UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

Project Management Plan for the Implementation of the Surveillance System Project BLPA Component

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DEDICATION

This research project is dedicated to my one and only daughter, Cynthia Vanessa Morales, who gives me more than one reason to continue striving for excellence. To my parents, Melanio and Irma Pech, who always push me to be a better person; and are supporting me with this accomplishment, despite all the challenges met along the way.

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ABBREVIATIONS AND ACRONYMS

- ALA – Authorized Livestock Agent
- BAHA- Belize Agriculture Health Authority
- BLPA- Belize Livestock Producers Association
- BLR- Belize Livestock Registry
- BNSCPP- Belize National Sanitary Cattle Plan Project
- BOD- Board of Directors
- CA- Control Accounts
- CEO- Chief Executive Officer
- CPI- Cost Performance Index
- CV- Cost Variance
- EV- Earned Value
- FGP- Final Graduation Project
- GMP- Good Management Practices
- MAFFESD- Ministry of Agriculture, Fisheries, Forestry, the Environment, Sustainable Development
- PMI- Project Management Institute
- PMP- Project Management Plan
- PV- Planned Value
- SV- Schedule Variance
- SPI- Schedule Performance Index
- VAP- Veterinary Association of Belize

EXECUTIVE SUMMARY (ABSTRACT)

The Belize Livestock Producers Association (BLPA) is a private non-profit organization established under the Meat and Livestock Act Chapter 214, (Revised Edition 2000, showing the law as of 31st December, 2000). The Association was established under the Meat and Livestock Commission, for the purpose of implementing the Meat and Livestock Act.

BLPA provides the livestock industry and all its stakeholders with the oversight at national and governmental levels. It also strives to provide its members with access to new markets, both at home and abroad; providing and disseminating new technologies and relevant information through a system of 'extension officer' led training, education initiatives, and projects.

Stakeholders in the cattle industry are convinced that having a national free status Tuberculosis, Brucellosis, and other notifiable diseases is key to opening markets. BLPA has committed to providing the required funding for testing; and BAHA has committed to maintaining the required public goods to support the implementation of the surveillance system that is required for two additional consecutive years of testing. The cattle sector also needs to address other key important elements in the sector to ensure that, parallel to testing, key investment is being made in the required infrastructure to stimulate export and to maintain national compliance to testing and also supply of the local market ensuring quality and sanitary conditions. BAHA will also require strengthening its department support to ensure that both the Animal Health and Food Safety are up to the required standards in enforcing and guiding the development of the required standards for the local and export market.

At BLPA, there were minor Project Management Foundations; specifically, Management Tools in use to deliver products, therefore, the Project Management approach that was in place was not sufficient to successfully deliver a project of this scale. Through the implementation of the proposed Final Graduation Project (FGP), BLPA will improve the weak project and Administrative Management personnel, and most importantly, have a more defined organizational structure.

The general objective for the project was to develop a Project Management Plan, framed within the standards of the project management institute, to manage the implementation of the Surveillance System Project BLPA Component. The specific objectives were: to create a project charter which formally authorizes the project and provides the project manager with the authority to apply organizational resources to the project in order to produce the project management plan; to create a scope management plan which ensures that all works required are included to successfully complete the project; to create a time management plan which supports the development and management of a project schedule that ensures the project is completed within the time constraints; to create a cost management plan which defines the processes for developing and managing the project budget that ensures the project is completed within the budget constraints; to develop a quality management plan which identifies the quality requirements for the project to ensure the results meet expectations for approval within the time, cost and scope constraints; to create a human resource management plan which ensures that all

human resources are identified and managed effectively to complete the project within time, cost and scope constraints; to develop a communication management plan which ensures the timely and effective communication of the project status and other key information; to create a risk management plan which identifies and examine risks for the successful completion of the project and develop plans to minimize probabilities of risks; and to develop a stakeholder management plan which identifies and supports all the project stakeholders and have an effective stakeholder engagement.

The methodology used for the research was analytical. The main sources used to gather information included A Guide to the Project Management Body of Knowledge (PMBOK Guide) 6th Edition and interviews which were held with members from the BLPA. The information was analyzed to create each factor the program used to develop the Project Management Plan for the implementation of the surveillance system project BLPA component.

Also, thorough stakeholder engagement; efficient resource allocation, and financial sustainability have long been identified as under exploited within the existing CASP structure. This primary observation is associated with the absence of projectized approaches to CASP processes and activities; unexplored funding opportunities; a partially inadequate quota of trained and specialized support staff; and a poorly organized staff complement.

The project's scope of work was narrowed subsequent to a rigorous financial planning exercise, and as such, the establishment of a sales and marketing mechanism was proposed. Strict project timelines were also established to facilitate optimal stakeholder engagement.

In Conclusion, it can be said that the methodology used for the research was analytical or explanatory. The main sources used to gather information included A Guide to the Project Management Body of Knowledge (PMBOK® Guide) 6th Edition and direct contact with BLPA. The sources used by the project team helped to develop a more detailed project management plan, and to improve the way the BLPA will manage any future project.

It is recommended that the development of complementary training modules for staff in the effective use of project management tools, techniques, material, and M&E skills be implemented and that the involvement of GIS for a project of this magnitude and type be incorporated. It is vital to invite the FAO as a main source for the Project. FAO can take the initiative of organizing regional workshops for veterinary epidemiologists to share and disseminate information more effectively. Furthermore, it is proposed that BLPA needs improvements to the existing procurement processes, project risk assessments, and to the provision of high-quality service delivery.

1. INTRODUCTION

1.1. Background

The BLPA is a private non-profit organization established under the Meat and Livestock Act Chapter 214, Revised Edition 2000 showing the law as of 31st December, 2000. The Association was established under the Meat and Livestock Commission for the purpose of implementing the Meat and Livestock Act. The livestock industry was formally organized in the late 1970's, when the Government of Belize passed the Meat and Livestock Act (1), which established an association of livestock producers known as BLPA. The Association is run by a nine-member Board of Directors. The cattle sector has 100,000 heads of cattle as quantified in the last third Cattle Sweep Report, the potential for expansion in the sector is there, but requires key investment of areas that will facilitate the commercialization of cattle. BLPA has developed a strategic plan projecting the vision of the cattle sector in next 25 years, which set five major necessary pillars if the cattle sector is to develop to an international competitiveness sector, this includes: proper organization and participation of cattle producers in the country, and establishing a proper Traceability system.

In 2015, the Belize Livestock Registry recorded that Belize exported 27,000 heads of cattle and 1000 were slaughtered in the country for national consumption. Even when Belize has satisfied all the conditions for exportation to the Mexican market, cattle is being more commercialized with Guatemala. The Ministry of Foreign Trade highlights that more than 70% of Belize agricultural products are being demanded by Guatemala, which demonstrates that close attention to the Guatemala requirements should also be considered.

1.2. Statement of the problem

At BLPA there are minor Project Management Foundations, specifically Management Tools, in use to deliver products. Therefore, the Project Management approach in place is not sufficient to successfully deliver a project of this scale. This project will help alleviate inadequacies pertaining to limited technical personnel at BLPA. By the implementation of the proposed Final Graduation Project (FGP), BLPA will improve on its currently weak project and Administrative Management personnel, and most importantly, have a better-defined organization structure. Each element of the Project Management Plan will be created, along with all of the tools, techniques, and concepts used to justify each management decision selected for application.

1.3. Purpose

The project purpose is the Strengthening of BLPA to ensure cattle producer's participation, investment, and support in the sector. BAHA is the Competent Authority for the surveillance and implementation of Animal Health regulation in the agriculture and cattle sector. Unfortunately, many of the services provided by BAHA are not all provided at a cost recovery method, some are considered public goods, and therefore require the support of the Ministry responsible for the sector. Also, the strengthening of the public health that supports the cattle industry related activities. In order to have a successful outcome, the Project Manager will seek to develop the Project Management Plan by detailing the management of all critical aspects of the project. The research proposal will explore the PMI guide to effectively create a Project Management Plan, providing justification for the decisions made while developing the project's integration, scope, time, cost, quality, human resources, communication, risk, and stakeholder management plans.

1.4. General objective

To develop a Project Management Plan, framed within the standards of the project management institute, to manage the implementation of the Surveillance System Project BLPA component.

1.5. Specific objectives

1. To create a project charter which formally authorizes the project and provides the project manager with the authority to apply organizational resources to the project in order to produce the project management plan.
2. To create a scope management plan which ensures that all works required are included to successfully complete the project.
3. To create a time management plan which supports the development and management of a project schedule that ensures the project is completed within the time constraints.
4. To create a cost management plan which defines the processes for developing and managing the project budget that ensures the project is completed within the budget constraints.
5. To develop a quality management plan which identifies the quality requirements of the project to ensure the results meet expectations for approval within the time, cost, and scope constraints.
6. To create a human resource management plan which ensures that all human resources are identified and managed effectively to complete the project within time, cost and scope constraints.
7. To develop a communication management plan which ensures the timely and effective communication of the project status and other key information.
8. To create a risk management plan which identifies and examines risks for the successful completion of the project and develop plans to minimize probabilities of risks.
9. To develop a stakeholder management plan which identifies and supports all the project stakeholders and have an effective stakeholder engagement.

