the subsidiary plans with very close interaction. Much of the information contained in the stakeholder engagement plan was gathered to be able to establish the requirements needed by the stakeholders and how communications should be carried out to fulfil their respective needs. The needs of the stakeholders was established based on various sessions with them, inclusive of consultative sessions, individual one on one meetings, and information received through the Belmopan Business Association.

Some of the criteria to establish which communication information was in fact a requirement include:

- Does the lack of information actively hinder the successful conveyance of a project delivery?
- Does the promotion of this information work towards the proactive implementation of a project delivery?
- Will the engagement level of stakeholders increase by carrying out this communication requirement?

These criteria will be applied to both internal and external stakeholders of the project.

4.3.2 Communications Information

The communications information section of the communications management plan contains the creative substance of what will be utilized to communicate during the project. The information included will serve as a guide to undertake the communications effort. It is the main objective of this plan to meet the needs of project stakeholders through the sharing of information in order to increase their level of engagement so they can reach that desired level. Each individual stakeholder or group of stakeholders will be delivered information that can be used as input to the project or which can facilitate the execution of project activities.

Key Messages

This project will make use of key messages, which will be utilized as catchphrases to create a cohesive branding. These messages will be the basis of what the municipality seeks as this project is embarked. They will provide focus to the material and information to be shared. These messages will be relayed to the stakeholders as the reasons for the municipality to plan for a business incubator model for the city. The following key messages will be used:

- Belmopan is focused on improving business development and supporting increased trade and economic activities.
- The Belmopan City Council acknowledges that small and medium size businesses are proven engines of local economic growth.
- The Council plays a vital role in supporting businesses and fostering MSME start-up and expansion that can increase incomes and reduce unemployment.

Languages

It is acknowledged that English is the official language of Belize including the Municipality of Belmopan. However consideration needs to be given to the fact that there is a substantial amount of residents whose first language is Spanish. In view of this it is recommmended that all official correspondence with MSME's appear in both English and Spanish. In addition, the option of dual language meetings or the availability of a translator should be an option and priority. This approach would allow communication with a larger portion of the citizens who own or operate businesses, particularly older business owners, and new immigrants.

Logos and Visibility

- **Acknowledgments –** Official communication with external stakeholders inclusive of letters, reports, surveys, questionnaires, and others will carry the footer stating, *"This initiative is a part of the Local Economic Development Strategy for Belmopan, and made possible by the Belmopan City Council."*

- **Logo - –** Official communication with external stakeholders as well as internal stakeholders inclusive of letters, reports, surveys, questionnaires, and others will carry the logo of the municipality on the left hand side of the page. Affixed is the Belmopan City Council's Logo. The image should not be distorted and should carry no background.

Figure 7: Belmopan City Council Logo (Belmopan City Council, 2018)

- **Website:** The website is a valuable tool to get feedback on the services provided to the businesses. The comments provided there can be insightful and will be used for PMP development. Flyers on consultative days with MSME's will be posted there.

- **Social Media:** Polls will be created in social media to gather the main services that are expected to be included in the business incubator model.

The external stakeholders were identified and subsequently included as a vital actors in this subsidiary management plan, they will dynamically provide insight that will result in the future development of the business incubator model. So far the information provided was the one that served as the basis for the development of the external communication information matrix. It is in the best interest of the resulting model that thorough communication be included as part of the projects initiation, and throughout its development. This will solidify the involvement of stakeholders, and facilitate a more robust model that will function to benefit the business sector who will be the main recipiets of the business development services which the incubator will offer.

The matrix was developed to concisely provide details on the communications activities. The matrix was prepared by the project manager and will be monitored by

the administrative assistant. If there is the need to update the plan, the project manager will be responsible for its update.

Chart 14: External Communication Information Matrix (FGP Author)

Target Audience	Information	Methodologies or Technologies Used	Frequency	Person Responsible	Comments
Belmopan MSME's	-General introduction on the purpose of the PMP. -Input as to what type of services are needed for the business incubator. -Location. -Resources needed. -Renting Scheme. -Exit of the incubator.	-Stakeholder Consultations -Meetings -Onsite visit -Surveys	1 consultation 2 Meetings 5 days of onsite visits 1 Survey	Project Team (Business Development Officer)	As the primary group of beneficiaries it is imperative to receive information on the business incubator model most suitable for the needs of their reality. It is crucial for them to be active participants in the establishment of this model and to get continuous

					feedback to feed into the end result.
University of Belize	-General introduction on the purpose of the PMP. -Input as to the type of services. -Partnership in the provision of technical assistance.	Consultative Meetings Email	1 Consultation Email asneeded	Project Manager	The establishment of a sound relationship with UB can provide technical expertise to the PMP, and can also provide the foundation for future input in the execution of the incubator itself.
Belmopan Business Association	-General introduction on the purpose of the PMP. -Request for mentorship. -Sponsorship opportunities. -Input as to what type of services	Consultative Meetings Email Surveys	1 Consultation Email as needed 1 Survey	Project Manager	They play an active role in promoting an environment conducive to business in Belmopan. It is important to keep them engaged and communicate

	needed for the business incubator. -Location. -Resources needed. -Renting Scheme. -Exit of the incubator				with them actively. In instances when the Project Manager cannot meet with the entire board, meetings will be scheduled between the PM and the BBA President.
Federation of Canadian Municipalities	-General introduction on the purpose of the PMP. -Best practices on business incubators. -Business development services offered. Expert guidance.	Email Video calls	Email as needed Video call sessions every 2 weeks	Project Manager	FCM will provide guidance on best practice models on Canadian municipalities with similar characteristics including population size and business type.

As important as it is to establish communication parameters with external stakeholders, it is equally important to organize communications internally with the stakeholders who will actively be pursuing the delivery of project results and between these actors and the project sponsor. It is because of this that internal communication information has been established as an item of standing within project delivery. The most significant forms of communication will be through meetings and reports, for which Communication Information Matrixes have been established. Nonetheless, daily forms of communication such as memos, emails, notes, will still be used and are communication tools which are stated as given.

Chart 15: Internal Communication Information Matrix – Meetings (FGP Author)

Meeting	Description Purpose	Frequency	Owner	Participants
Introductory Meeting	This meeting will set the basis for the work to be accomplished. The project team will be provided information on how the project contributes to the organizational goal and will be provided their roles and tasks for project completion.	Once	Project Manager	Project Sponsor, Project Manager, Project Team
Status Update Meetings	These meetings will be semi-formal and will be carried out every Friday until project completion. This will	Weekly	Project Manager	Project Team, Project Manager

	assist in monitoring progress and updating on the status of the project. Every team member with assigned responsibilities will brief the team on their work.			
Project Sponsor Update Meetings	The first monthly meeting will be informal in nature were the project manager will present a status update. Nonetheless, a formal end of month meeting will be done with the aid of a project status report.	Bimonthly	Project Manager	Project Manager, Project Sponsor
Scope Change Request Meeting	These meetings will be done if a team member or the project manager foresees the need to request a change in the scope. This meeting will serve to present the scope change request to the sponsor with the recommendation from the project manager.	As needed	Project Manager	Project Manager, Project Sponsor

Chart 16: Internal Communication Information Matrix – Reports (FGP Author)

Report Name	Description Purpose	Frequency	Owner	Distribution List
Project Report	Summary report on the status of the project inclusive of report on schedule and cost, and the attainment of deliverables	Monthly	Project Manager	City Administrator Mayor LED-PAC
Status Update Report	Based on a pre-established template, the project team will inform the project manager on their performance based on the tasks they were assigned. They will pinpoint any red flags that might hinder project execution.	Bi-Monthly	Project Team	Project Manager
Final Project Report	Report to be made to mark the closure of the project, stating deliverables and goals met, or other.	Once	Project Manager	City Administrator Mayor LED-PAC BBA in representation of Belmopan MSME's

4.3.3 Communications Updating Method

Taking into consideration the short lifecycle of the Project, the communications management plan will be officially reviewed once at the exact mid-level interval of the project life cycle. The revision will include the updating of stakeholders as needed. This will also reflect the changes in their communication needs and the information necessary to keep them engaged to facilitate project deliverables. If necessary, the communications management plan will be refined to include these new needs and the vehicles of information which are most adequate.

However, in this case the administrative assistant, will be serving as the project assistant and will be the person responsible for notifying to the project manager of any new relevant methods of communication with stakeholders, as she will be the direct liaison for information sharing. If the project manager sees fit, the changes and inclusions will be made to accommodate these changes outside the official established check point. Changes will be accepted and other relevant project documents will reflect these changes. The project sponsor has provided the authority to the project manager to change subsidiary project management plans with consent with the exception of the scope, schedule, cost, and risk management plans.

4.3.4 Resource Allocation

Resource allocation for communication management includes human, informational, and budgetary resources. The human resources include the project management team, and the project manager who will be tasked with the responsibility to complete the assigned activities. Informational resources to be used include, project management software to be utilized among the team, social media survey polls, and data collection software to analyse the responses to the onsite visits. The budgetary resources assigned for communication will be detailed in the cost management plan.

The approval for the use of the resources will be done through the project sponsor. It is important to detail that the human resources that have been assigned for this project were given instruction to give this priority. Even though, some of the informational resources come with an initial purchasing cost, it is expected that the municipality will make use of other resources which are available free of cost such as Facebook polls, Survey Monkey, and Google Docs.

4. 4 Resource Management Plan

The management of both physical and human resources is indispensable and crucial for the execution of projects. For the development of this project management plan, the most used and recognizable assets will be the human resources who will be providing an assisting role in the development of the project management plan. The plan will be spearheaded by the project manager with direct oversight and authorization from the project sponsor. The resource management plan will provide due diligence in the use of the project resources including how they will be distributed through the Project's life cycle and how they will be managed for better project efficiency.

Since this project is geared towards plan development, the most important aspect will be its focus on the project management team. Nonetheless, the other resources, secondary in nature, such as the means of transportation, software usage, programs, and others will also be outlined. This resource management plan will expand on the resource identification methods used to determine resources, the roles and responsibilities of the project management team, the organizational chart which will show the reporting relationships, the structure on how to control the resources, as well as a brief recognition plan.

4.4.1 Resource Identification

The identification of both human and physical resources needed was done through various methodologies. Brainstorming sessions occurred with the project sponsor as to what human resources would be of most value and could directly be assigned to the project manager for the duration of the project. The overall organizational structure of the Belmopan City Council facilitated this endeavour as most of the officers working under the Local Economic Development Department have been functioning automatically and unintentionally as a project management team.

After the brainstorming and assignment meeting with the project manager the following officers were assigned to the development of the project management plan:

- LED Manager
- Business Development Officer
- LED & Research Officer
- Administrative Assistant

For the purposes of this project some of the posts will also be hyphenated to include the active role they are playing as part of the project team, in addition to their official post.

Another of the valuable resources outside of the municipality that will provide guidance in the development of the business incubator model will be the liaison representing the Federation of Canadian Municipalities. As an expert in business incubators and the manager of a Local Economic Development Department, Ms. Elizabeth Lawrence will provide valuable practical information. It was through this partnership agreement with FCM that the analogous estimating technique was used for determining both human and physical resources which were previously used in similar endeavours. Physical resources include:

- Vehicle for Transportation
- Project Management and other Software
- Laptops
- Venue for Meetings
- Catering
- Projector

4.4.2 Roles and Responsibilities Chart

The purpose of this chart is to display in a concise manner the roles and responsibilities within the project management team. This is key in the execution phase of project, in which the project management plan will be followed to create the model for the business incubator. By outlining the role, authority, responsibility and competence the project team will garner a much better appreciation of the part they plan in achieving the project goals.

For the purposes of the chart each section will be described:

- Role – The functional capacity under which the person is acting
- Authority - The power exerted by the individual regarding resources, and decision-making capacities within the official project structure.
- Responsibility – The assigned duties needed to be undertaken to successfully execute the project work.
- Competence – The proficiency and ability that is needed by the person to be able to perform.

Chart 17: Human Resources – Roles and Responsibilities Chart (FGP Author, 2018)

Human Resources				
Name	**Role**	**Authority**	**Responsibility**	**Competence**
Ralston Frazer	Project Sponsor (City Administrator)	Gives authority to the project manager to use city council resources to implement activity work.	Oversight of project	High level understanding of projects linkage to the institutions overall goals

Keyla Magaña	Project Manager (LED Manager)	Is the person responsible for assigning phsyical resources, and requesting purchases if needs be. Assigns task to be completed by the project management team who in this case is the most valuable human asset.	Facilitates the use of resources to the project team members for them to carry out project work.	Proficiency in Project Management and Project Management Plan Development, supervisory knowledge of project management software, expertise in local economic development activities and participatory approach to planning.
Urceline Garnett	Project Management Team - Business Development Officer	Authority over activities that will be undertaken to gather information from MSME's	Responsible for providing information on the business incubator model desired by the businesses. Direct liaison between the	Great interpersonal skills. Proficient in reporting using project management. Experience in business

			council and the private sector.	development services Expertise in assisting businesses.
Kyle Pascascio	Project Management Team - LED & Research Officer	Authority to request information to national agencies, statutory bodies and partners on behalf of the council.	Directly assists the project manager in the development and compilation of information necessary for PMP development. Responsible for the content for information sharing and marketing of participatory approach exercises.	Expertise in Photoshop, excel, project management software and statistical programs. Good research and interpersonal skills for the liaison with MSME's.
Lucin Sho	Project Management Team – Administrative and Project Assistant	Authority over the logistics of consultations and public participation exercises.	Responsibility over project files and project document management,	Proficiency in administrative excel, basic understanding of project management

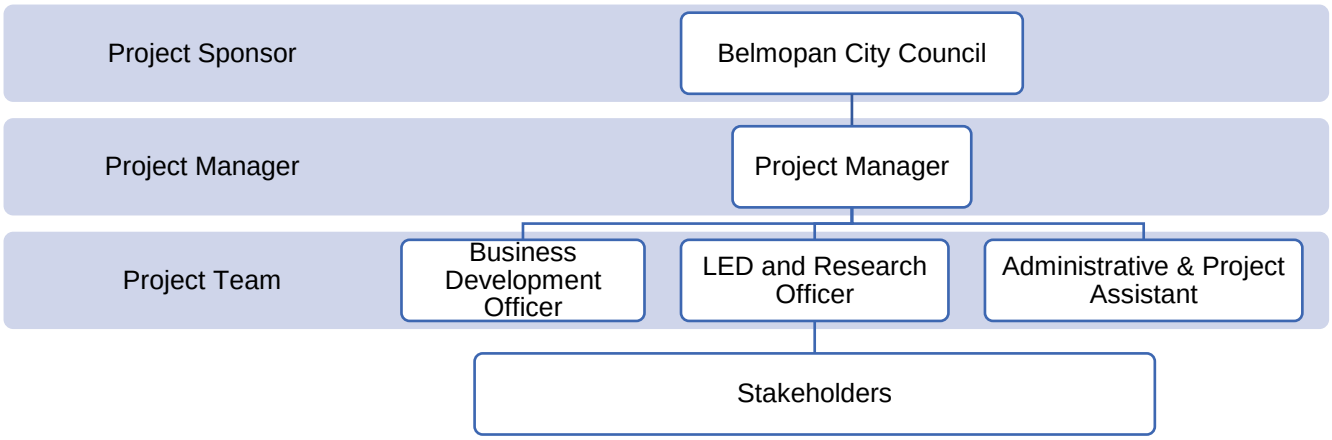
			delivers direct support to the project manager, responsible for contacting stakeholders, and oversight of changes to the communication plan.	software, Excellent administrative and filing skills.
Elizabeth Lawrence	Expert	No direct authority on the project	Provide guidance and best practice information to the Belmopan Municipality.	Thorough knowledge on business incubator practices and Local Economic Development Initiatives

4.4.3 Project Organization Chart

The development of the project organization chart is done so as to concisely pinpoint the reporting relationships between internal stakeholders within the organization who will be undertaking the tasks for project fruition. The graphical nature of the chart assists in providing quick and verifiable context to the management structure and operation within the Belmopan City Council in the light of the development of the project management plan.

The reporting relationship within the internal stakeholders will be hierarchical. The officers who compromise the team will all directly report to the LED Manager who will be functioning as the project manager and is the person in direct control of managing the human resources of the Project. All team members will report to her. In direct oversight of the project manager is the project sponsor who in its legal authority is the Belmopan City Council. Hence, the person who represents the institution is the City Administrator. The stakeholders are also included in the graphical display, even though there is no formal reporting relationship. It is important to keep them abreast of the undertaking of the project and keep them informed.

Chart 18: Project Organizational Chart for PMP Creation (FGP Author, 2018)



It is key to mention that all members of the project team were assigned to this task based on their contribution to the project management plan. Each individual served a purpose and provided direct insight in the model from which the business incubator will result. It is their expertise in various fields such as business development, capacity building, training, moderating, management information systems, process development, entrepreneurial ecosystem, and organizational processes which made their assignment to this project practical. The municipality is now in the practice of assigning key personnel based on the type of project being worked on, this is so

regardless if the staff is or is not assigned under the LED Department, municipal department that is responsible for project development.

4.4.4. Resource Control

The ability to control the resources for the projects use is critical for the efficient delivery of activities. It is onerous on the project manager to ensure that both the human and physical resources of the projects are wholly available for the development of the project management plan. As previously mentioned during the identification process of the resources, the City Administrator assigned the officers who would be making the project team. The project manager has direct control of their hours and how their work load is assigned.

The physical resources to be used by the project team however, are not under the sole management of the project manager. The Procurement Office of the Municipality is responsible for Fleet Management, and for the equipment that will be utilized. A memo will be sent to the procurement officer outlining the dates and hours to use specific physical resources so as to ensure that these items are available for project use. The memo will be supported by the signature and approval of the City Administrator given the provision of project activities as priority.

4.4. 5 Recognition Plan

The Belmopan City Council has identified incentives in the form of recognition and rewards as methods of motivation for high-paced planning projects such as this one. The project life cycle of this PMP development is very short. The project team has to undertake these activities in addition to the other duties as assigned by their job descriptions. It is because of this that the project sponsor has decided on incentives in the form of days in lieu and intrinsic rewards such as inclusion in decisión-making.

- All team members in one way or the other will interact with the MSME's to gather information on their needs for the Business Incubator Model. However, the person who provides a new service idea centred on MSME needs will get 3 days in lieu of the work. The project manager will monitor and decide on the best idea and will forward the request of this recognition to the HR Department through the approval of the City Administrator.

- The project manager will closely monitor the achievements of team members based on their work assignment. Because of this, the team member with the most completed work schedule and the one who has satisfactorily provided deliverables beyond expectation will sit in the LED-PAC meeting that will recommend the approval or not of the final project management plan.

4.5 Quality Management Plan

This subsidiary management plan will focus on meeting the requirements needed for the deliverables to be accepted by the entities engaged in the development of the project management plan for the creation of the business incubator model. This plan will serve to concisely describe how procedures and the guiding framework will be implemented to accomplish the quality objectives being sought. The development of this plan was done early in the creation of the overall project management plan so as to include information grounded on correct and relevant information.

For the purpose of this plan, quality will be described as *"The degree to which a set of inherent characteristics fulfils requirements"* (*PMBOK® Guide* 2017, p 718) Some of the benefits of having a quality management plan include that if followed there is a higher degree of meeting stakeholders expectations as the work carried out is based on their requirements. Another is that less corrective action might happen as proactive action can be taken to ensure compliance. This also translates into cost reduction and more accurate schedule completion due to limited necessity of doing re-implementation.

It is because of this, that this quality management plan will include succinct items such as the quality approach, quality standards, quality objectives, quality roles and responsibilities, quality management activities and quality tools. It is expected that information on all these items will be collated into a document that will directly guide in the execution of actions that are mindful of quality, As a result this can have positive repercussions that can directly impact the degree and level of project realization.

4.5.1 Quality Approach

The approach to quality that will be given to this project will be based on Total Quality Management (TQM). This project is centred on the principles of local economic

development based on which the municipality works to foster LED and under which the MSME's are its prime customers. The TQM is based on the premise that customers are the centre. The TQM under this project focuses on the long terms success of the MSME's. The improvement of planning processes, products and services to be offered in the incubator and the organizational culture will all be centred on having satisfied business incubator participants. This will only be achieved if there is a solid project management plan that will serve to guide the basic premise by which the incubator will be developed. Much like the TQM approach, employees will be actively involved in PMP development as progressive elaboration will be used for continual improvement. The decisions will be based on facts found through various mediums, and communications will be inherent to the overall structure for plan development.

4.5.2 Quality Standard

Business incubators are relatively new entities providing services for business development. Hence the repertoire of best practices is limited for the direct specificities of developing a project management plan for the creation of a model. However, there are various industry specific documents that can be used as standards by which the quality for the model can be based. These documents provide insight as to the practical nature that will serve to ensure that quality is highlighted when applying the model. These guiding documents will be presented to the two main stakeholders the Belmopan Business Association and the University of Belize, based on their suggestions quality parameters will be obtained. The project management team will be responsible for the inclusion of the quality measures for the business incubator model. The documents to be used will be:

- **The Benchmarking for Business Incubators developed by the European Union in 2014** - This will not only be used as guiding framework in the elaboration of the project management plan, but will provide comprehension

on specific quality measures that are to be used in the model and its subsequent implementation.

- **FCM Business Incubator Prototypes** - This report makes inclusion of measures of best practice that can facilitate the creation of the incubator model for the City of Belmopan. This document can be used to match the requirements already identified with suitable practices already implemented by the Canadian local government for the creation of business incubators. The prototype document facilitates quality parameters as it matches the reality of of a municipal government spearheading a project in the best interest of the private sector, while bearing in consideration the stakeholder's expertise in areas of MSME interest.

4.5.3 Quality Objectives

The performance of the project is dependent on knowing what are the inherent criteria that need to be met to arrive to the quality juncture of the project. The quality objectives are used as a measures to appraise the project based on its performance and the verification of having met client requirements. In this case, it is the project sponsor who will be setting out the quality objectives taking into consideration the input of the primary beneficiaries; the MSME's.

The quality objectives that have been established for this project management plan are the following:

- Scope Management Plan – Completion of all work outlined in the work breakdown structure to successfully complete all requirements set out by each individual management plan.
- Stakeholder Engagement Plan – The conformity of engagement parameters to have active participation and involvement of stakeholders through the implementation of the plan.

- Communications Management Plan – Compliance to the communications requirements timelines in regards to the frequency and interval of project reporting, project meetings and dissemination of information.
- Resource Management Plan – Effective pinpointing of all resources both humam and physical and the methods in which they will be assigned, requested and used.
- Quality Management Plan – Specific outlining of quality endeavours needed by subsidiary management plans to achieve the requirements set out by the project sponsor in the scope management plan.
- Risk Management Plan – Effective monitoring of project activities and implementation of the risk management strategy in order to minimize possible negative consequences and optimize possible positive occurrences.
- Schedule Management Plan – The adherence to the chronogram as outlined in the project schedule. The Schedule will be reviewed weekly to verify that the activities are occurring as per the outlined timeline.
- Cost Management Plan – Suitable compliance of the projects budget, following the specific metrics as outlined in the plan.

4.5.4 Quality Roles and Responsibilities

As with other subsidiary plans outlining specific roles and responsibilities for individual project management, knowledge area facilitates the accountability and reporting effectiveness of tasks.

These are the following quality responsibilities per internal stakeholder:

Chart 19: Quality Roles and Responsibilities (FGP Author, 2018)

Name	Role	Responsibility
Ralston Frazer	Project Sponsor (City Administrator)	Enforces quality parameters. Approves quality objectives are successfully met.
Keyla Magaña	Project Manager (LED Manager)	Oversight of quality activities within the project team. Ensuring compliance of all requirements in all subsidiary management plans. Application and inclusion of the quality standard.
Urceline Garnett	Project Management Team - Business Development Officer	Thorough implementation of project processes. Delivery of successful individual project activities assigned as their task.
Kyle Pascascio	Project Management Team - LED & Research Officer	Thorough implementation of project processes.

		Delivery of successful individual project activities assigned as their task.
Lucin Sho	Project Management Team – Administrative and Project Assistant	Thorough implementation of project processes. Delivery of successful individual project activities assigned as their task. Monitor complaints and suggestions of stakeholders.
Chairperson	Local Economic Development Project Advisory Committee (LED-PAC)	Provide recommendations to the project manager in the event quality parameters are not being met. Accept scope changes that only have direct positive impact on the quality objectives. Agreeing on project tolerances specific to quality

4.1.5 Quality Management Activities

Quality management activities will be embarked on to assure that quality occurs throughout the projects development. Since this project focuses on plan development most of the activities will be centred on the compliance of the plans with the requirements established. The activities will include:

- Conformance checks to be done by the project manager
- Thorough review and inclusion of usable suggestions to be incorporated in the business incubator model.
- Addressing of complaints made by stakeholders
- Meetings including quality assurance and quality control
- Meetings including the implementation of individual team member's tasks and their adherence to the requirements.
- Control of project schedule as this is one of the unchangeable requirements

4.1.6 Quality Tools & Techniques

For both management and control of quality, it is necessary to use adequate project specific tools for the oversight of quality. For this project we will be using both audits, and surveys. As previously mentioned, this project management plan is the first of its type, structured with the official use of recognized project management processes by the Belmopan municipality and as such, audits will be used to manage quality effectively.

The Ministry of Local Government, Rural Development, Immigration and Nationality is the national body with direct responsibility of all local government authorities of Belize. It is within this purview that they will be conducting the assessment and audit over the compliance of project processes and procedures. A certified project manager in collaboration with a local government officer will do the audit. The areas of focus will be:

- Application of good and best practices being implemented that can be used as a reference in future municipal project management plans for the Belmopan Municipality (with the possibility of being benchmarked for other Belizean local government bodies)
- Identification of nonconformities
- Assistance in suggestions to make plan and process improvements
- Identification of contributions made by the plan to overall municipal development
- Sharing the lessons learnt.

The audit will be done in a scheduled basis, before the conclusion of the project. The date will be set out by the LED-PAC, taking into consideration the project's maturity level. By carrying out this audit we can have a possible reduction in overall costs on quality and increase the customer's approval of the final project management plan.

Surveys will be an additional technique used for quality control. Surveys which fall under data gathering will be used to gather data about customer satisfaction as it relates the development of the project management plans. Prior to the launching of the official PMP, stakeholders will meet with the project manager after being exposed to the draft PMP. This survey will be done to asses if their requirements have been fully met. Each subsidiary management plan will be measured on its compliance to expectations in a point scale of 1-5, 1 being the lowest and 5 being the highest.

Surveys with open ended questions will be included in order to gather data that will serve as indicators for improvement. The timeframe will be provided to get final response. If responses are not received as expected, the administrative assistant will conduct the survey via telephone. It is expected that this will minimize costs regarding compliance to customer satisfaction prior to the actual execution and construction of the business incubator and the implementation of the model in the subsequent project.