2. THEORETICAL FRAMEWORK

2.1 Company/Enterprise background

The recently implemented project entitled, “Belize National Sanitary Plan Project” has set new structures and systems in place that now provide clear statistical information of the cattle sector. It also provides a Traceability System that has mapped the population of both beef and dairy cattle, movement of cattle, level of slaughtering for national consumption, and the level of exports of heads of cattle in the country.

BLPA has developed a strategic plan, which sets five major pillars if the cattle sector is to develop to an international competitiveness sector, projecting the vision of the cattle sector in next 25 years. Said plan includes: proper organization and participation of cattle producers in the country and establishing a proper Traceability system. This is contemplated in the BLR Sustainability Plan.

The cattle stakeholders have agreed to fund the continuation of the structures of the Cattle Sweep project. This is with the expected output of declaring Belize free of Tuberculosis and maintaining the required testing while also declaring Belize free of Brucellosis. During the development of the continuation plan, it is also expected that surveillance of other diseases of relevance will also observed. All the plans are contemplated in the Surveillance System Plan and Exit Strategy of the BNSCPP.

2.1.2 Mission and vision statements

Vision:

Provide the livestock industry, and all its stakeholders, with the oversight at national and governmental levels; whilst also striving to provide its members with access to new markets, both at home and abroad. Also, to provide and disseminate new technologies and relevant information through a system of trainings led extension officers, education initiatives, and projects.

Mission:

To provide technical assistance and training to farmers in relevant aspects of livestock production and encourage production of quality livestock (focused on cattle, sheep, and goat) by facilitating access to good genetic stock and support, and also ensuring compliance with international standards for marketing of livestock products (focused on cattle, sheep, and goat).

2.1.3 Organizational structure

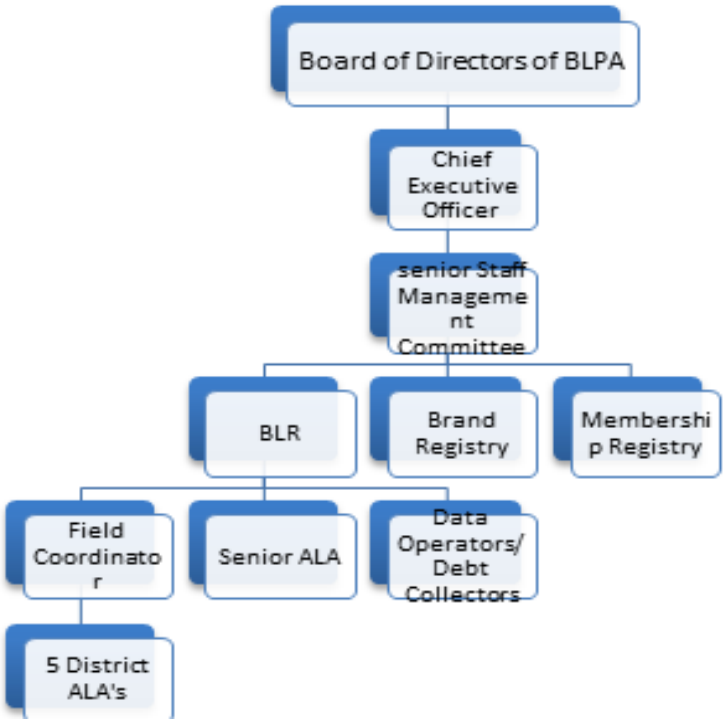


Figure 1: Organizational Structure of the Belize Livestock Producers Association (Source: Internal Documentation)

A. THE ROLE OF BLPA BOARD OF DIRECTORS

1. Approve and lead the implementation of BLPA Strategic Plan.
2. Develop Policies and strategies for implementation by BLPA.
3. Review and approve BLPA programs, projects, evaluation, and activities.
4. Install Institutional procedures and mechanisms for facilitating BLPA to achieve its goals and objectives.
5. Review and approve BLPA's annual plans.
6. Review and approve BLPA's annual budget, audits, and financial statements.
7. Approve and review Annual and quarterly reports.
8. Approve and provide input to technical reports, publications, and special reports.
9. Conduct Recruitment of CEO of BLPA and periodic review of his performance and compensation.
10. Establish committees, or working groups, to address specific issues on behalf of the Board. The terms of reference for such committees will be defined by the Board.
11. Support and foster a corporate culture in BLPA that reflects efficiency, transparency, and an institution that is results oriented and accountable to its stakeholders.
12. Review and approve measures to foster best institutional practices, not only in the management and operations of BLPA, but also within the Board's operations.
13. Review and approve agreements, contracts, Memorandums of Understanding, etc., that establish strategic relations with other institutions to support BLPA's work.
14. Foster a culture of cohesiveness and a mission of collective responsibility among the members.

B. Role of CEO of BOD

The CEO of BLPA will act as the Secretary of the Board. ALL Administrative and logistical support to the Board will be provided by BLPA's administrative staff, under the supervision of the CEO. Some guidelines are provided on the principal responsibilities of the Secretary as follows:

1. Prepare and discuss the agenda for meetings with the BOD.
2. Distribute the agenda, reports, and documents required to be reviewed for decision-making by the Board.
3. Provide information and orientation (in collaboration with the Chairman) to new Board members and facilitate their transition into the group.
4. Execute and provide follow-up on decisions taken by the Board and submit periodic progress reports as needed.
5. Ensure that the confidentiality of the Board's proceedings and decisions are maintained.
6. Provide a channel of communication and liaison between the Government, the Board, and with other stakeholders in the industry.
7. The Secretary is responsible to ensure that the Board's decisions are carried out effectively. These include:

C: Senior Staff

Role of the finance officer of BLPA

The finance officer is the custodian of the funds and financial records of the association. The Finance officer duties will include overseeing the appropriate people to ensure that the financial records and reports are properly kept and maintained.

The finance officer works closely with the BOD, CEO, and auditor to ensure the integrity of the fiscal affairs of the association.

Role of the Executive Secretary

1. Must have a knowledge of the BLPA by-laws, policies, and internal procedures to provide advice to the CEO and BOD for the hosting of meetings and discussions
2. Ensure Accurate recollection of decisions;
3. Performs clerical booking such as posting and reconciling ledgers, preparing trial balances, and statistical reports, resolving case booking discrepancies.
4. Compiles and/or coordinates collection of data for inclusion, in a variety of regular reports following prescribed form.
5. Reviews and/or processes financial documents such as invoices, vouchers, receipts, requisitions, and reports, ensuring accuracy of mathematical computations and completeness; resolves discrepancies.
6. Monitors bank accounts deposits by reviewing entries, verifying amounts, compiling, and comparing balances.
7. Maintains manual and automated recordkeeping systems by tracking, verifying and updating records, files and reports. Inputs, monitors, and corrects data in automated systems; generates reports.

THE ROLE OF THE OFFICE MANAGER/PROJECT ASSISTANT

1. To assist CEO with all admin and day-to-day running of head office.
2. Monitor Cess returns and ensure account receivables are kept in good standing.
3. General Bookkeeping.
4. Ensure Payroll, including sec and all relevant taxes, are paid and up to date.
5. Prepare all payments due and present them for approval.
6. Answer phones and look after visitors and their enquiries.
7. Administer petty cash.
8. Banking of all cash and cheques received.

D. Brand Registrar

1. Responsible for Registering Brand Cattles.
2. The registrar will reject a brand if that particular design is already registered.
3. The registrar is responsible to authorize. Under the law, individuals can register new brands or they can apply to use brands that have not been used for ten years.

G: ROLE OF THE FIELD COORDINATOR

1. To liaise with district committees, community offices and head office.
2. To assist in implementation of plans, directives, and projects as directed by CEO.
3. To meet regularly, with farmers in each district and promote the work of BLPA within the farming community and Belize as a whole
4. To assist all local boards and community offices with operations, and pass on relevant information.
5. Be responsible for repair and maintenance scheduling of all BLPA/BLR vehicles.
6. Assist BLR manager with liaison between community offices, ALAs, and head office.
7. Assist BLR manager with supervision and scheduling of ALAs

The Field Officer reports to the CEO of BLPA.

2.1.4 Products offered

1. Pasture Improvement for breeding stock with the aim of increasing quality, production and productivity of meat and milk through improved grasses and legumes.
2. Technological Improvement to enhance the quality of the local cattle stock in Belize and ensure the continuous supply of superior breeding stock to producers through the use of Registered Bull.
3. Capacity building in the areas of GMP, animal health, and nutrition.
4. Registering Livestock Brands- It is important to notice that Brands used for identification within the herd are not considered proof of ownership. Once brands

are recorded with the Belize Livestock Producers Association, they become the personal property of the owner.