4.6 Risk Management Plan

Individual Project Risks are uncertain events or conditions that if occur, can have a positive or negative effect on one or more project objectives (*PMBOK® Guide* 6th Edition p, 397). For the purpose of the development of this project management plan, focus will be given to individual project risks as these should be followed closely to ensure the maximization of opportunities and the hindrance of negative effects. Risks will be intentionally monitored through the risk management plan so as to create a purposeful supervision and control of possible deviations. This will be done taking as a primary reference the project assumptions and constraints, which will assist in establishing, risk parameters.

It is imperative that the risks be managed effectively, as they have direct impact on overall project conformity and the project's successful completion. The aggregation of the individual risks will then add to an overall risk degree. All of these items will be managed closely to enhance the opportunities derived from positive risks and minimize the threats made by the negative risks. By doing so we will positively manage situations that could escalate into cost overruns, poor performance, loss, and bad reputation.

The risk management plan for the PMP for the Creation of a Business Incubator Model will focus on the identification, analysis and response to risks within the project, this taking into consideration the best interest of the projects scope. The Risk Management Plan will entail the risk strategy, the risk methodology, roles and responsibilities along with a proper risk categorization. It is expected that the concise and precise information contained in this plan will compliment the quality management plan and will coexist in such a manner that together they will work to successfully deliver the end project objective, in addition information contained in all other subsidiary management plans will be fed into this plan.

4.6.1 Risk Strategy

This risk strategy will provide a general and overall description to the approach that will be utilized to managing risks for this project. The strategic implementation of this plan will be based on the premise that proper risk management indicates control over the consequences of possible future events and is proactive rather than reactive. Although the strategy will is based on this general approach to risk management, specific and individual risks will be identified and as such their consequences will be outlined. This will directly have an impact on the risk management plan development as it will ascertain what can be encountered as the project progresses. Five major risks were identified using the cause, risk, and consequence structure.

Chart 20: Cause, Risk, Consequence Structure (FGP Author, 2018)

Cause	Risk	Consequence
The use of new communication tools and techniques	Inneficient communication by the project management team with the stakeholders	Project Team and primary beneficiaries do not agree on deliverables
Assumptions and constraints were not developed through a participatory process with primary beneficiaries	Poor involvement of primary beneficiaries (MSME's) in plan development.	Without MSME involvement it would be difficult to tailor a business incubator model based on their needs which would make this endeavour fail to meet the need it was created for.

Level of Expertise - Project management team with no formal training on project management.	Formal project management practices and processes are presented to the team, upskilling opportunity for staff.	Staff members are more versed in Project Management.
Belmopan City Council's level of project management maturity is very minimal	The project sponsor might not accept some or all of the best practices as per the project management plan developed.	This might translate into the creation of a project management plan which is not entirely implemented or from which only portions are implemented which will make it less congruent.
Agreement with FCM to transfer model and information is not legally binding	Partnership on best practices, information transfer and expert support can cease at any point during the project life cycle.	This can have a direct impact on the quality of the project management plan as their expertise is being used as a model to emulate for the development of the plan.

When it comes to the individual risks, it is best to ascertain an individual strategy per risk since this will facilitate risk monitoring and the proactive response to such. There are five responses that can be accounted for when dealing with such threats, one of them is escalation, where the threat is outside the purview of the project management team and in this case would be escalated to the organizational level, and would be brought to the elected officials through a decision made in a municipal caucus meeting.

The second response is transfer, where the threat is given as a responsibility to a third party mainly done through the purchase of an insurance. Thirdly, mitigate refers to actions done to minimize the chances of the occurrence and the impact of the threat. This is commonly the most used action. Another option is acceptance of the risks, this signifies that there will be no proactive measure taken to maximize or combat against the threat. The last response is Exploit where active measures are taken to ensure that a positive opportunity comes to fruition.

It is based on these parameters that a risk strategy was defined for each individual risk. The individual strategies can be seen in the below table:

Chart 21: Individual Risk Strategy (FGP Author, 2018)

Risk	Risk Strategy
Inneficient communication by the project management team with the stakeholders	Mitigate – Provide the project management team with comprehensive training on the new communications tools and techniques specially the ones utilized on the communication management plan to ensure that the tools and techniques used by the PMT convey the right messages to the project stakeholders.
Poor involvement of primary beneficiaries (MSME's) in plan development.	Mitigate – Although they were not included in the development of the assumptions and constraints, the primary beneficiaries will be involved throughout the development and implementation of the project management plan, through reporting meetings, face-to-face interviews, surveys, calls and through social media. This will facilitate stakeholders' involvement.
Formal project management practices and processes are presented to the team,	Exploit – actively engage project team members and provide learning opportunities through project management sensitization sessions, granting them with a *PMBOK® Guide* latest edition as a reference

upskilling opportunity for staff.	and guide to conduct processes. Offer intrinsic rewards as part of this semi-self taught fast-paced situation.
The project sponsor might not accept some or all of the best practices as per the project management plan developed.	Mitigate – Even though the municipalitie's project management maturity level is still in the making, the project sponsor will be responsible for engaging and garnering buy-in from senior management and the Belmopan city Council Caucus during the project's initial briefing. During this meeting the project manager will provide the benefits of utilizing the *PMBOK® Guide*'s processes as the world wide recognized body for project management practices and for adhering to the International Standards Organizations (ISO's) requirements, making it the most competent entity to emulate for project management plan development.
Partnership on best practices, information transfer and expert support can cease at any point during the project life cycle.	Mitigate – Request a holistic package containing reports, best practice documents, incubator stakeholder information, implementation documents, lessons learnt, and other supporting documents to be delivered as a master file to the mutual repository. This would contravene the effects of partnership ceasing at any given moment as crucial and the most important information would have already been gathered.

4.6.2 Methodology

The methodology to develop the risk management plan includes the approaches, the tools, and the data sources that will make up this subsidiary management plan, and will be responsible to oversee this aspect of the risk management of this project.

The approach was specified as being proactive rather than reactive, delineating individual strategies per risk identified. The most significant tools that will be used include the risk management plan template, which will serve as the guiding framework to manage risks. The risk register which is used to concisely identify individual risks, potential risk owners, and a list of the appropriate risk responses. The information contained in the register can be updated as needed. Also, as one of the most useful software programs, Ms Project will be used to assist in the tracking of risks.

Risk Register

The risk register is a vital component of the overall risk management approach. This concise table is a tool that is vital in the overall management of risks within the project's life cycle. The individual risks previously identified, were analysed. Management strategies are assigned per risk. The risk register aids in the identification of the causes, and what might trigger the risks to occur. This provides the basis by which the strategic action to counteract or act will be based on. A key aspect within the risk register is the identification of the risk owner, assigning direct responsibility over an item, and providing the assurance that the risk will be observed, and action will be taken when necessary.

Chart 22: Risk Register (FGP Author, 2018)

RBS	Cause	Risk	Consequence	Probability	Impact	Pxl	Trigger	Owner	Strategy	Cost
1.1	Assumptions and constraints were not developed through a participatory process with primary beneficiaries	Poor involvement of primary beneficiaries (MSME's) in plan development.	Without MSME involvement it would be difficult to tailor a business incubator model based on their needs which would make this endeavour fail to meet the need it was created for.	2	4	8	Stakeholder perception that they are not being included.	Business Dev. Officer	Mitigate – Although they were not included in the development of the assumptions and constraints, the primary beneficiaries will be involved throughout the development and implementation of the project management plan, through reporting meetings, face-to-face interviews, surveys, calls and through social media this will facilitate stakeholders involvement.	Included in project budget
1.2	Level of Expertise - Project management team with no formal training on	Formal project management practices and processes are	Staff members are more versed in Project Management.	5	3	15	Project Managers' realization that team is not fully equipped with project	Project Manager	Exploit – actively engage with the project team members and provide learning opportunities through project management sensitization sessions,	$250 BZD

	project management.	presented to the team - upskilling opportunity for staff.					management knowledge.		granting them with a *PMBOK® Guide* latest edition as a reference and guide to conduct processes. Offer intrinsic rewards as part of this semi-self taught fast-paced situation.	
2.1	The use of new communication tools and techniques	Inneficient communication by the project management team with the stakeholders	Project Team and primary beneficiaries do not agree on deliverables	1	2	2	Project Management Team not following communication procedures.	Project Manager	Mitigate – Provide the project management team with comprehensive training on the new communications tools and techniques specially the ones utilized on the communication management plan to ensure that the tools and techniques used by the PMT convey the right messaged to the project stakeholders.	$150 BZD
2.2	Belmopan City Councils level of project management	The project sponsor might not accept some or all of the best	This might translate into the creation of a project management plan which is not	1	4	4	Project Manager not satisfied at the end of project	Project Manager	Mitigate – Even tough the municipalities project management maturity level is very minimal, the project sponsor will be	$0 BZD

	maturity is very minimal	practices as per the project management plan developed.	entirely implemented or from which only portions are implemented which will make it less congruent.				reporting meeting.		responsible for engaging and garnering buy-in from senior management and the Belmopan city Council Caucus during the project's initial briefing. During this meeting the project manager will provide the benefits of utilizing the *PMBOK® Guide*'s processes as the world- wide recognized body for project management practices and for adhering to the International Standards Organizations (ISO's) requirements, making it the most competent entity to emulate for project management plan development.	
3.1	Agreement with FCM to transfer model and information is not legally binding	Partnership on best practices, information transfer and expert support can cease at any	This can have a direct impact on the quality of the project management plan as their expertise is being used as a model	2	3	6	Change of Local Government which decides not to uphold previous	Project Manager	Mitigate – Request a holistic package containing reports, best practice documents, incubator stakeholder information, implementation documents, lessons	$0 BZD

		point during the project life cycle.	to emulate for the development of the plan.				agreements .		learnt, and other supporting documents to be delivered as a master file to the mutual repository. This would contravene the effects of partnership ceasing at any given moment as crucial and the most important information would have already been gathered.	

Probability Legend

The probability refers to the direct prospect of this risk occurring based on factors such as prior occurrence, likelihood of its occurence in this project, and elements of consideration such as the unique characteristics and the reality of this project.

Scale	Probability
Very Low 1	Very low probability of this happening has not happened before
Low 2	Low Probability, has happened once
Medium 3	Medium probability, this has occurred 3 times before
High 4	High probability, this has happened more that 5 times
Very High 5	Very High probability, this usually happens

Impact Legend

The impact is based on the degree of effect it can have on quality, time, cost, and scope starting at very low impact measured at 1 point and progressively moving to a very high impact on quality, time, cost, and scope with the highest degree measured at 5 points.

Scale	
Very Low 1	Very low impact on the project, does not pose significant effect
Low 2	Low impact on the project, the effect it may have is minimal
Medium 3	Medium impact on the project, the effect is average.
High 4	High impact on the project, the effect it may have is significant.
Very high 5	Very high impact on the project, the effect it poses is of great significance

Taking into consideration the classification of the probability and the impact of the risks, in the risk register a probability and impact (Pxl) matrix was developed. The matrix is to work within a parameter of scores, 25 being the highest with the risks with a maximum probability of happening and with the most impact on the project. The PXl will also serve as a visual representation to the project manager and the project team members and aid in the monitoring of the individual project risks and in assigning resources and efforts.

Chart 23: Project Risk PXl (FGP Author, 2018)

Impact / Probability	Very Low 1	Low 2	Medium 3	High 4	Very High 5
Very Low 1	1	2 Inneficient communication by the project management team with the stakeholders	3	4 Project Sponsor Non Acceptance	5
Low 2	2	4	6 FCM Partnership Cease	8 Poor Primary Beneficiary Involvement	10
Medium 3	3	6	9	12	15
High 4	4	8	12	16	20
Very High 5	5	10	15 Upskilling opportunity for staff.	20	25

Chart 24: Project Risk PXI Legend (FGP Author, 2018)

Probability Impact Matrix Legend		
Color	Priority Range	Risk Score
Green	Low priority	1-9
Yellow	Medium priority	10-15
Red	High Priority	16-25

4.6.3 Roles and Responsibilities

One of the fundamental principles used in the development of this project management plan was the accurate description of the roles and responsibilities of each individual team member. By defining the role and clearly establishing the responsibilities, risks are allocated an owner which will facilitate the accountability of project team members to actions that can deter or improve the projects deliverables. The roles and responsibilities for the risk management section of the PMP are the following:

Chart 25: Risk Roles and Responsibilities (FGP Author, 2018)

Name	Role	Responsibility
Ralston Frazer	Project Sponsor (City Administrator)	If necessary, approve of scope changes that can have a direct impact on proactively addressing risks. Keep awareness of risks and their consequences to

		the projects as well as the organization's needs.
Keyla Magaña	Project Manager (LED Manager)	Decision maker responsible for implementing actions to maximize positive risks or minimize negative risks. Oversees risk management processes. Directly liaise with stakeholders to maximize relationship building efforts that will decrease possible adverse effects. Allocation of risk responsibilities within project management team.
Urceline Garnett	Project Management Team - Business Development Officer	Assists in directly monitoring factual causes that can trigger risks, before these occur. Provide necessary information for the project

		manager to review potential risks.
Kyle Pascascio	Project Management Team - LED & Research Officer	Assist in directly monitoring factual causes that can trigger risks, before these occur.
Lucin Sho	Project Management Team – Administrative and Project Assistant	Assist in the development of risk reports on a per needs basis. Maintain and monitor issues log
Chairperson	Local Economic Development Project Advisory Committee (LED-PAC)	Issues recommendations to the project sponsor regarding scope changes related to project risks. Vested by the authority of the project sponsor approve risk related resources for the use of the project manager.

4.6.4 Risk Categories

To categorize risks, a Risk Breakdown Structure (RBS) was utilized. The RBS is a hierarchically organized view of the identified project risks arranged by risk category and

sub-category. It identifies the various areas and sources of potential risks. The RBS was done through various project management team meetings, as this assisted in ascertaining most of the risks that were included in the project. The RBS is an invaluable tool that aids in understanding the risks faced by the project and will be used to structure and guide the risk management process.

Chart 26: Risk Breakdown Structure (FGP Author, 2018)

Risk Breakdown Structure		
RBS 0	**RBS 1**	**RBS 2**
0.Sources of Risk	1.Technical Risk	1.1 Poor Primary Beneficiary Involvement
		1.2 Upskilling Opportunity for Staff
	2.Management Risk	2.1 Bad Communication
		2.2 Project Sponsor Non Acceptance
	3.Commercial Risk	3.1 FCM Partnership Cease
	4.External Risk	4.1 Unpredictable Hurricanes

4.7 Schedule Management Plan

The schedule management plan provides direction and oversight on how the project schedule will administered by the project manager throughout the project's life cycle. This plan will serve as the roadmap that will be followed from project initiation, to the development of the project activities, and towards culmination at the project's completion. The management of the project schedule is one of the most critical components in this project as there is an allotted, predetermined and non-negotiable timeframe for the delivery of the projects objectives. This subsidiary plan will be done by following the best practices outlined by the Project Management Institute. It will be concise and include the most essential items that are needed for an efficient schedule management plan of this nature.

Components of this schedule management plan include the project schedule model that will outline the methodologies and tools used, and the project schedule model maintenance that will be used as the main reference when updating the current status and determining the projects progress. It also includes the definition of activities that are to be based on the WBS. It will include the activity list, milestones and sequencing, as well as the performance measurement. This plan will encompass the criteria to be used to monitor and control the project schedule during its implementation so as to follow the rubrics for its most close adherence.

4.7.1 Scheduling Model

To develop a sound project schedule model it is imperative to establish the methodology to be used inclusive of the scheduling tools. Overall these are actually what make up the schedule model. The life cycle to be used is the adaptive one while taking into consideration the flexibility that this cycle provides. The development of this project management plan was developed with the deliberate knowledge of the pre-determined timeframe and the need to be rigid in the use of time management. It is because of this

that the adaptive method was used. This would allow the project to reflect a possible changing reality that even if altered would work towards the flexible accomplishment of the goals.

The main scheduling tool that will be used for this plan is Microsoft Project 2016. The use of this tool will provide an organized manner of tracking and organizing specific activities. It will make use of the activities stated in the work breakdown structure and will provide a synopsis of the milestones, the dependencies between activities, and will establish a critical path that needs to be followed for project completion within the predetermined date. Based on the expertise premise, reference from an incubator manager was used to ascertain crucial activities with the reassurance of the project management team's brainstorming session, which was done to assist in the development of the schedule management plan.

The methodology and tools will work based on the following key dates:

Project Start: 14th of May 2018
Approval of Project Management plan by tutor: 21st of October 2018
Project End Date: 15th of December, 2018

The timeframe for this project is rigid, with no flexibility. This makes following the schedule imperative for the successful delivery of the project.

4.7.2 Activity Definition

Activities for this schedule were defined using the work breakdown structure used previously during the scope management plan. The detailed hierarchical representation of activities and their parent-child relationship determined the activities that were needed to be implemented in order to achieve each subsidiary management plan. Rather than having an activity list that will duplicate in the information contained on the scope

management plan, direct reference will be made to the work breakdown structure's dictionary in annex 5 for a description of the activity, the responsible entity, and the resources needed for execution of each particular activity item.

The activities contained in the schedule, in annex 6 will be conducted in a linear sequence; there will be no activities that will be carried out in parallel. This is due to the high paced nature of the project and because of the requirement that mandates that the project manager be the person responsible for the overall delivery of the project objectives. The linear sequence of this project will be seen in the relationship sequencing of the project activities in the schedule. It is important to highlight that most of the dependencies used were discretionary. The discretionary dependency was used because there is no rigid sequencing, rather the project has been using soft of preferential logic based on best practices by other developers of business incubators. The finish to start relationship was of significant use, this precedence method was utilized to actively engage in the conveyance of the activity work in an environment where one activity was done after the next in a high-paced work setting.

Project milestones contribute significantly to the realization of the project objectives and the end deliverables sought out. The project milestones are significant project landmarks that pinpoint the achievement of a particular item. All project milestones identified in this project are mandatory, they are all a requirement for the delivery of the overarching project objective. The milestones showed in the project schedule have no significant duration in days as they represent the achievement of other activities, this denotes their importance. The milestones in this project are the 8 subsidiary management plans that will compliment each other and create the project management plan. The milestone list is a tool that will be used to check and monitor the effectives of the schedule as it relates to the achievement of the milestones, it is through this tool that the project manager will check to see if they milestones have been met, thus providing an assurance that the project is moving as scheduled.

Chart 27: Milestone List (FGP Author, 2018)

Milestone	Date of Accomplishment
FGP Start	14-05-2018
Approved FGP Scheme for PMP Development	26-06-2018
Scope Management Plan	25-07-2018
Resource Management Plan	08-08-2018
Schedule Management Plan	20-08-2018
Quality Management Plan	31-08-2018
Stakeholder Engagement Plan	12-09-2018
Communication Management Plan	24-09-2018
Risk Management Plan	04-10-2018
Cost Management Plan	19-10-2018
Tutor's Approval of PMP	19-10-2018
FGP Finalization – Project Management Plan Approval	15-12-2018

4.7.3 Project Schedule Model Maintenance

Upon the schedule development and its approval as the formal baseline, the project manager will be the person with direct oversight and responsibility over reviewing the project team's adherence to the assigned activities. Initially, team members are going to sit and provide input to the schedule. After revisions are made the project manager will be responsible for liaising to have these insertions included or discarded. This schedule will be presented to the project sponsor which will provide the final go ahead that will serve as the baseline for this schedule management plan. After the schedule's baselining no changes will be made unless they go through the formal change control process. This is done through a formal presentation of the change made by the project manager to the LED-PAC which approves or rejects it. The change is then logged.

The schedule model maintenance processes are primarily used to update the standing of the schedule in comparison to the work that is supposed to be achieved, this along with a complete record of how these activities are progressing during the implementation of the project activities. As mentioned mosts milestones make allusion to a subsidiary management plan and each of them contain activities that need to be implemented to achieve the milestone. Meetings are scheduled on a monthly basis with the project manager, these meetings will serve to communicate the update on the status of the project. This will be verified based on the scheduled meeting date and taking into account all prior work that needs to be achieved for that specific time frame. Progress of the project will be recorded per milestone achieved.

4.7.4 Rules for Performance Measurement

It was decided that for this project Earned Value Management (EVM) would be used as the performance measuring framework. It is in the schedule plan that the rules for such performance measurement are established so that they could be used in their entirety during project execution. The use of EVM has been widely accepted in the project management world to facilitate effective measurement of not only cost but schedule as well. Following the rules of performance measurement as it relates to schedule, allows the project manager to get appropriate feedback on the schedule status and will therefore be a key item to consider if changes are to be made, or if a problem is encountered. In essence the rules that will be used will assist in maintaining the schedule within established time frames.

EVM makes use of the predictive principle, it takes into account the patterns and tendencies that have been going on in the project and uses them to forecast future possibilities based on scientific calculations. These calculations focus on pre-established patterns which will assist the project manager in knowing if the project is on, behind or ahead of schedule, and if the project management team is using the time resources in an appropriate fashion as it relates to the expected time for completion. It is important to

mention that this EVM methodology assists in rectifying possible negative occurrences by showing where the project is encountering pitfalls, and how long it will take to rectify the situation.

The following concepts are going to be used as reference when checking on the project's performance:

Planned Value (PV) – The planned value under EVM is a summary description of how much the work is supposed to be done at a predetermined point in the project's schedule. This measurement is done based on how much work is scheduled to be done in comparison to the established baseline which in turn is referred to as the performance measurement baseline (PMB).

Earned Value (EV) – is a reflection of the work that has been completed at any given point in time. It shows the quantity of work that has been completed to date and is expressed as the planned value for the work.

EMV Rules to be applied

Basic mathematic calculations will be used as the principles and will regulate the determination of performance measurement. Throughout the project we will calculate the schedule variance, which will let us know if the endeavour is on, ahead or behind the schedule. Positive results for this calculation signify that we are moving in the right direction and are ahead of schedule, while a negative result signifies the project is behind schedule. The calculation for schedule variance is: Schedule Variance (SV) = Earned Value (EV) – Present Value (PV). To get this figure in a percentage form that will indicate the percentage of work completed we will use the following formula: Schedule Variance Percentage (SV%) = Schedule Variance (SV) / Percentage Variance (PV), likewise negative values denote we are behind schedule, while positive values show how much work has been done.

Since this is the first formal project being implemented by the LED department as a project team, is its imperative to be able to monitor how the team is performing based on the time allocated for the project, this will be done using the Schedule Performance Index (SPI). The SPI is gotten through the division of Earned Value by the Planned, Schedule Performance Index (SPI) = Earned Value (EV) / Planned Value (PV). The decimal result of this calculation will show us the percentage of efficiency by which the project team member is working.

These calculations will be applied as guiding frameworks to analyze the current schedule status of the project and will assist in rectifying situations if needs be. When it comes to the application of the rules of the EVM formulas, the guiding principle is that the schedule variance should be no lower than 85% at any given time and that the Schedule Performance Index likewise should not be lower tan 85%. By ensuring compliance to the Schedule, we will be within parameters of achieving the activities on the schedule as per the projects baseline.

4.8 Cost Management Plan

The cost management plan is directly responsible for the description of project costs, their planning, structuring and their subsequent control during execution. The Belmopan City Council as project sponsor will be the entity that will be incurring in all costs related to this PMP development. As one of the project exclusions, there will be no procuring of third party service providers. All work will be done using the internal resources of the organization. As such, it is expected that this project management plan will be cost effective as the staff tasked to carry out this endeavour are all part of the salary system of the municipality.

The development of this plan made use of various tools and techniques that aided in its creation. One is the cost management plan template from the Project Management Institute, which was used as a reference in identifying suitable information for a project of this similitude. The project charter was also used as a valuable reference in the creation of this plan. As much generic information as was possible was established there during the project's inception. Ms Project will also be used to associate activities and link them to resources and to the costs of each individual task as this will ensure that no activity is overlooked and that close monitoring will happen while implementing the project's activities.

The budget for this project was developed using the analogous estimating technique, and was based on a comparable project undertaken by a municipality under the Federation of Canadian Municipalities. It is important to note that the municipality to be compared has similar characteristics as the City of Belmopan, making the comparison valid. The budgetary allocation made by the Belmopan municipality will not be subject to changes and will include contingency costs that will cover any unexpected occurrences. However, it was indicated during project acceptance that no revision of the project budget will be submitted to the Belmopan's caucus via the LED-PAC.

Reporting regarding the use of finances will be made by the project team to the project manager on a weekly basis. The team member responsible for an assigned activity will first request the resources to the project manager who will then submit the requisition for approval by the City Administrator who will then provide instructions of disbursement to the accounts department. The project manager will be responsible for the overall use of resources specially finances. The process will follow financial organizational processes established by the council, and passed as resolutions by the caucus. The weekly reporting made to the project manager will then feed into the monthly report that will be made to update the project sponsor on the status of the project.

Financial Reporting will follow the template below and will be done in excel:

Chart 28: Cost Report (FGP Author, 2018)

WBS Activity	Description	Date	Amount Requested	Amount Spent	Total Budget remained

4.8.1 Units of Measure

The units of measurement will establish the parameters based on which the resources will be quantified. The three main measurements that will be used include the hours used by staff, the currency, and the amount and cost of mileage used to conduct participatory process activities. One of the main resources to be used is the staff who will assist in the implementation and execution of the plan. The activities that they will undertake will be an additional responsibility aggregated to those in their daily operational tasks. As such

each staff member is expected to use no less that 15-25 hours per week to accomplish the project. This will be done based on the priority given by the municipality to the project.

The Belizean dollar (BZD) will be the base currency by which all costs will be expressed. The exchange rate is $1.00 USD per $ 1.981 BZD. The exchange rate will not fluctuate as the Central Bank of Belize has pegged the BZD to the USD so that the foreign exchange rate remains constant. To conduct field visits to MSME's, the officer will be using either the assigned vehicle which will be fuelled at 8 gallons per day at a rate of $11.15 BZD per gallon or the officer will be provided mileage of $1.72 BZD per mile to an amount not exceeding 52 miles per day. These activities are scheduled to happen 7 days during the lifetime of the project. These stakeholder outreaches will happen to develop activities under the stakeholder enagagement plan. In both instances, the costs will automatically be deducted from the LED Department's annual fiscal year budget under the project implementation line item.

4.8.2 Level of Precision

The above projected estimating, needs to be assigned a level of precision. In this instance, precision will make reference to the refinement in the measurements to be used. It will be the condition of exactitude and accuracy used for time, money, and other quantifiable items. The use of precision will facilitate the development of cost estimates and will provide figures that are more manageable. It is important that close recording of the item in mention be done. As a pilot initiative in project management practices for the municipality, lessons learnt or best practices established need to be analysed for future reference.

It is because of this that the project manager decided to assign hours as the only measurement of time to be used in the Project. In instances where minutes are used, this will be added, tabulated and accounted for in hours, not in minutes. The financial costs of individual activity items will always be rounded up to the nearest Belizean dollar. The total

project budget however, will be rounded up to the nearest hundredth of a dollar. Miles and gallons have assigned values and will remain constant as per the outlined numeric figures established in the units of measure.