2.2 Project Management concepts

2.2.1 Project

A Guide to the Project Management Body of Knowledge (PMBOK) 6th Edition describes a project as “a temporary endeavor undertaken to create a unique product, service or result”. For the benefit of this FGP, this project speaks to the development of a project management plan for the BLPA.

A project is an activity to meet the creation of a unique product or service, and thus, activities that are undertaken to accomplish routine activities cannot be considered projects. For instance, if your project is less than three months old and has fewer than twenty people working on it, you may not be working on what is called a project, according to the definition of the term.

It has to be remembered that the term ‘temporary’ does not apply to the result or service that is generated by the project. The project may be finite but not the result.

Finally, a project must be progressively elaborated. This means that the project progresses in steps and continues by increments. This also means that the definition of the project is refined at each step, and ultimately the purpose of the progress is enunciated. This means that a project is defined initially, and then as the project progresses, the definition is revisited and more clarity is added to the scope of the project, as well as the underlying assumptions about the project (Simon Wallace).

Hence, this project to implement of the Surveillance System Project for BLPA has a general objective of testing a representative sample of the national herd of Belize for a period of 2 years.

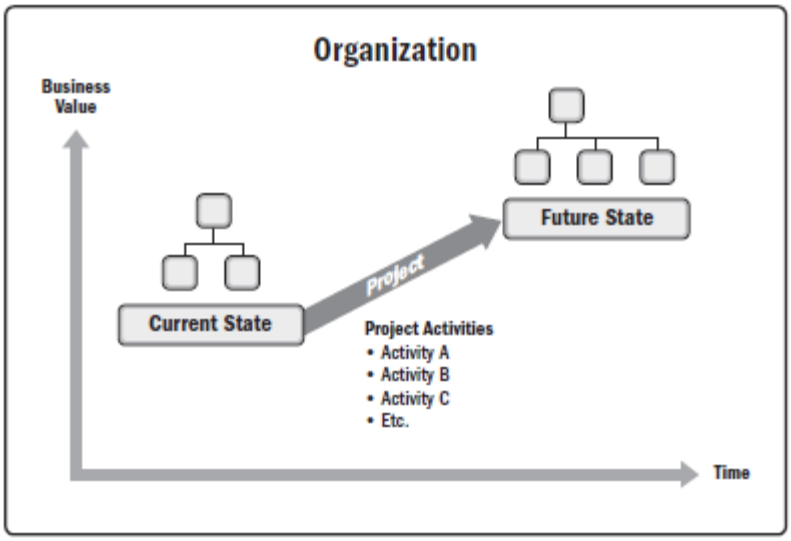


Figure 2 Organizational state transition via a project (PMBOK Guide 6th Edition, 2017)

2.2.2 Project management

The PMBOK guide 6th Edition defines project management as, “the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements”. A Project in any organization is collaboration across departments to achieve a single well-defined objective. Project Management enables organizations to execute projects effectively and efficiently.

Any project requires a Project Manager who leads the project to its logical conclusion. The Project Manager is responsible for appointing team members with different backgrounds, but essentiality in completion of the project. Effective and efficient project management should be considered a strategic competency within organizations. It enables organizations to:

1. Tie the project results to business goals
2. Compete more effectively in their markets
3. Sustain the organization
4. Respond to the impact that business environment changes have on projects by appropriately adjusting project management plans.

2.2.3 Project life cycle

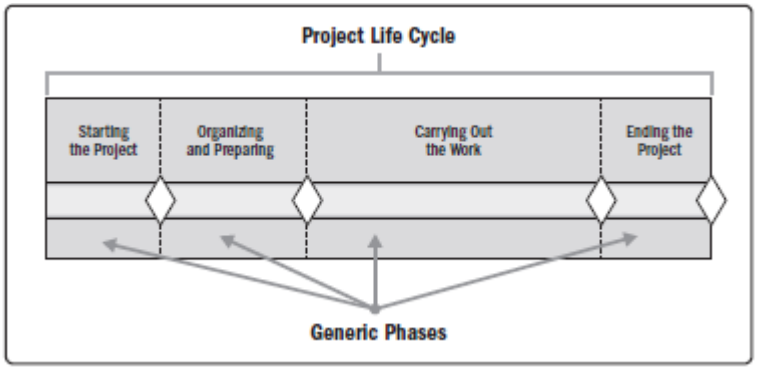


Figure 3 Project Management Life Cycle (PMBOK Guide 6th Edition, 2017)

The PMBOK guide 6th Edition describes the project management life cycle as, “phases that a project goes through from its start to completion” (PMBOK guide 6th Edition, 2017). A typical project is divided into the phases below. Each phase of the project has its own importance and impact on overall success of the project.

The project lifecycle can be influenced by the unique aspects of the organization, industry, development method, or technology employed (Malsam,2018). A typical project can be mapped to the following life cycle structure (see figure 3):

- **Staring the project**
- **Organizing and preparing**
- **Carrying out the work**
- **Closing the project**

2.2.4 Project management processes

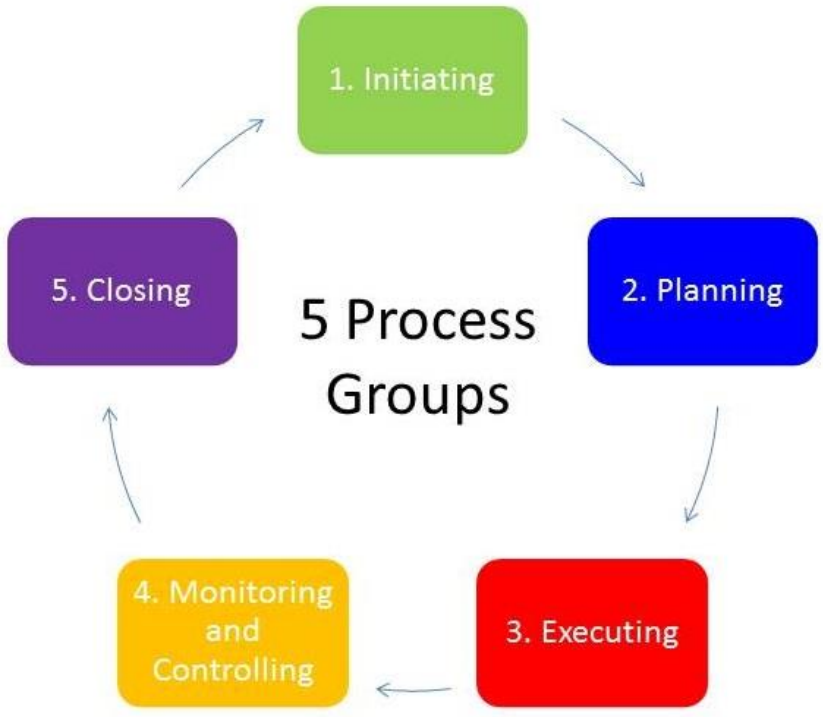


Figure 4 Project Management Processes, (Process management process groups 2016)

According to PMBOK Guide 6th Edition, these 5 process groups are independent of the application areas. Individual processes in the process groups are often repeated prior to completing a phase or a project.

1 – Initiating Process Group- The process performed to define a new project or a new phase of an existing project by obtaining authorization to start the project or phase.

3. **Planning Process Group-** The process required to establish the scope of the project, refine the objectives, and define the course of action required to attain the objectives that the project was undertaken to achieve.
4. **Execution Process Group-** The process performed to complete the work defined in the project management plan to satisfy the project requirements.
5. **Monitoring/controlling Process Group-** The process required to track, review, and regulate the progress and performance of the project.

6. **Closing Process Group-** The process performed to formally complete or close a project, phase, or contract.