4.8.3 Level of Accuracy

The range of accuracy that will be used for this project will be ± 10 % in all aspects related to costs and their estimates. Since the project is making use of the analogous estimating technique, it is in the best interest of the project to make use of an acceptable range that will make inclusion of contingencies. Contingencies are referred to as the costs associated with possible risks that are known. The contingency can include rework, and other known unknowns. As per the risk register the contingency for this project will be $400.00 of the total project budget. It is important to note that the management reserve will not be included in the overall cost baseline.

Budget

The budget will be the main reference as to spending matters in this cost management plan. This project budget will be the baseline reference document of all authorized cost transactions. The cost baseline will have a $400.00 BZD contingency reserve included as part of the budget and will be authorized to address identified risks.

The management reserve will be excluded out of this Budget. However, 5% of the total cost budget will be designated as management reserve. It will be a part of the project and its budgeting but will only be used to finance unknown-unknowns. The changes will made only if approval has been given by the project sponsor. It is onerous on the project manager to get this approval by substantiating the reasons as to the implementation of the management reserve. Only if this management reserve is approved and thus used, will it be included as part of the cost baseline

Chart 29: Project Budget (FGP Author, 2018)

Project Budget			
WBS Level	**WBS Code**	**Activity**	**Cost**
1	1.1	Project Scope Statement	$1,000.00
1	1.2	Work Breakdown Structure	
1	1.3	Scope Baseline	
1	1.4	Formal Acceptance	
2	2.1	Scheduling Model	$1,000.00
2	2.2	Activity Definition	$100.00
2	2.3	Project Schedule Model Maintenance	
2	2.4	Rules of Performance Measurement	
3	3.1	Units of Measure	
3	3.2	Level of Precision	
3	3.3	Level of Accuracy	
3	3.4	Control Thresholds	
3	3.5	Rules of Performance measurement	
4	4.1	Quality Standards	$300.00
4	4.2	Quality Objectives	
4	4.3	Quality Roles and Responsibilities	
4	4.4	Quality Management Activities	
4	4.5	Quality Tools	
5	5.1	Resource Identification	
5	5.2	Roles and Responsibilities Chart	
5	5.3	Project Organization Chart	
5	5.4	Resource Control	
5	5.5	Recognition Plan	
6	6.1	Stakeholder Communications Requirement	$1,500.00
6	6.2	Communication Information	$1,000.00
6	6.3	Communication Updating Methods	
6	6.4	Resource Allocation	
7	7.1	Risk Strategy	
7	7.2	Methodology	
7	7.3	Roles and Responsibilities	
7	7.4	Risk Categories	
8	8.1	Stakeholder Register	$300.00
8	8.2	Stakeholder Strategy	$1,000.00
8	8.3	Power Interest Analysis	
		Contingency	$400.00
(Cost Baseline)		**TOTAL PROJECT BUDGET**	**$6,600.00**
		Management Reserve - 5% of budget	$330.00

4.8.4 Control Thresholds

The total budget for this project is $7,300.00 BZD. To better ascertain the management of these funds and to make certain that the project remains on track, control thresholds have been established. The variance threshold for cost performance will indicate the specific deviation from the plan that will serve as a signal indicating that action needs to be taken to correct the discrepancy within the project. The designated control threshold for this project is $1,000.00 BZD. If there is more than $1,000.00 BZD that is out of estimated costs, an analysis will be done to determine where the project fell short and where corrective action needs to be taken as per the risk management plan. This will facilitate the correction of the deviation and will allow actions to be taken to revert to the expected performance.

4.8.5 Rules of Performance Measurement

As established in the schedule management plan this project will be focusing on Earned Value Management as the parameter by which the performance of the project will be measured. The EVM is the most used method to quantify performance and as such will provide information on the project's progress as it specifically relates to the costs. This plan will directly make use of the Cost Variance (CV) and the Cost Performance Index (CPI). These along with the Schedule Variance (SV) and the Schedule Performance Index (SPI) in the schedule management plan will provide a well-rounded synopsis on the Projects performance and will directly assist in effective overall strategic management of the project.

Firstly, the cost variance (CV) will be utilized to quantify the budgets performance The calculation to get this is done by subtracting the Actual Costs (AC) from the Earned Value (EV) using this following calculation; Cost Variance = Actual Costs (AC) – Earned Value (EV). It is important to note that the actual costs make reference to the costs that have been incurred to the date on which the calculation is made. A Zero on the calculation

results signify that the project is on Budget. If the CV is more than zero the project is in turn generating more value than was planned. If the CV is less than zero then the project is not earning the value that was planned and this can be translated into an over budget. This project's target is always to be at a zero or more on the CV scale.

The other EVM restriction that will be used in the Cost Performance Index (CPI). The CPI will provide a measurement of the value of the work that has been accomplished in comparison to the actual cost of that work completed. The calculation to determine the CPI is done using the following; Cost Performance Index (CPI) = Earned Value (EV) / Actual Costs (AC). The target for this project is a CPI of one as this signifies that the project is on budget and as planned. If the CPI is more than one it means that the project is under Budget and if the CPI is less than one this means that the project is over the budget and that corrective action needs to be taken to correct this trend.

Based on this it was established that if the CPI has a variance of 0.1 or 0.2 the project manager will provide a report to the project sponsor indicating the reasons why the results came about. In the eventuality that the CPI is more than 0.2 the project manager will provide the project sponsor not only with a report on the matter but will propose a solution through a plan that will return the performance measurement levels within accepted bounds.

5. CONCLUSIONS

The development of this Project Management Plan focused its general objective towards the resulting creation of a model for a business incubator for the city of Belmopan. The project management plan will allow a holistic and participatory approach to planning the business incubator model for the city of Belmopan. This will be done through active participation of stakeholders with a focus on the scope management plan, and the complimentary importance of the use of the subsidiary management plans. It is important to mention that the integration and procurement áreas of the A Guide to Project Management Body of Knowledge, were not included, integration was deemed as as being partially utilized by generating the PMP as part of the planning measures, while procurement was excluded by the Project sponsor.

Additionally, the lack of relevant nationally developed business incubator information that could be found and which was based on Belize was non-existent. This posed a significant challenge for the overall creation of the project management plan. However, pertinent information was acquired through the partnership agreement that the Belmopan City Council has with the Federation of Canadian Municipalities. The business incubator information they had, was used and tailored for the appropriate use of Belmopan. It is of most utmost relevance to mention that the Belmopanese entrepreneurial ecosystem in the form of the Belmopan Business Association and the University of Belize provided unsurmountable expertise and information that was used by the project manager and the project management team to tailor and modify to make it usable in the different subsidiary management plans.

The resulting project management plan will foster the local government’s project management maturity and will thus generate an increased benefit by the implementation of project management practices by the municipality. This plan is of strategic importance in the organization’s overall mission and vision as it fosters a planned approach to the development of the city. Rather than focusing merely on infrastructure and maintenance,

the city now seeks the consolidation of a robust entrepreneurial ecosystem that supports job creation and economic development through a planned and method -oriented project management approach.

The specific objectives of the project management plan were geared towards the development and creation of eight subsidiary management plans, these are; scope management, stakeholder engagement, communication management, resource management, quality management, risk management, schedule management, and cost management. The specific conclusions per plan are the following:

1. The definition of the scope was of paramount importance as it established the bounds of the project as well as the exclusions. It was of critical importance that all project actors knew what was expected as a result, and what was not. Knowing these factors assisted in maintaining consistency and remaining within the expectations of the project. The project team's awareness and knowledge of the items to be covered was expected to be always on high as they would be responsible for items during the implementation stage. The scope statement and the scope baseline were used to monitor the project throughout its life cycle.
2. Utilizing a participatory model approach to planning meant developing a thorough stakeholder engagement plan, that served to clearly identify the most important stakeholders and outlined the strategy to be used with each individual stakeholder. This was done based on the power and interest that each actor yielded in the project. The assessment of stakeholders helped in validating the primary beneficiary sector, and established actors who support the entrepreneurial ecosystem in Belmopan, and who would be interested in the project's fruition. This plan was used as a guiding reference for the communication management plan.

3. The communication plan was done in a tailored manner taking into account the characteristics and communication needs of each respective stakeholder. The use of a holistic communication management plan was outlined as imperative, and was

included as one of the most important subsidiary management plans to be a part of the overall project management plan. By establishing the information management, the best mediums of communication and targets signified that the conveyance of material would occur in a purposeful and effective manner.

4. The resource management plan addressed the physical and human resources that were needed for this project. Special emphasis was given to the human resources as they were assigned as primary resources for the delivery of this project. Most of the human resources to be used included staff of the Belmopan City Council. This allowed for the transfer of best practices and project management processes needed for any project management activity. As mentioned, this project will also serve as a pilot initiative to introduce staff to project management and as such the capacities of staff members was focused on. The practicality of this theoretical framework will be awarded through the recognition plan.

5. The quality management was another of the rubrics that was deemed of relevance to be included in this project management plan. It was specifically commissioned to outline the quality methods and standards as well as the requirements that needed to be complied to develop the business incubator model as part of the scope set out by the project sponsor. Quality has been estalished as a fourth item to focus on while looking at project constraints and as such the description of quality markers goes hand in hand with the development of cost, schedule, and scope. It is in the projects best interest that quality requirements be identified and sought out.

6. Risk management activities were elaborated to perform the task of identifying and subsequently offering proactive solutions to occurrences that could have a potential impact on the projects overall success. Although this project is in its nature focused on planning and not implementation and execution, the development of this plan provided the reassurance that risks should be identified

and a strategy created for each individual risk. This provides an increased surety that if unforeseen or foreseen incidences do happen, the projects management is poised to act to maximize such an opportunity or minimize the threat of it negatively affecting overall project realization.

7. The schedule management plan was based on the scope outlined and provided guidance in criteria and activities. In a time-restricted project as this, it was imperative to establish the project milestones, which are key in the successful conveyance of project deliverables. The establishment of activities and the assignment of a timetable to achieve them resulted in measurable performance.

8. Although the project was developed using mostly internal human resources, financial resources were key in some activity implementation and as such, a cost management plan was developed to structure and provide control to the municipal budget allocated to this project. The performance measurement was critical, as the project sponsors had established that there would be no revision of the budget. Known risks were contained by the contingency figure, while the management reserve focused on the unknown risks. Careful planning allowed that the contingency be included as a part of the cost baseline.

These specific conclusions offer a reflection on the achieved project results based on a succinct comparison of each with a specific objective, in this case, individual project management plans. It is onerous on the project manager to make the best use of the implementation of a project management methodology and for its continuous use as a part of the organizational process assets of the Belmopan Municipality.

6. RECOMMENDATIONS

Upon completion of the project management plan development, the following recommendations are made to the City Administrator of the Belmopan City Council who is directly responsible for relaying the information to the government's local authority caucus, specifically the Mayor. It is expected that these recommendations will serve to further provide value add to the efforts being undertaken.

1. As a general recommendation, the use of project management processes, methods and best practices should be strongly endorsed by the municipality as part of the professional growth achieved by undertaking and developing this project management plan. This will in turn increase the likelihood of overall project success rates. This can be done through the development of a Project Management Methodology for the Belmopan City Council.

2. For projects not related to planning, the work breakdown structure in the scope management plan should contain more than two levels. The more in- depth that a project is means that more attention should be focused into the various levels of work necessary for project completion. This is recommended especially for the project that will focus on the implementation of the business incubator model.

3. Similar MSME focused projects can make use of assembling stakeholders intro groups. In the stakeholder engagement plan, this could facilitate their classification either as business support agencies, government related bodies, interested parties, financial entities and others. This can provide the demarcation of a robust approach per group of stakeholders.

4. It is recommended that an escalation process be included in the communication management plan. This process would provide a mechanism to escalate issues within a project. There are instances where certain stakeholders who are directly

responsible or are the liaison with the project need to be bypassed to ensure the project's successful delivery. This is done because the stakeholder cannot or is not willing to assist. In these instances, the person who is superior in authority is the one with whom communication is established. It is vital that a process be recognized ensuring that there is no damage in the relationship when the escalation process needs to be executed.

5. Capacity building and strengthening of technical skills and capacities should be included in order to strengthen the resource management plan. The human resources which will be responsible for projects need to be equipped with professional learning opportunities rather than solely learning as they go. The provision of this capacity building will equip the human resources, not only for this project, but will also yield benefits in the overall project management maturity of the organization.

6. Another insightful endorsement to be made is the drafting of a continuous improvement procedure section in the quality management plan. This would not only follow the methodology of the progressive elaboration, but would also take it a step further by improving the products, services, or results being delivered by the project. The procedures for continuous improvement would offer a step by step sequence on how to make the noticeable end results superior. It is recommended that consideration be placed in this process for future projects which are tangible and result- oriented.

7. As part of the proactive risk management activities, it is recommended that an implementation plan be developed. This will focus on how to implement and execute the business incubator model. This along with an operations guideline, will be of great significance and will facilitate the successful execution of the organization's quest to facilitate entrepreneurial activities.

8. For both the purposes of the cost and schedule management plans it is suggested that the municipality invest in the purchase of the Microsoft Project Software 2016 for all team members in the Local Economic Development Department as they have been assigned project development and implementation responsibilities. This will allow the staff to be more effective.

9. One of this project's exclusions was the use of third party service or product providers, however, in other projects this will not be the reality. In such instances it is highly recommended and completely necessary to develop a procurement management plan which will guide the acquisition of external resources, both human and physical.