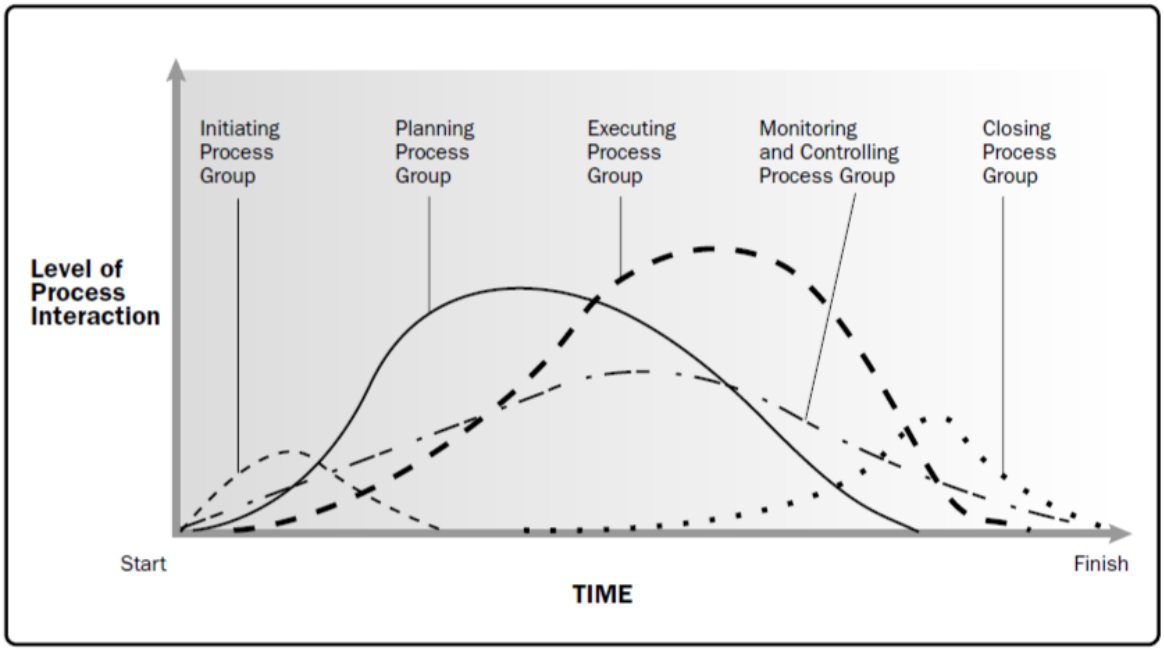


Figure 5 example of process group interactions within a project or phase (PMBOK Guide 6th Edition, 2017)

2.2.5 Project management knowledge areas

The PMBOK guide 6th Edition highlights ten knowledge areas used on projects. The guide asserts that each knowledge area represents a complete set of concepts, terms, and activities that make up a professional field, project management field, or area of specialization. This PMP study will attempt to create a time management plan to ensure that the project is completed on time; to develop a cost management plan to make sure the project is within budget; to design a quality management plan to make certain that all resources needed to complete the project are successfully available; to create a communications management plan ensuring that the system of communications and the project performance are documented properly; to develop a risk management plan that details the process to be employed on the project in order to manage risk; to construct a stakeholder management plan that documents the interaction between stakeholders and

processes used to manage issues identified on the project; and to produce a scope management plan to guarantee that the purpose and objectives of the project are maintained throughout the project duration.

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring & Controlling Process Group	Closing Process Group
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Work 4.4 Manage Project Knowledge	4.5 Monitor and Control Project Work 4.6 Perform Integrated Change Control	4.7 Close Project or Phase
5. Project Scope Management		5.1 Plan Scope Management 5.2 Collect Requirements 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope	
6. Project Time Management		6.1 Plan Schedule Management 6.2 Define Activities 6.3 Sequence Activities 6.4 Estimate Activity Durations 6.5 Develop Schedule		6.6 Control Schedule	
7. Project Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs	
8.Project Quality Management		8.1 Plan Quality Management	8.2 Perform Quality Assurance	8.3 Control Quality	
9. Project Resource Management		9.1 Plan Human Resource Management 9.2 Estimate Activity Resources	9.3 Acquire Project Team 9.4 Develop Project Team 9.5 Manage Project Team	9.6. Control Resources	
10. Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Control Communications	
11. Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risk Analysis 11.5 Plan Risk Responses	11.6 Implement Risk Responses	11.7 Control Risks	
12. Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	
13. Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Management	13.3 Manage Stakeholder Engagement	13.4 Control Stakeholder Engagement	

Figure 6 Process management process groups and knowledge area mapping (PMBOK Guide 6th Edition)

- **Project Integration Management**- Includes the processes and activities to identify, define, combine, unify, and coordinate the various processes and project management activities within the project management process groups.
- **Project Scope Management**- Includes the processes required to ensure that the project includes all the work required to complete the project successfully.
- **Project Schedule Management**- Includes the processes required to manage the timely completion of the project.
- **Project Cost Management**- Includes the process involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so the project can be completed within the approved budget.
- **Project Quality Management**- Includes the processes for incorporating the organization's quality policy regarding planning, managing, and controlling project and product quality requirements, in order to meet stakeholders' expectations.
- **Project Resource Management**- Includes the processes of identification, acquisition, and management the resources needed for the successful completion of the project.
- **Project Communication Management**- Includes the processes required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and ultimate disposition of project information.
- **Project Risk Management**- Includes the processes of conducting risk management planning, identification, analysis, response planning, response implementation, and monitoring risk on a project.
- **Project Stakeholder Management**- Includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project. To develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution.

3. METHODOLOGICAL FRAMEWORK

3.1 Information sources

According to karibouconnections.net, Information sources are the various means by which information is recorded for use by an individual or an organization. It is the means by which a person is informed about something or knowledge is availed to someone, a group of people or an organization. That source might then inform a person about something or provide knowledge about it. Information can come from essentially anywhere: personal experiences, books, articles, expert opinions, encyclopedias, the Web. The choice of the source to consult is usually determined by the type of information sought. The three types of information sources are: Primary, Secondary, and Tertiary (Schmidt, 2013).

3.1.1 Primary sources

Primary sources are original materials on which other research studies are based. Primary sources report a discovery or share new information, they present first-hand accounts and information relevant to an event. They present information in its original form, not interpreted, condensed, nor evaluated by other writers. Primary sources are the first formal appearance of results in print or electronic formats. (Clement ,2018).

For the development of the FGP, the primary information sources that will be used are meeting minutes, personal interviews with members of BPLA, photographs, and interviews with other stakeholders.

3.1.2 Secondary sources

According to University Librarian, a secondary source of information is one that was created by someone who did not have first-hand experience or did not participate in the events or conditions being researched. Secondary sources describe, analyze, interpret, evaluate, comment on, and discuss the evidence

provided by primary sources. A secondary data is one that has been collected by individuals or agencies for purposes other than those of a particular research study. For the development of the Final Graduation Project, secondary sources such as the PMBOK Guide, Web research, and the PMI database will be used.

Chart 1 Information sources (Source: A. Pech, The Author, June 2019)

Objectives	**Information sources**	
	Primary	**Secondary**
1. To create a project charter which formally authorizes the project and provide the project manager with the authority to apply organizational resources to the project in order to produce the project management plan.	Meeting Minutes, and personal interviews with Personnel in charge	PMBOK Guide 6th edition, PMI database and web research
2. To create a scope management plan which ensures that all works required are included to successfully complete the project.	Meeting Minutes, and personal interviews with Personnel in charge	PMBOK Guide 6th edition, and the Internet
3. To create a Time management plan which supports the development and management of a project schedule that ensures the project is completed within the time constraints.	Personal Interview with personnel in charge	PMBOK Guide 6th edition, and the Internet

4. To create a cost management plan which defines the processes of developing and managing the project budget that ensures the project is completed within the budget constraints.	Meeting Minutes, and personal interviews with personnel in charge	PMBOK Guide 6th edition, and PMI database, internet
5. To develop a quality management plan which identifies the quality requirements for the project to ensure the results meet expectations for approval within the time, cost, and scope constraints.	Personal Interview with Personnel in charge	PMBOK Guide 6th edition, internet research
6. To create a human resource management plan which ensures that all human resources are identified and managed effectively to complete the project within time, cost and scope constraints.	Personal Interview with Personnel in charge	PMBOK Guide 6th edition, internet research
7. To develop a communication management plan which ensures the timely and effective communication of the project status and other key information	Personal Interviews with personnel in charge	PMBOK Guide 6th edition and PMI database, internet research
8. To create a risk management plan which identifies and examines risks for the successful completion of the project and develop plans to minimize probabilities of risks.	Personal Interview with personnel in charge	PMBOK Guide 6th edition and PMI database, internet research

9.To develop a stakeholder management plan which identifies and support all the project stakeholders and have an effective stakeholder engagement.	Personal Interview with personnel in charge	PMBOK Guide 6th edition, internet research

3.2 Research methods

Research Methods is a systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions. Therefore, it is concluded that a research method is a particular procedure to establish facts and reach new conclusions. (McLeod, 2017)

3.2.1 Analytical method

The analytical research method, also known as the explanatory method, uses facts or information already available and analyzes to make a critical evaluation. With this research method, information from multiple sources will be examined and used to develop the deliverables.

Chart 2 Research methods (Source: A. Pech, The Author, June 2019)

Objectives	Research methods
	Analytical Research Method
1. To create a project charter which formally authorizes the project and provide the project manager with the authority to apply organizational resources to the project in order to produce the project management plan.	The analytical method will be applied, by using facts or information from the sources identified in Chart 1 objective 1 above, to carry out decision making when creating the project charter.