These recommendations are made to strengthen the project management plan and to reinforce the knowledge and capacity of the municipality to implement further project management practices. It is in the best interest of the municipality of the City of Belmopan that these recommendations are followed so that all municipal related projects have an increased probability of succeeding.

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8. APPENDICES

Appendix 1: FGP Charter

PROJECT CHARTER **Formalizes the project start and confers the project manager with the authority to assign company resources to the project activities. Benefits: it provides a clear start and well defined project boundaries.**	
Date	**Project Name:**
14th May, 2018	Project Management Plan for the Creation of a Business Incubator Model for the City of Belmopan.
Knowledge Areas / Processes	**Applicacion Area (Sector / Activity)**
Knowledge areas Stakeholder : Project Scope Management, Project Schedule Management, Project Cost Management, Project Quality Management, Project Resource Management, Project Communication Management, Project Risk Management, , Project Management**.** **Process groups**: Initiation, Planning**,** Monitoring and Controlling	Business Development Local Economic Development
Start date	**Finish date**
14th May, 2018	16th December, 2018
Project Objectives (general and specific)	
General objective: To develop a Project Management Plan for the creation of a Business Incubator Model for the City of Belmopan, Belize in order to build a strong micro and small enterprise ecosystem, support job creation and generate economic development. **Specific objectives:** 1. To develop a Scope Management Plan to establish the parameters of what will be encompassed within the Project. It will outline how the scope will be defined and developed. 2. To establish Stakeholder Engagement Plan to indentify the stakeholders who will directly be impacted or have potential to impact project execution. 3. To draft a Communication Management Plan to establish how project information will be managed, the mediums and the target. 4. To create a Resource Managemen Plan that will guide the project on how to categorize, allocate, manage and release resources. 5. To develop a Quality Management Plan that will serve to outline how the quality methodologies and standards will be implemented in the development of the business incubator model.	

6. To develop a Risk Management Plan to establish risk managemnt activities how they will be structured and performed throughout the project.
7. Define a Schedule Management Plan that will establish the criteria and the activities to develop, monitor and control the project schedule.
8. To create a Cost Managemement Plan to establish how costs will be planned, structured and controlled to remain within the municipal budget allocated.

Project purpose or justification (merit and expected results)

The purpose of this project is to develop a Project Management Plan that will facilitate the execution of a business incubator model specifically drafted to address the inherent characterisitics of the City of Belmopan, its clients, and stakeholders. It is imperative that a project management plan be develope in order to facilitate and assist the local government in establishing the neccesary actions and subsidiary plans. Previously projects implemented did not follow the best practice of having a project management plan and this in turn contributed to a less than optimal implementation methodology. The purpose of having a structured project management plan is to have a clear roadmap that will increase the projects success rate and provide cohesiveness to implementation. It will be a guiding document, and the main reference point for subsequent project execution. In essense the project management plan will be concise but robust enough to respond to the changes in the project environment and will be done with agility in order to have accurate information as the project progresses.

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

The product to be developed is a Project Management Plan for the creation of a Business Incubator Model. Secondary bi-products that will be generated as part of the end project deliverable are all 8 subsidiary plans mentioned in the specifc deliverables. These include, scope, schedule, cost, quality, resource, communication, risk, plan and the stakeholder enagagement plan respectively.
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Assumptions

1. It is presumed that the student has complete knowledge to carry out the final graduation project.
2. It is assumed that the student has fully understood the requirements to successfully complete the final graduation project.
3. It is anticipated that adequate information will be found on research, that will facilitate the completion of a holistic project management plan.
4. It is presumed that the student, who is also functioning as the project manager will remain in good health and that this will not hinder project completion.
5. It is assumed that the final graduation project requirements will remain constant so that project time and completion will not be affected

Constraints

1. Time: Limited time to develop a comprehensive project management plan, taking into consideration the time provided to complete the final graduation project.
2. Resources: The availability of experts to provide knowledgeable information as part of the core substance and scope for the development of the final graduation project.

3. Quality: Limited best practices as it relates specifically to the development of previous project management plans for business incubator models.

Preliminary risks

1. Inadequate communication between those in a supervisory role can impact the degree of substance in the final graduation project.
2. Limited information available which can cause below optimal information quality.This can have repercussions on the scope and can affect the delivery times scheduled in the FGP Project Schedule.

Budget

$6,600.00 BZD for the development of Project Management Plan.

Milestones and dates

Milestone	Start date	End date
FGP Start	14-05-2018	14-05-2018
Approved FGP scheme for PMP Development	14-05-2018	26-06-2018
Scope Management Plan	10-07-2018	25-07-2018
Resource Management Plan	22-07-2018	08-08-2018
Schedule Management Plan	09-08-2018	20-08-2018
Quality Management Plan	21-08-2018	31-08-2018
Stakeholder Engagement Plan	03-09-2018	12-09-2018
Communication Management Plan	13-09-2018	24-09-2018
Risk Management Plan	`25-09-2018	04-10-2018
Cost Management Plan	05-10-2018	19-10-2018
Tutors Approval of PMP	10-07-2018	19-10-2018
FGP Finalization – Project Management Plan Approval	24-10-2018	15-12-2018

Relevant historical information

The City of Belmopan is a newly established municipality in the Belize. The Belmopan City Council Act came into effect in 2000, which coincides with the year in which the City was incorporated. As the administrative capital of Belize, the economy is driven largely by the activities of government, the University of Belize, statutory bodies, foreign embassies, banks, other national institutions, regional institutions, and the private sector.

As of 2015 the City adopted the Local Economic Development (LED) Strategy which was developed through a strategic planning process, and was a collaborative effort of various groups including local and national government representatives, private sector, residents, civil society organisations, and academia, along with representatives from CARILED staff and consultants. The main objective of this strategy is to promote Local Economic Development through public private partnerships, to this effect the Local Economic Development Department was institutionalized as a municipal department responsible for the implementation of the LED Strategy and its Project inclusive of the Development of a Business Incubator.

The Business Incubator falls in line as an implementable project which aids in the objective to achieving the cities vision which is to "… *be a youthful, vibrant, peaceful, environmentally friendly and diverse community, serving as Belize's administrative and educational centre, fostering a robust and* ***sustainable economy and offering the highest quality of life."***

Stakeholders
Direct stakeholders: Belmopan City Council Service Users (Potential New, Micro and Small Businesses) University of Belize Project Management Team **Indirect stakeholders:** Belmopan Private Sector Belmopan Business Association Community Surrounding the Business Incubator

Project Manager: Keyla Magaña	**Signature:** 
Authorized by:	**Signature:**

Appendix 2: Change Request Form

Change Request Form

Project Name		Date	
Project Number		Requestor	
Project Manager		Project Owner	

Describe the Requested Change

Describe the Reason for the Request

Risk Identification/Analysis

Impact Analysis	
Work Products to be Modified	Version Number
1.	
2.	
3.	
Describe the impact of the suggested change to work that is already complete.	

Schedule Impact			
New Deliverables Description	Effort Hours	Date Required	Impact to Other Delivery Dates
1.			
2.			
3.			
Based on the impact, state the estimated date for implementing the requested change. State the new estimated project completion date.			

Budget Impact			
New Deliverables Description	Lessen or Eliminate Other Expenses? Please describe.	Cost of New Deliverable	Total
1.			
2.			
3.			
Describe the overall impact to budget/cost.			

Decision	
☐ Approved	☐ Rejected
☐ Approved with modifications	☐ Deferred
Justifications	
Additional Comments	

Ralston Frazer

Date

Chairperson - LEDPAC

Signature

Appendix 3: Work Breakdown Structure Dictionary

WBS Level	WBS Code	WBS Name	WBS Description	Entity Responsible	Resources Required	Cost Estimate
1	1.1	Project Scope Statement	Concise description of all work necessary for the completion of the project management plan for the creation of the business incubator model	Project Manager	Literature on project management plans and business incubator models Laptop Internet Connection	$1,000.00
1	1.2	Work Breakdown Structure	Hierarchical representation of all work and activities to be carried out to achieve the end result	Project Manager	Laptop Internet Connection	
1	1.3	Scope Baseline	Approved version of the Project Scope Statement, WBS, WBS Dictionary, will be used to measure and ensure completeness of the project management plan	Project Sponsor	Laptop Internet Connection	
1	1.4	Formal Acceptance	Acceptance of project deliverables, which provides the affirmation that all activities were satisfactorily completed	Project Sponsor	Laptop Internet Connection Literature	
2	2.1	Scheduling Model	Inclusive of the scheduling methodology to be used to carry out and implement scheduling activities, and the scheduling tool used to develop and accurate schedule for the project management plan	Project Manager	Project Management Software Laptop	$1,000.00

2	2.2	Activity Definition	Outlining of activities to be performed to achieve subsidiary plans, with an emphasis on Project milestones.	Project Manager	Project Management Software Laptop	$100.00
2	2.3	Project Schedule Model Maintenance	Establishment of the process to check on the status and progress of project work.	Project Manager	Laptop Literature Standards	
2	2.4	Rules for Performance Measurement	Earned Value Management rules used to measure the performance of activities in comparison to the schedule	Project Team	Project Management Software Laptop	
3	3.1	Units of Measure	Each resource is assigned a measurement unit so as to establish how they will be compared to actuals	Project Team	Laptop Literature review	
3	3.2	Level of Precision	Identification of the degree by which cost estimates will be rounded up to the closest interval established.	Project Manager	Laptop Excel	
3	3.3	Level of Accuracy	Acceptable range per costs which will include contingency costs that might be incurred.	Project Manager	Laptop Excel	
3	3.4	Control Thresholds	Deviations to the prestablished baseline will be monitored through the control thresholds which will outline the variance on cost performance	Project Manager	Project Management Software Laptop Standards	
3	3.5	Rules of Performance measurement	Earned value management techniques that are to be utilized to measure costs during the project.	Project Manager	Laptop Project Management Software	

4	4.1	Quality Standards	Use of reference quality standards for the specific topics of interest in this case business incubator best practice models	Project Manager	Best Practice Guides Business Incubator Models Laptop	$300.00
4	4.2	Quality Objectives	These will be set out as quality targets to be achieved so as to comply with the quality requirements	Project Sponsor and Project Manager	Laptop	
4	4.3	Quality Roles and Responsibilities	Identification of roles and responsibilities assigned to entities and individuals to ensure accountability of quality	Project Manager	Laptop Chart Template	
4	4.4	Quality Management Activities	Identification of quality activities to be undertaken to satisfy the quality needs	Project Manager	Project Management Software Laptop	
4	4.5	Quality Tools	Specification of quality tools that will be utilized throughout project development	Project Manager and Project Team	Literature Review Laptop Project Management Software	
5	5.1	Resource Identification	Identification of all human and physical resources to be used for the development of the project management plan	Project Manager	HR Policies Physical Resources List Excel Laptop	
5	5.2	Roles and Responsibilities Chart	Under the purview of resources the creation of a chart to outline the roles and responsibilities within the parameters of human and physical resources.	Project Manager	Template of Roles and Responsibilities Chart Laptop	

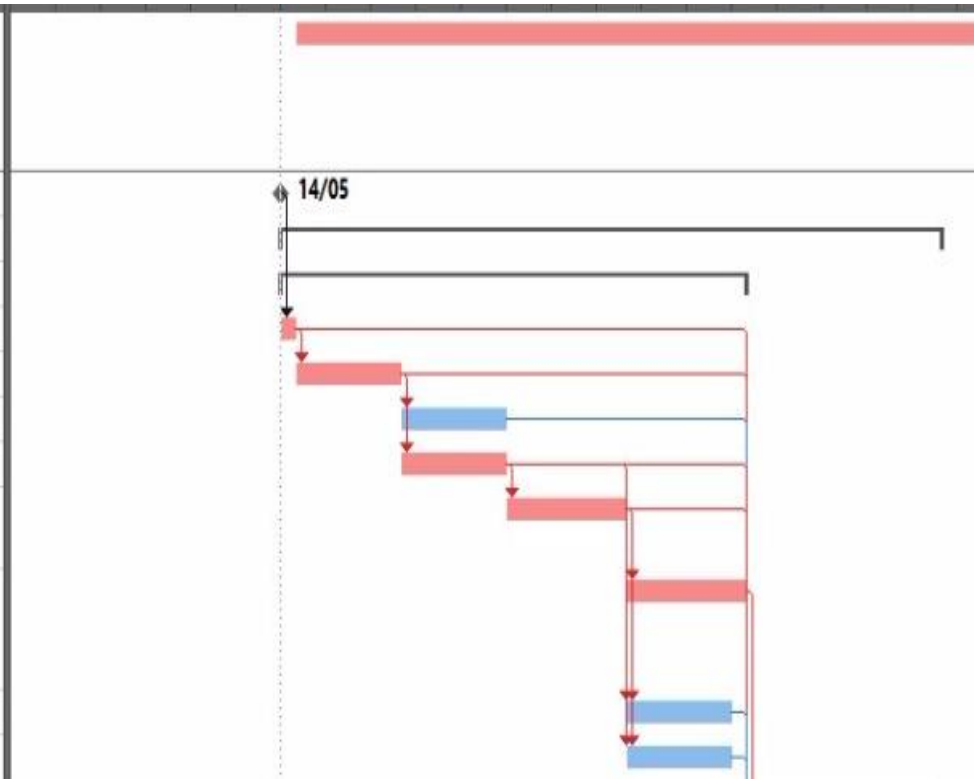
					Internet Connection	
5	5.3	Project Organization Chart	Representation of project team members and their reporting relationships, which facilitates communication and the undertaking of work.	Project Manager and Project Sponsor	Template on Project Organization Chart Management Software HR Literature	
5	5.4	Resource Control	Specification on how both physical and human resources will be made available for Project use.	Project Manager Procurement Officer	Procurement Tracking System Laptop Schedule in Microsoft Project	
5	5.5	Recognition Plan	Outlining of rewards to be given to Project team members for achieving designated outputs.	Project Manager	Rewards Tracking System in Microsoft	
6	6.1	Stakeholder Communications Requirement	Specification on the communications need of the stakeholders, this will be done by individual stakeholder and will outlines specificities that will facilitate the communication process.	Project Team	Venue for Meetings Catering Informational Brochures	$1,500.00
6	6.2	Communication Information	Identification of relevant information that is necessary to be shared within the project and with stakeholders	Project Manager	Venue for meetings Catering	$1,000.00
6	6.3	Communication Updating Methods	Process on how to update the communication methods that were identified per stakeholder	Project Manager	Laptop Project Management Software	