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

project within time, cost and scope constraints.	documents that will comprise the human resources management plan.
7. To develop a communication management plan which ensures the timely and effective communication of the project status and other key information	The analytical method will be applied, by using information from the sources identified in Chart 1 objective 7 above, to carry out decision making when creating the documents that will comprise the communication management plan.
8. To create a risk management plan which identifies and examines risks for the successful completion of the project and develop plans to minimize probabilities of risks.	The analytical method will be applied, by using information from the sources identified in Chart 1 objective 8 above, to carry out decision making when creating the documents that will comprise the risk management plan.
9.To develop a stakeholder management plan which identifies and support all the project stakeholders and have an effective stakeholder engagement.	The analytical method will be applied, by using information from the sources identified in Chart 1 objective 9 above, to carry out decision making when creating the documents that will comprise the stakeholder management plan.

3.3 Tools

According to the *PMBOK Guide 6th edition,* a tool is defined as, “something tangible, such as a template or software program, used in performing an activity to produce a product or result”

Chart 3 Tools (Source, A. Pech, Author, June 2019)

Objectives	Tools
1. To create a project charter which formally authorizes the project and provide the project manager with the authority to apply organizational resources to the project in order to produce the project management plan	Project Charter template and Project Management Plan template
2. To create a scope management plan which ensures that all works required are included to successfully complete the project.	Requirements traceability matrix template, Work Breakdown Structure generator, and Scope Management Plan template
3. To create a Time management plan which supports the development and management of a project schedule that ensures the project is completed within the time constraints.	Schedule Management Plan template, Project Plan 365 Software and Activity List template
4. To create a cost management plan which defines the processes of developing and managing the project budget that ensures the project is completed within the budget constraints.	Cost Management Plan template, Cost Baseline template, Excel 2016
5. To develop a quality management plan which identifies the quality requirements for the project to ensure the results meet expectations for approval within the time, cost, and scope constraints.	Quality Management Plan template and Quality Management tools (Check sheets)

6. To create a human resource management plan which ensures that all human resources are identified and managed effectively to complete the project within time, cost and scope constraints.	Human Resource Management template and Responsibility Assignment Matrix
7. To develop a communication management plan which ensures the timely and effective communication of the project status and other key information	Communications Management Plan template and Communications Matrix
8. To create a risk management plan which identifies and examines risks for the successful completion of the project and develop plans to minimize probabilities of risks.	Risk Management Plan template, and Risk Register template
9. To develop a stakeholder management plan which identifies and support all the project stakeholders and have an effective stakeholder engagement.	Stakeholder Management Plan template, Stakeholder Analysis Matrix, Microsoft Excel 2016, Stakeholder Register template,

3.4 Assumptions and constraints

According to PMBOK Guide 6th Edition, Project Assumption is, “A factor in planning process that is considered to be true, real, or certain often without any proof or demonstration”. Another definition could be, “Project Assumptions are events or circumstances that are expected to occur during the project life-cycle”.

According to PMBOK Guide 6th Edition, Project Constraint is, “A limiting factor that affects the execution of a project, program, portfolio or a process”. Another definition could be, “Project Constraints are restrictions imposed by Stakeholders or Environment that limits Project Team’s options”.

Chart 4 Assumptions and constraints (Source, A. Pech, June 2019)

Objectives	Assumptions	Constraints
1. To create a project charter which formally authorizes the project and provide the project manager with the authority to apply organizational resources to the project in order to produce the project management plan	The charter will be created before all other minor documents	There are only a couple of days allocated to create the project charter. Also, stakeholder identification is scheduled to occur at the same time as the development of the project charter.
2. To create a scope management plan which ensures that all works required are included to successfully complete the project.	The Clients will disclose some of the information required to develop the scope.	A substantial amount of work has to be collected in a short space of time.
3. To create a Time management plan which supports the development and management of a project schedule that ensures the project is completed within the time constraints.	The time allocated for the development of the Project Management Plan and the implementation of the surveillance system for BLPA will be sufficient	Delays in Government developments may impede project progress.
4. To create a cost management plan which defines the processes of developing and managing the project budget that ensures the project is	It is assumed that funding will be made available for the implementation of the project by the association BLPA.	The budget for the project must not exceed $1,610,000 million dollars. The project cost can be elevated due to inflation or increase in prices of goods and services

Objectives	Assumptions	Constraints
completed within the budget constraints.		
5. To develop a quality management plan which identifies the quality requirements for the project to ensure the results meet expectations for approval within the time, cost, and scope constraints.	The project team has sufficient expertise that permit the elaboration of final epidemiological reports required	The proper amount of veterinary expertise is available at a reasonable price of services
6. To create a human resource management plan which ensures that all human resources are identified and managed effectively to complete the project within time, cost and scope constraints.	The implementing association has some technical and administrative capacity to implement a project with this complexity	Only the Human Resources identified and planned for will be included in the budget. The man hours and overtime hours are predetermined.
7. To develop a communication management plan which ensures the timely and effective communication of the project status and other key information	The association has the technology required to suffice the communication needs of all stakeholders.	The availability of electricity and consistency of internet access must be dependable.
8. To create a risk management plan which identifies and examines risks for the successful completion of the project and develop	There is sufficient information required to adequately identify most of the project risks.	All of the project risks need to be identified within the planning phase (stage) or as early as possible.

Objectives	Assumptions	Constraints
plans to minimize probabilities of risks.		
9. To develop a stakeholder management plan which identifies and support all the project stakeholders and have an effective stakeholder engagement.	Stakeholders continue to provide the required commitments for the implementation of the project as per agreement	The information required to plan and manage stakeholders must be accurate.

3.5 Deliverables

According to PMBOK 6th Edition a deliverable is defined as, “any unique and verifiable product, result, or capability to perform a service that is required to be produced to complete a process, phase, or project”.

Chart 5 Deliverables (Source, A. Pech, June 2019)

Objectives	Deliverables
1. To create a project charter which formally authorizes the project and provide the project manager with the authority to apply organizational resources to the project in order to produce the project management plan	Project Charter
2. To create a scope management plan which ensures that all works required are included to successfully complete the project.	Scope Management Plan
3. To create a Time management plan which supports the development and management of a project schedule that ensures the project is completed within the time constraints.	Time Management Plan
4. To create a cost management plan which defines the processes of developing and managing the project budget that ensures the project is completed within the budget constraints.	Cost Management Plan
5. To develop a quality management plan which identifies the quality requirements for the project to ensure the results meet expectations for approval within the time, cost, and scope constraints.	Quality Management Plan
6. To create a human resource management plan which ensures that all human resources are identified and managed effectively to complete the project within time, cost and scope constraints.	Human Resource Management Plan
7. To develop a communication management plan which ensures the timely and effective communication of the project status and other key information	Communication Management Plant

8. To create a risk management plan which identifies and examines risks for the successful completion of the project and develop plans to minimize probabilities of risks.	Risk Management Plan
9. To develop a stakeholder management plan which identifies and support all the project stakeholders and have an effective stakeholder engagement.	Stakeholder Management Plan

4. RESULTS

4.1 Project Integration Management: Project Charter

Project Purpose/Justification

Result 1: Strengthening of BLPA to ensure cattle producer's participation, investment, and support in the sector.
Result 2: Strengthening of BAHA.
Result 3: Strengthening of the public health that supports the cattle industry related activities.

Business Objectives

1. Strengthening of the cattle sector in areas that can permit market access
2. Strengthening of the Cattle organization (s) to ensure proper channeling of the cattle producer's participation and investment
3. Creation of proper infrastructure in both public and private sector that will provide for improvement of cattle and cattle product related activities
4. Strengthening of the Public Health and Agriculture Health Organization to ensure compliance to the animal health standards
5. Capacity building of local actors and technical personnel to ensure understanding of the requirements in meat and cattle standard related matter

Stakeholders

Direct Stakeholders:
Belize Livestock Producer Association
Cattle Ranchers
Veterinary Association of Belize
Ministry of Agriculture, Fisheries, Forestry, the Environment, Sustainable Development;
Belize Agriculture Health Organization
Ministry of Health

Indirect Stakeholders:
Butchers
Meat Shops
Beef Consumers
International Donors
Slaughtering Facility Owners

Measurable Project Objectives and Success Criteria

Constraints:

- The project should continue without interruption as per International guidelines in order not to break the consecutive testing results
- The project cost is not elevated due to inflation or increase in prices of goods and services
- The proper amount of veterinary expertise should not be absent and at a reasonable price for services
- Farmers should not hesitate to pay on time and as per cash flow needs

Assumptions:

- It is assumed that the Government to Belize will have the willingness to negotiate clear export agreements with Mexico
- It is assumed that BLPA will have the technical and administrative capacity to implement a project with this complexity
- It is assumed that Farmers will be willing to pay for the continuation of testing even if cattle are not tested directly or only as a sample
- It is assumed that the internal movement control will be maintained
- It is assumed that the project team will have sufficient expertise that will permit the elaboration of final epidemiological reports required
- It is assumed that the stakeholders will continue to provide the required commitments for the implementation of the project as per agreement

Risks

Planning:

- The epidemiological report detects none compliance of the export guidelines
- Brucellosis and tuberculosis is detected in Belize and there is no rapid response
- Probability of undetected infection

Stakeholders:

- Mexico enforces current export requirment with strict guidelines and regulations for the exportation of cattle to Mexico and other countries
- The project unit does not have the required expertise to implement and coordinate a project of this complexity.
- Farmers do not comply with the internal movement control of cattle

Financial:

- Farmers do not pay dues on time
- Underestimation of the project

Project Deliverables

1. Project Charter
2. BLPA Strategic Plan
3. Traceability System
4. Update of Belize Livestock Registry
5. Epidemiolocal Lab Reports
6. Monitoring and enforcement reports of the required standards in the cattle sector
7. Appropriate governance and management framework established

Chart 6 Summary Milestone Schedule (Source, A. Pech, June 2019)

Milestone	End date
1. Development of Protocol for Sampling the national herd	Jan 2018
2. National tour to meet the cattle producers of the country	Jan 2018
3. Hiring of project team	Dec 2020
4. Generation of Cattle community list	June 2018
5. Hiring of the first Team for testing of cattle in each community	Dec 2020
6. Updating of inventory Stocks of materials available	Dec 2020
7. Procurement of lab materials and equipment for BLPA technical staff	Sept 2020
8. Collecting from individual community and ranchers	Dec 2020
9. Populating the BLR with information	Dec 2020
10. Field testing of all community in the official list	Dec 2020
11. Lab testing and results reports	Sept 2020
12. Maintaining a mobile patrol unit	Sept 2020
13. Training and capacity building of technical and admin staff	Dec 2020
14. Public Awareness and information sharing	Dec 2020
15. Epidemiological study of sweep 4 and 5	Dec 2020
16. Final Report	Dec 2020
17. Accounts consolidation and Financial Report	Dec 2020
18. Auditing of Project along BLPA accounts	Dec 2020

Chart 7 Project Budget (Source, A. Pech, June 2019)

Activities		**Total budget 24 months**	**Budget Annual (Bz)**
1. Development of Protocol for Sampling the national herd		**-**	**-**
2. National tour to meet the cattle producers of the country		**$4000**	**$2000**
3. A. Hiring of project team	Project Manager	**$48,000**	**$24,000**
	Admin Assistant	**$40,000**	**$20,000**
	Finance Officer	**$40,000**	**$20,000**
3 b. 1 Technical Team	Field Director/ Vet Officer	**$120,000**	**$60,000**
	Data Operator	**$42,000**	**$21,000**
	Tagger	**$40,000**	**$20,000**
	Restrainer/ Cowboy	**$48,000**	**$24,000**
3 c. Other technical team	2nd Technical team	**$125,000 (If required)**	
4. Generation of Cattle community list		**-**	**-**
5. Hiring of the first Team for testing of cattle in each community		**Line 3 b. 1**	
6. Procuring Cattle Committee Support with personnel		**$300,000**	**$ 150,000**
7. Updating of inventory Stocks of materials available		**-**	**-**
1. Procurement of lab materials and equipment for BLPA technical staff	Sweep 4	**$60,000 (If required)**	
	Sweep 5	**$300,000**	**$150,000**
8. Collecting from individual community and rancher		**$100,000**	**$50,000**
9. Populating the BLR with information		**-**	**-**
10. Field testing of all community in the official list (operational expense, transport and logistics)		**$180,000**	**$90,000**
11. Lab testing and results reports		**$36,000**	**$18,000**

12. Maintaining a mobile movement control unit		**$44,000**	**$22,000**
13. Training and capacity building of technical and admin staff		**$5000**	**$ 2500**
14. Public Awareness and information sharing		**$8,000**	**$4000**
15. Epidemiological study of sweep 4 and 5		**$60,000**	**$30,000**
16. Reports	Monthly	**-**	**-**
	Sweeps	**-**	**-**
	Field Reports	**-**	**-**
	Lab reports	**-**	**-**
	BLR	**-**	**-**
	Final	**-**	**-**
17. Accounts consolidation and financial report		**-**	**-**
18. Auditing of Project along BLPA accounts		**$10,000**	**$10,000**
TOTAL (Bz)		**$1,610,000**	**$717,500**

4.2 Project Scope Management

The planning of project scope management was the first of the planning process group processes to occur, following the development of the Project Charter. To define the scope of the project, a scope management plan was produced. The Scope Management Plan included the scope definition, project scope statement, the Work Breakdown Structure (WBS), WBS dictionary, scope verification, and the scope control measure that would guide the project management team throughout the project.

The Scope Management Plan provides the scope framework for this project. This plan documents the scope management approach; roles and responsibilities as they pertain to project scope; scope definition; verification and control measures; scope change control; and the project's work breakdown structure.

This project is to manage the implementation of the Surveillance System Project BLPA component and to ensure cattle producer's participation, investment and support in the sector.

Scope Management approach

For this project, scope management will be the sole responsibility of the Project Manager. The scope for this project is defined by the Scope Statement, Work Breakdown Structure (WBS) and WBS Dictionary. The Project Manager, Sponsor and Stakeholders will establish and approve documentation for measuring project scope which includes deliverable quality checklists and work performance measurements. Proposed scope changes may be initiated by the Project Manager, Stakeholders or any member of the project team. All change requests will be submitted to the Project Manager who will then evaluate the requested scope change. Upon acceptance of the scope change request, the Project Manager will submit the scope change request to the Change Control Board and Project Sponsor for acceptance. Upon approval of scope changes by the Change Control Board and Project Sponsor, the Project Manager will update all project documents and communicate the scope change to all stakeholders. Based on feedback and input from the Project Manager and Stakeholders, the Project Sponsor is responsible for the acceptance of the final project deliverables and project scope.

Roles and Responsibilities

In order to successfully manage a projects' scope, it's important that all roles and responsibilities for scope management are clearly defined in the Scope Management Plan. Key personnel will be instrumental to the management of the scope process of the Project.

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

Chart 8 Scope Management Roles and Responsibilities (Source: A. Pech, The Author, June 2019)

Role	Description
Project Sponsor	• Approves key project deliverables • Provides financial resources • Approve or deny scope change requests as appropriate • Evaluate need for scope change requests • Deals directly with the Project Manager • Leads the National Steering Committee
Project Manager	• Communicates outcomes of scope change requests • Updates project documents upon approval of all scope changes • Involved in project planning, controlling and monitoring • Facilitates scope change requests • Responsible for accomplishing project objectives and all associated outcomes within scope, cost, time and quality specifications • Reviews and prioritizes project work plans as deemed necessary for timely completion of tasks • Participates in the approval of the project plan and deliverables • Detects, monitors and responds to project risk

Team Members	• Communicate outcomes of scope change requests to team • Directed by the Project Manager • Evaluate the need for scope changes and communicate them to the project manager as necessary • Responsible for project deliverables • Identify and escalate policy issues to Project Manager for appropriate referral
Steering Commitee	• Provides policy and functional direction • assists in conflict resolution • supervision to the project • Involved in project oversight and general control • Approves project deliverables and scope changes, implementation and work plans, milestones, and prioritizes project goals

Scope Description

In principle, biosecurity is a responsibility shared by governments, producers and the general public. The scope of this Project Management plan is limited to the legitimate domain of governments and livestock Association as providers and users of animal health surveillance information; these parties will be chiefly responsible for its implementation. However, delivery of outcomes will require engagement with a broader range of stakeholders.

The plan covers the collection, analysis and reporting of surveillance information for infectious diseases considered to be of national and/or international significance. This includes exotic, emerging, and nationally significant (notifiable) endemic diseases of Livestock.

For completeness, this plan refers to an ongoing targeted and general surveillance program as well as new activities to strengthen priority areas and add value to existing activities, data and practices.

Measures of Project Success

The success of this BLPA project will be realized when/with:

1. A National Steering Committee is established to work towards the improved management of the BLPA Surveillance system
2. An efficient and representative Cost Plan is developed for the running of the financials pertaining to the project
3. A specific and instructive Scope Plan is developed for the clear indication of what work will be done to improve BLPA Surveillance system
4. A Schedule Plan with clear scheduling instructions for the timely completion of the Project matters
5. A Stakeholder Plan that allows for the engagement and participation of project stakeholders involved
6. A Communications Plan that guarantees the timely, representative transferal and management of BLPA information among project stakeholders.
7. A quality management plan to identify the quality requirements for the project to ensure the results meet expectations for approval within the time, cost and scope constraints.
8. A human resource management plan to ensure that all human resources are identified and managed effectively to complete the project within time, cost and scope constraints.
9. A risk management plan to identify and examine risks to the successful completion of the project and develop plans to minimize probabilities of risks.