6	6.4	Resource Allocation	Allocation of resources for the effective delivery of communication activities.	Project Manager	Laptop	
7	7.1	Risk Strategy	Is the approach to be used when dealing with risks in the Project. Iit provides a pre-established notion of how the positive risks will be maximized and the negative risks counteracted or prevented.	Project Manager	Laptop Project Management Software	
7	7.2	Methodology	Will outline the tools and sources that will be used to effectively manage risks.	Project Manager	Literature review Laptop	
7	7.3	Roles and Responsibilities	Will concisely outline the roles and responsibilities within the project management team relating to risks per activity.	Project Manager	Laptop Venue for meetings Catering	
7	7.4	Risk Categories	Through the representation of a Risk Breakdown structure outline and group risks by categories.	Project Team	Laptop Project Management Software	
8	8.1	Stakeholder Register	Document that will outline how to identify, asses and classify project stakeholders .It will be a vital component for the overall stakeholder strategy	Project Team	Venue for meetings Catering Laptop Internet	$300.00
8	8.2	Stakeholder Strategy	Strategic document on how to engage and actively involve stakeholder participation throughout the project management plan development	Project Manager	Laptop Project Management Software	$1,000.00

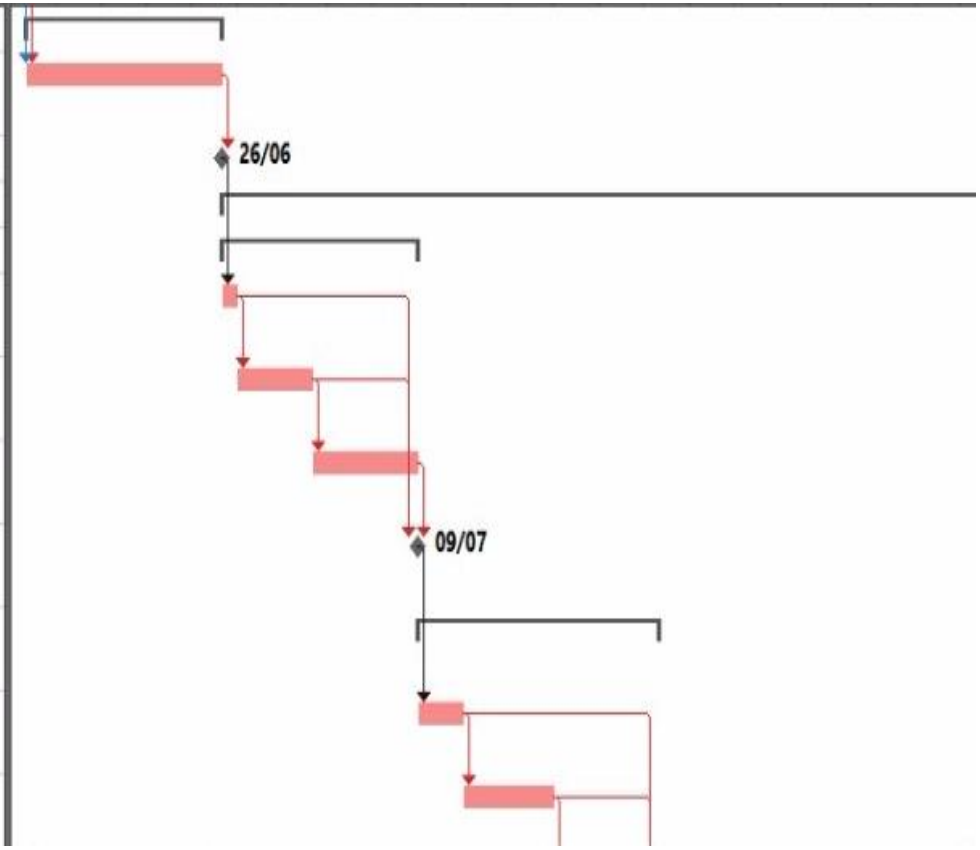
8	8.3	Power Interest Analysis	Graphical representation of the amount of interest and power that stakeholder will have in this particular project based on this their relationship and importance to the project will be established	Project Team	Laptop Project Management Software	

Appendix 4: Project Management Plan Schedule

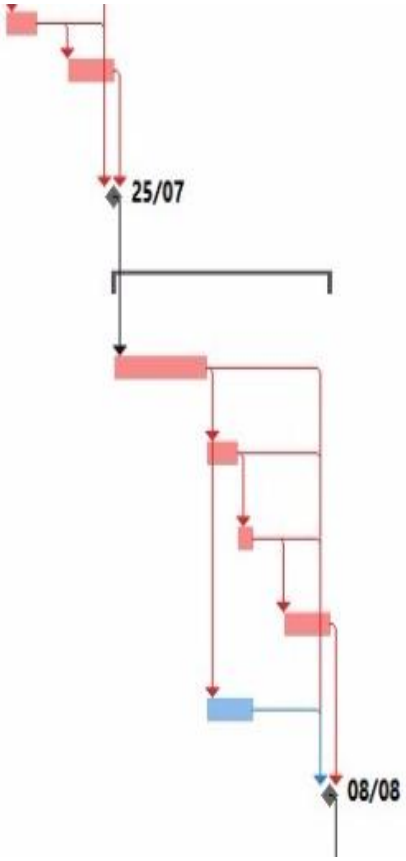
Project Management Plan for the Creation of a Business Incubator Model	156 days	Tue 15/05/18	Sat 15/12/18		
FGP Start	0 days	Mon 14/05/18	Mon 14/05/18		
1. Graduation Seminar	**33 days**	**Mon 14/05/18**	**Tue 26/06/18**		
1.1 FGP Deliverables	**23 days**	**Mon 14/05/18**	**Wed 13/06/18**		
1.1.1 FGP Title	1 day	Mon 14/05/18	Mon 14/05/18	2	
1.1.2 Charter	5 days	Tue 15/05/18	Mon 21/05/18	5	
1.1.3 WBS	5 days	Tue 22/05/18	Mon 28/05/18	6	
1.1.4 Introduction	5 days	Tue 22/05/18	Mon 28/05/18	6	
1.1.5 Theoretical Framework	6 days	Tue 29/05/18	Tue 05/06/18	8	
1.1.6 Methodological Framework	6 days	Wed 06/06/18	Wed 13/06/18	9	
1.1.7 Bibliography	5 days	Wed 06/06/18	Tue 12/06/18	8,9	
1.1.8 Schedule	5 days	Wed 06/06/18	Tue 12/06/18	8,9	



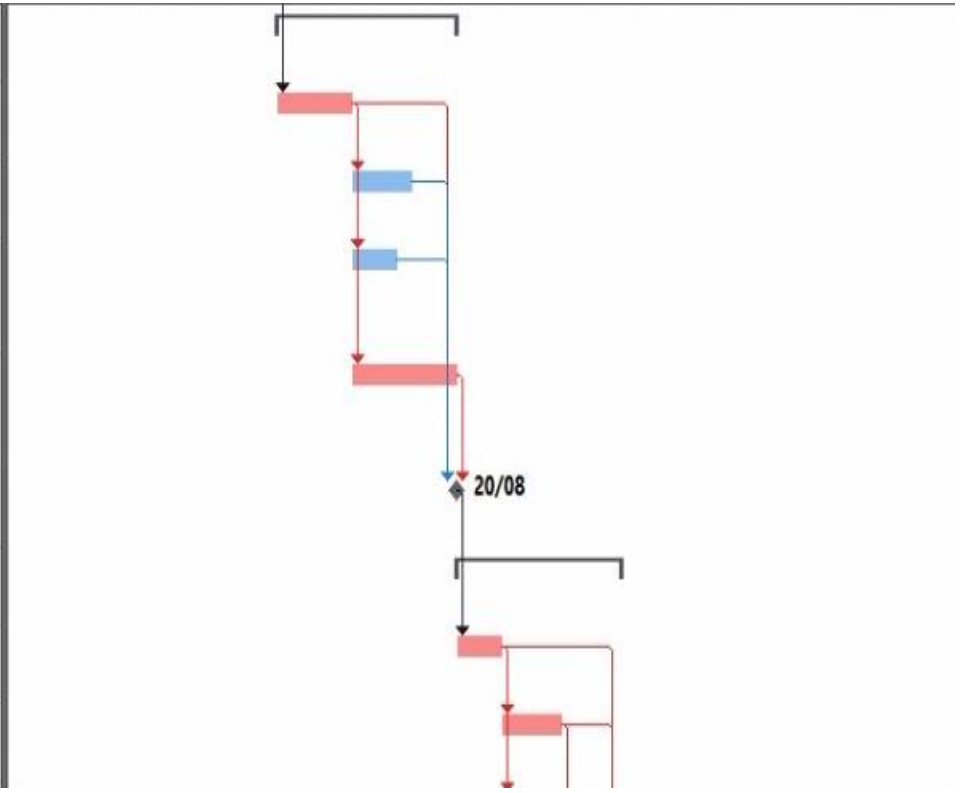
1.2 Revision of FGP	**10 days**	**Thu 14/06/18**	**Tue 26/06/18**	
1.2.1 Revision and Approval	10 days	Thu 14/06/18	Tue 26/06/18	5,6,7,8,9,10,
Approved FGP	0 days	Tue 26/06/18	Tue 26/06/18	14
2. PMP Development	**85 days**	**Wed 27/06/18**	**Tue 23/10/18**	
2.1 Tutor	**9 days**	**Wed 27/06/18**	**Mon 09/07/18**	
2.1.1 Tutor Assignment	1 day	Wed 27/06/18	Wed 27/06/18	15
2.1.2 Communication	3 days	Thu 28/06/18	Mon 02/07/18	18
2.1.3 Revision of Previous Work	5 days	Tue 03/07/18	Mon 09/07/18	19
Tutor Agrees with work plan	0 days	Mon 09/07/18	Mon 09/07/18	18,19,20
2.2 Scope Management Plan	**12 days**	**Tue 10/07/18**	**Wed 25/07/18**	
2.2.1 Project Scope Statement	3 days	Tue 10/07/18	Thu 12/07/18	21
2.2.2 Work Breakdown	4 days	Fri 13/07/18	Wed 18/07/18	23



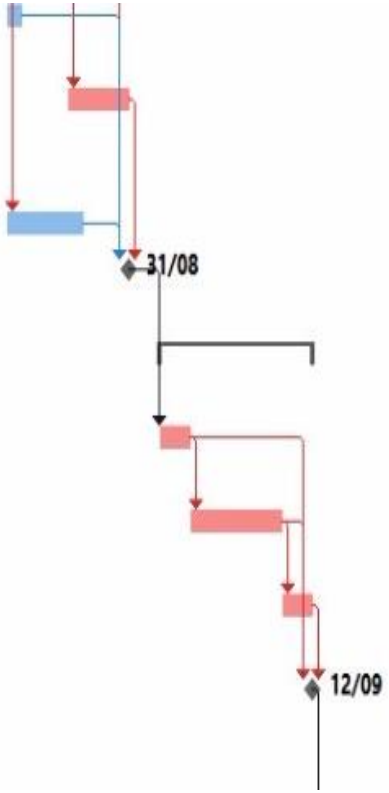
2.2.3 Scope Baseline	2 days	Thu 19/07/18	Fri 20/07/18	24	
2.2.4 Formal Acceptance of Scope	3 days	Mon 23/07/18	Wed 25/07/18	25	
Approved Scope Management Plan	0 days	Wed 25/07/18	Wed 25/07/18	23,24,25,26	
2.3 Resource Management Plan	**10 days**	**Thu 26/07/18**	**Wed 08/08/18**		
2.3.1 Resource Identification	4 days	Thu 26/07/18	Tue 31/07/18	27	
2.3.2 Roles and Responsibilities	2 days	Wed 01/08/18	Thu 02/08/18	29	
2.3.3 Project Organization Chart	1 day	Fri 03/08/18	Fri 03/08/18	30	
2.3.4 Resource Control	3 days	Mon 06/08/18	Wed 08/08/18	31	
2.3.5 Recognition Plan	3 days	Wed 01/08/18	Fri 03/08/18	29	
Approved Resource Management Plan	0 days	Wed 08/08/18	Wed 08/08/18	29,30,31,32,3	