Scope Control

The Scope of Works for the BLPA project will be controlled by the Project Manager and his / her Project Team. The Project Team will perform the work reflected in the WBS and the WBS Dictionary or Glossary of Activities. The Project Manager will oversee the project team and the progression of the project to ensure that this scope control process if followed.

If a change to the project scope is needed, the process of recommending changes to the scope of the project must be carried out. Any project team member or sponsor can request changes to the project scope. All change requests must be submitted to the Project Manager in the form of a project change request document. The Project Manager will then review the suggested change to the scope of the project. The Project Manager will then either deny the change request, if it does not apply to the intent of the project, or convene a change control meeting between the project team and Sponsor to review the change request further and perform an impact assessment of the change. If the change request receives initial approval by the Project Manager and Sponsor, the Project Manager will then formally submit the change request to the Change Control Board. If the Change Control Board approves the scope change the Project Sponsor will then formally accept the change by signing the project change control document. Upon acceptance of the scope change by the Change Control Board and Project Sponsor, the Project Manager will update all project documents and communicate the scope change to all project team members' stakeholders.

Scope Verification

The deliverables for the project should be formally accepted and signed off by the customer throughout the lifecycle of the project, and not held back as a single deliverable at the end of the project.

During the Project's advancement, the Project Manager will verify the Project deliverables against the original scope as defined in the scope statement, WBS and WBS Dictionary. After the Project Manager verifies that the scope meets the requirements defined in the project plan, the Project Manager and Sponsor will meet for

formal acceptance of the deliverable. During this meeting, the Project Manager will present the deliverable to the Project Sponsor for formal acceptance. The Project Sponsor will accept the deliverable by signing a project deliverable acceptance document. This will ensure that project work remains within the scope of the project on a consistent basis throughout the life of the project.

Work Breakdown Structure

The Work Breakdown Structure (WBS) and Work Breakdown Structure Dictionary are key elements to effective scope management and are included in the Scope Management Plan. This section discusses how the project scope is to be subdivided into smaller deliverables in the WBS and WBS Dictionary; and how these smaller components are managed during the life of the project.
The project is broken down into three phases: The Initiation phase, Procurement phase, Field Activity phase, Capacity Building phase, Project Closure phase, and Project Management phase.

1.0 Initiation Phase

1.1 .1 Development of Protocol for Sampling the national herd

1.1.2 National tour to meet the cattle producers of the country

1.1.3 Hiring of project team

1.1.4 Generation of Cattle community list

1.2 Procurement Phase

1.2.1 Procuring Cattle Committee Support with personnel

1.2.2 Updating of inventory Stocks of materials available

1.2.3 Procurement of lab materials and equipment for BLPA technical staff

1.3 Field Testing Phase

1.3.1 Collecting from individual community and ranchers

1.3.2 Populating the BLR with information

1.3.3 Field testing of all community in the official list

1.3.4 Lab testing and results reports

1.3.5 Maintaining a mobile movement control unit

1.4 Capacity Building Phase

1.4.1 Training and capacity building of technical and admin staff

1.4.2 Public Awareness and information sharing

1.5 Project Closure

1.5.1 Epidiomology Study

1.5.2 Reports

1.5.3 Accounts consolidation and financial report

1.5.4 Auditing of Project along BLPA accounts

1.6 Project Management

1.6.1 Project Planning

1.6.2 Project Scheduling

1.6.3 Project Accounting

1.6.4 Project Reporting

Chart 9 WBS Dictionary (Source: A. Pech, The Author, June 2019)

WBS Code	Element Name	Description of Work	Deliverables	Budget per annum (Bz)	Resources
1.0	Initiation Phase	Starting poing of Development	NA	NA	*Laptop *Desktop *Internet *Relevant Literature
1.1.1	Development of Protocol for Sampling the national herd	Achievement of national free herd status	Official Document	NA	*Laptop *Desktop *Internet *Relevant Literature
1.1.2	National tour to meet the cattle producers of the country	To have the cattle producer's participation, investment and support in the sector.	Framework for traceability	$2,000	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.1.3	Hiring of Project/ Technical team	The team is collectively responsible for assisting the programme or project manager to deliver the programme or	Project Management Plan Documents	$189,000	*Laptop *Desktop *Internet *Relevant Literature *Data input

		project objectives			
1.1.4	Generation of Cattle community list	Enhances the level of more accurate data of the cattle sector with ability to use in key decision making	Formal List	NA	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.2	Procurement Phase	This process involves the acquisition of products or services needed for the project to carry out its operations.	NA	NA	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.2.1	Procuring Cattle Committee Support with personnel	This department is in constant contact with all our producers across the country, procuring cattle on a continual basis.	Reports	$150,000	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.2.2	Updating of inventory Stocks of materials available	For efficient stock control and to ensure that capital is	Data Inventory Control Log Sheets	NA	*Laptop *Desktop

		not tied up unnecessarily			*Internet *Relevant Literature *Data input
1.2.3	Procurement of lab materials and equipment for BLPA technical staff	Supplying together ítems that need to be used concurrently to complete the testing protocol.	Data Inventory Control Log Sheets	$300,000	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.3	Field Testing Phase	Technical field technicians for real time data input to keep up with the amount of data transferred to the required format	NA	NA	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.3.1	Collecting from individual community and rancher	Increase the usage of technical service, extension service that ranchers face annually.	Data Logs	$50,000	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.3.2	Populating the BLR with information	The BLR can upgrade using other databases	Data Logs/Framew	NA	*Laptop *Desktop

		of key data in the sector, including Metadata and GIS technology.	ork for tracability		*Internet *Relevant Literature *Data input
1.3.3	Field testing of all community in the official list	Additional support staff for real time data input to keep up with the amount of data transferred to the required format.	Data Logs	$90,000	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.3.4	Lab testing and results reports	Ensure Sustainable Laboratory Support	Reports	$18,000	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.3.5	Maintaining a mobile movement control unit	Mobility of its technical officers for active surveillance, Quarantine, assurance of slaughtering positive tested cattle, enforcement of	NA	$22,000	Transportation

		movement control activities among others			
1.4	Capacity Building Phase	Project Team/Technical team will be fully trained to equip them with the skills to carry out the Project	NA	NA	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.4.1	Training and capacity building of technical and admin staff	They will receive detailed training to develop the necessary technical skills as well as appropriate methods to pass on those skills since they are often the ones to have regular contact with farmers	Attendance Records	$2,500	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.4.2	Public Awareness and information sharing	It is very important to devote considerable resources to	Attendance Records	$4,000	*Laptop *Desktop *Internet *Relevant Literature

		public education and awareness. Encouraging the support of livestock owners can be achieved through the development of appropriate public awareness and education			*Data input
1.5	Project Closure	Activities to ensure the recording of project documents, making final payments, releasing resources and completing the project	NA	NA	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.5.1	Epidemiological study of sweep 4 and 5	To attempt to determine what factors are associated with the diseases (risk factors)	Report Study	$30,000	*Laptop *Desktop *Internet *Relevant Literature *Data input

1.5.2	Reports	Includes ALL Report: Monthly, Sweeps, Field Reports, Lab reports, BLR, & Final	Reports documents	NA	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.5.3	Accounts consolidation and financial report	Consolitdating and formalizing Financial stands	Financial Report/Statements	NA	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.5.4	Auditing of Project along BLPA accounts	This will enable the auditor to express a professional opinion on the financial position of the Project and of the funds received and expenditures for the accounting period	Audit Report	$10,000	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.6	Project Management	The management of the planning, execution,	NA	NA	*Laptop *Desktop

		monitoring & controlling and closure of the project			*Internet *Relevant Literature *Data input
1.6.1	Project Planning	Planning and updating project activities throughout project lifecycle	Project Management Plan	NA	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.6.2	Project Scheduling	Planning of project activities, assigning timeline and dates to determine and control project duration	Schedule	NA	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.6.3	Project Accounting	Monitoring the financial expenditures of the project throughout the project lifecycle	Financial Reports	NA	*Laptop *Desktop *Internet *Relevant Literature *Data input
1.6.4	Project Reporting	Documenting project activities, preparing reports and	Project Management Reports and Memos	NA	*Laptop *Desktop *Internet *Relevant Literature

		presenting to the appropriate stakeholders			*Data input

Scope Critera Acceptance

The following requirements must be met for the project to be accepted as complete:

- All and only the work captured in the Scope baseline is completed;
- A robust plan, with clear steps is established for cash generation and financial management of BLPA funds;
- A clear and timed execution plan for BLPA related activities;
- A plan for the engagement of BLPA stakeholders at the various stages of the project life cycle, to ensure heightened appreciation for, and appropriate participation in BLPA related activities; and
- A plan to produce, transfer, and manage BLPA information to stakeholders at appropriate times in the project life cycle.