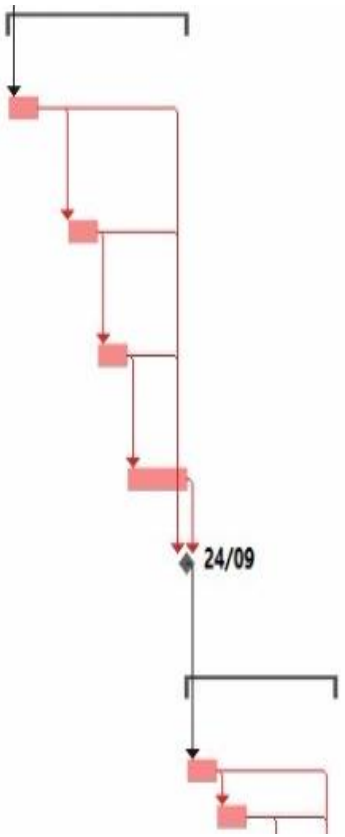
2.4 Schedule Management Plan	**8 days**	**Thu 09/08/18**	**Mon 20/08/18**	
2.4.1 Schedule Model	3 days	Thu 09/08/18	Mon 13/08/18	34
2.4.2 Activity Definition	4 days	Tue 14/08/18	Fri 17/08/18	36
2.4.3 Project Schedule Model Maintenance	3 days	Tue 14/08/18	Thu 16/08/18	36
2.4.4 Rules for Performance Measurement	5 days	Tue 14/08/18	Mon 20/08/18	36
Approved Schedule Management Plan	0 days	Mon 20/08/18	Mon 20/08/18	36,37,38,39
2.5 Quality Management Plan	**9 days**	**Tue 21/08/18**	**Fri 31/08/18**	
2.5.1 Quality Standards	3 days	Tue 21/08/18	Thu 23/08/18	40
2.5.2 Quality Objectives	2 days	Fri 24/08/18	Mon 27/08/18	42



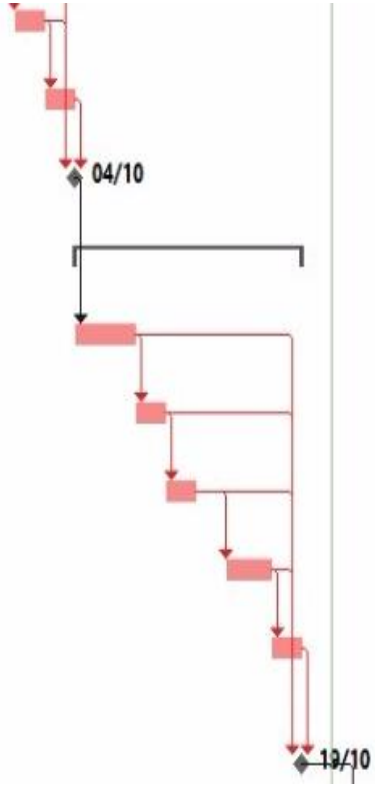
2.5.3 Quality Roles and Responsibilities	1 day	Fri 24/08/18	Fri 24/08/18	42	
2.5.4 Quality Management Activities	4 days	Tue 28/08/18	Fri 31/08/18	43	
2.5.5 Quality Tools	3 days	Fri 24/08/18	Tue 28/08/18	42	
Approved Quality Management Plan	0 days	Fri 31/08/18	Fri 31/08/18	42,43,44,45,4	
2.6 Stakeholder Engagement Plan	**8 days**	**Mon 03/09/18**	**Wed 12/09/18**		
2.6.1Stakeholder Register	2 days	Mon 03/09/18	Tue 04/09/18	47	
2.6.2 Stakeholder Strategy	4 days	Wed 05/09/18	Mon 10/09/18	49	
2.6.3 Power Interest Analysis	2 days	Tue 11/09/18	Wed 12/09/18	50	
Approved Stakeholder Engagement Plan	0 days	Wed 12/09/18	Wed 12/09/18	49,50,51	



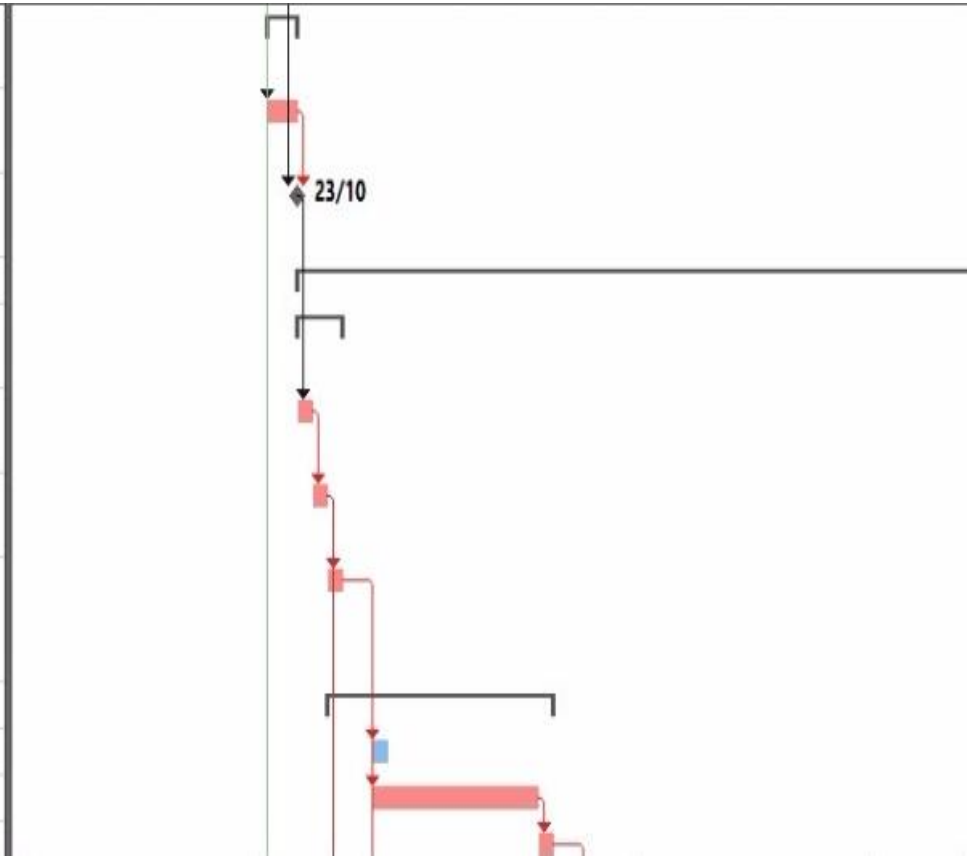
2.7 Communication Management Plan	**8 days**	**Thu 13/09/18**	**Mon 24/09/18**	
2.7.1 Stakeholder Communication Requirement	2 days	Thu 13/09/18	Fri 14/09/18	52
2.7.2 Communication Information	2 days	Mon 17/09/18	Tue 18/09/18	54
2.7.3 Communications Updating Methods	2 days	Wed 19/09/18	Thu 20/09/18	55
2.7.4 Resource Allocation	2 days	Fri 21/09/18	Mon 24/09/18	56
Approved Communication Management Plan	0 days	Mon 24/09/18	Mon 24/09/18	54,55,56,57
2.8 Risk Management Plan	**8 days**	**Tue 25/09/18**	**Thu 04/10/18**	
2.8.1 Risk Strategy	2 days	Tue 25/09/18	Wed 26/09/18	58
2.8.2 Methodology	2 days	Thu 27/09/18	Fri 28/09/18	60



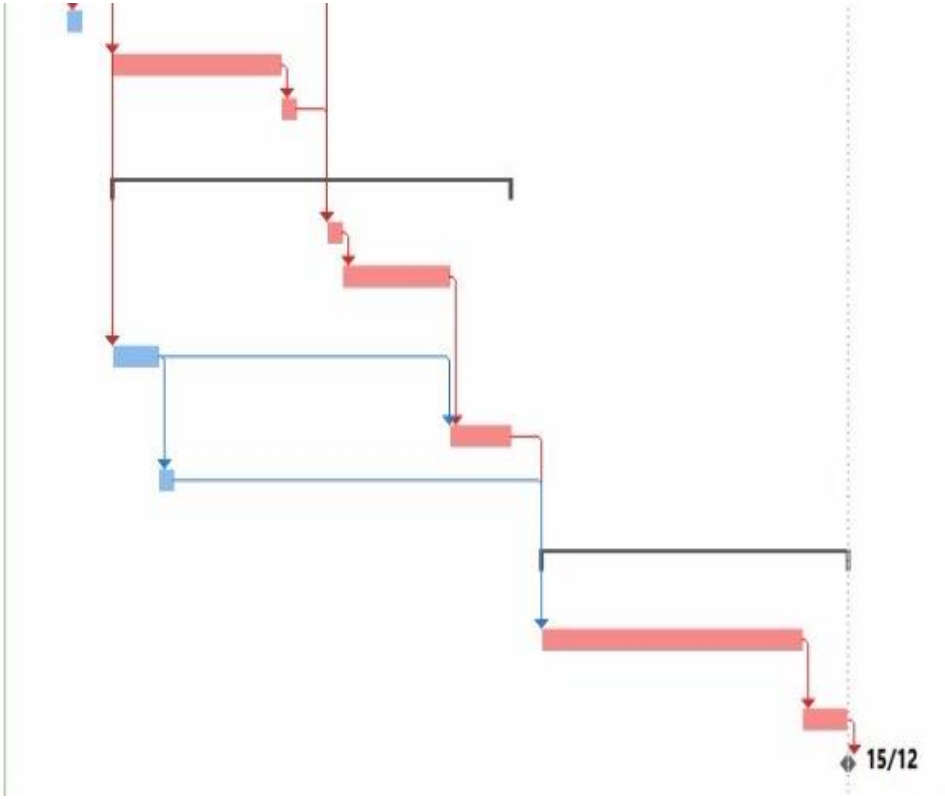
2.8.3 Roles and Responsibilities	2 days	Mon 01/10/18	Tue 02/10/18	61
2.8.4 Risk Categorization	2 days	Wed 03/10/18	Thu 04/10/18	62
Approved Risk Management Plan	0 days	Thu 04/10/18	Thu 04/10/18	60,61,62,63
2.9 Cost Management Plan	**11 days**	**Fri 05/10/18**	**Fri 19/10/18**	
2.9.1 Units of Measure	2 days	Fri 05/10/18	Mon 08/10/18	64
2.9.2 Level of Precision	2 days	Tue 09/10/18	Wed 10/10/18	66
2.9.3 Level of Accuracy	2 days	Thu 11/10/18	Fri 12/10/18	67
2.9.4 Control Thresholds	3 days	Mon 15/10/18	Wed 17/10/18	68
2.9.5 Rules for Performance Measurement	2 days	Thu 18/10/18	Fri 19/10/18	69
Approved Cost	0 days	Fri 19/10/18	Fri 19/10/18	66,67,68,69,7



2.10 Submission of FGP to tutor	**2 days**	**Mon 22/10/18**	**Tue 23/10/18**		
2.10.1 Tutor Final Review	2 days	Mon 22/10/18	Tue 23/10/18	71	
2.10.2 Final Tutor Approval	0 days	Tue 23/10/18	Tue 23/10/18	73,71	
3. Reading by Reviewers	**39 days**	**Wed 24/10/18**	**Sat 15/12/18**		
3.1 Reviewers Assignment Request	**3 days**	**Wed 24/10/18**	**Fri 26/10/18**		
3.1.1 Assignment of 2 Reviewers	1 day	Wed 24/10/18	Wed 24/10/18	74	
3.1.2 Communication	1 day	Thu 25/10/18	Thu 25/10/18	77	
3.1.3 FGP Submission to Reviewers	1 day	Fri 26/10/18	Fri 26/10/18	78	
3.2 Reviewers Work	**11 days**	**Fri 26/10/18**	**Fri 09/11/18**		
3.2.1 Reviewer	1 day	Mon 29/10/18	Mon 29/10/18	79	
3.2.1.1 FGP Reading	9 days	Mon 29/10/18	Thu 08/11/18	79	
3.2.1.2 Reader 1 FGP	1 day	Fri 09/11/18	Fri 09/11/18	82	



3.2.2 Reviewer	1 day	Fri 26/10/18	Fri 26/10/18	78
3.2.2.1 FGP Reading	9 days	Mon 29/10/18	Thu 08/11/18	79
3.2.2.2 Reader 2 FGP Report	1 day	Fri 09/11/18	Fri 09/11/18	85
4. Adjustments	**20 days**	**Mon 29/10/18**	**Fri 23/11/18**	
4.1 Reviewer Report	1 day	Mon 12/11/18	Mon 12/11/18	83,86
4.2 Revision and Update of FGP	5 days	Tue 13/11/18	Mon 19/11/18	88
4.3 Second Review by reviewers 1 and 2	3 days	Mon 29/10/18	Wed 31/10/18	79
4.4 Changes	4 days	Tue 20/11/18	Fri 23/11/18	89,90
4.5 Reviewers vet FGP	1 day	Thu 01/11/18	Thu 01/11/18	90
5. Presentation to Board of Examiners	**16 days**	**Mon 26/11/18**	**Sat 15/12/18**	
5.1 Final Review by Board	13 days	Mon 26/11/18	Wed 12/12/18	92,91
5.2 FGP grade report	3 days	Thu 13/12/18	Sat 15/12/18	94
FGP Finalization	0 days	Sat 15/12/18	Sat 15/12/18	95



Appendix 5: Philological Review Documents

CERTIFICATE OF REVISION

17th of October 2018

University for International Cooperation
Avenida 15, Calle 35
Barrio Escalante, San Jose 10101
Costa Rica

Philological Review of Thesis

The following is to confirm that the Final Graduation Project titled *"Project Management Plan for the Creation of a Business Incubator Model for the City of Belmopan"*; written by Ms. Keyla Magaña as her thesis for her Masters in Project Management has been reviewed and corrected thoroughly.

Her work now meets the requirements corresponding a master's level dissertation.

Beatriz Alondra Landero

Beatriz Landero (Mrs.)
B.A English Ed.

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

Beatriz Alondra Landero

the degree of

Bachelor of Science in English Education

Cum Laude

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