When all of these requirements are met, the Project Manager and Project Sponsor will sign off on the project plan below.

Approved by:

_____ Date: _____

<Full Name>

Project Sponsor

_____ Date: _____

<Full Name>

Project Manager

4.3 Project Schedule Management

The project schedule is the roadmap for how the project will be executed. Schedules are an important part of any project as they provide the project team, sponsor, and stakeholders a picture of the project's status at any given time. The purpose of the schedule management plan is to define the approach the project team will use in creating the project schedule. This plan also includes how the team will monitor the project schedule and manage changes after the baseline schedule has been approved. This includes identifying, analyzing, documenting, prioritizing, approving or rejecting, and publishing all schedule-related changes (Malsam,2018).

Schedule Management Approach

Project schedules will be created using Project Plan 365 starting with the deliverables identified in the project's Work Breakdown Structure (WBS). Activity definition will identify the specific work packages which must be performed to complete each deliverable. Activity sequencing will be used to determine the order of work packages and assign relationships between project activities. Activity duration estimating will be used to calculate the number of work periods required to complete work packages. Resource estimating will be used to assign resources to work packages in order to complete schedule development.

After an initial schedule has been developed, it will be reviewed by the project team and any resources tentatively assigned to project tasks. The project team and resources must agree to the proposed work package assignments, durations, and schedule. When this is

achieved, the project sponsor will review and approve the schedule and it will then be baselined.

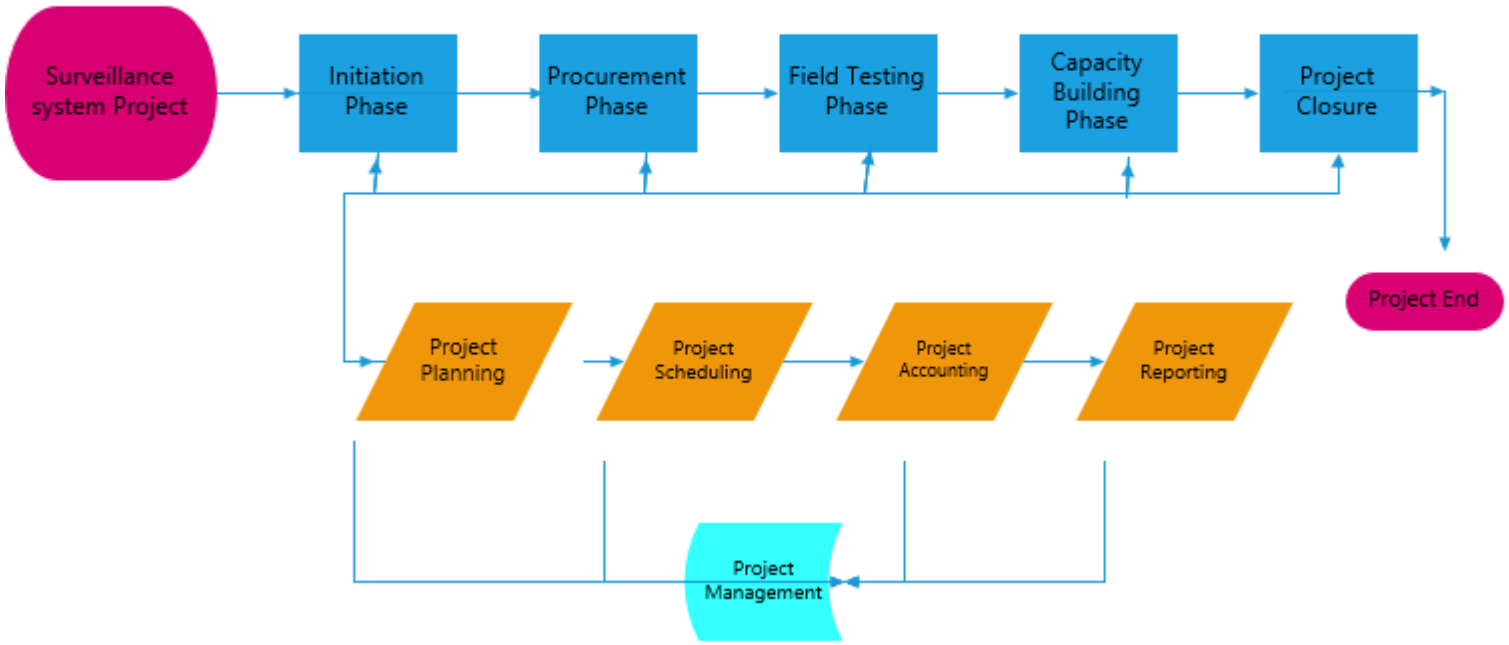


Figure 7 example Schedule Network Diagram (A. Pech, Visio Professional 2019)

Milestones for the project schedule:

- Completion of scope statement and WBS/WBS Dictionary
- Baselined project schedule
- Approval of final project budget
- Project kick-off
- Approval of roles and responsibilities
- Requirements definition approval
- Completion of data collection/inventory
- Project implementation
- Acceptance of final deliverables

Chart 10 Schedule Management Roles and Responsibilities (Source: A. Pech, The Author, June 2019)

Role	Description
Project Sponsor	• Participate in reviews of the proposed schedule and approve the final schedule before it is baselined.
Project Manager	• Responsible for facilitating work package definition, sequencing, and estimating duration and resources with the project team. • Create the project schedule using MS Project 2016 and validate the schedule with the project team, stakeholders, and the project sponsor. • Obtain schedule approval from the project sponsor and baseline the schedule.
Team Members	• Responsible for participating in work package definition, sequencing, duration, and resource estimating. • Review and validate the proposed schedule and perform assigned activities once the schedule is approved.
Project Stakeholders	• Participate in reviews of the proposed schedule and assist in its validation

Schedule Control

The project schedule will be reviewed and updated as necessary on a bi-weekly basis with actual start, actual finish, and completion percentages which will be provided by task owners.

The project manager is responsible for holding bi-weekly schedule updates/reviews; determining impacts of schedule variances; submitting schedule change requests; and reporting schedule status in accordance with the project's communications plan.

The project team is responsible for participating in bi-weekly schedule updates/reviews; communicating any changes to actual start/finish dates to the project manager; and participating in schedule variance resolution activities as needed.

The project sponsor will maintain awareness of the project schedule status and review/approve any schedule change requests submitted by the project manager.

Scope Change

Any changes in the project scope, which have been approved by the project sponsor, will require the project team to evaluate the effect of the scope change on the current schedule. If the project manager determines that the scope change will significantly affect the current project schedule, he/she may request that the schedule be re-baselined, in consideration of any changes which need to be made as part of the new project scope.

The project sponsor must review and approve this request before the schedule can be re-baselined.

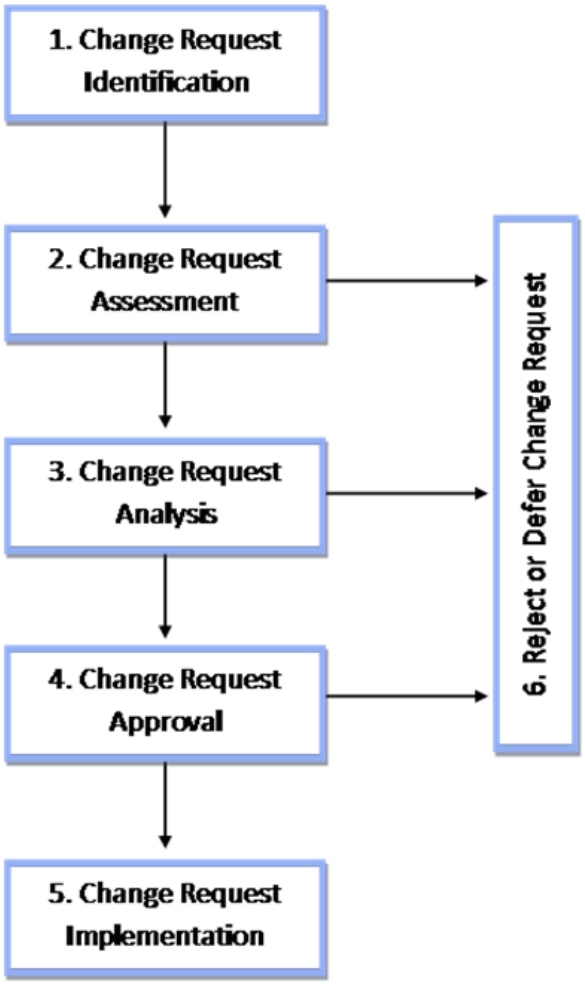


Figure 8 Example of change request Phases (A. Pech, Visio Professional 2019)

Implementation of the Surveillance System Project BLPA Component Change Control Form

SECTION 1

DATE (DD/MM/YY): _____

PROJECT NAME: _____

CHANGE NUMBER: _____

ITEM VERSION: _____

IDENTIFICATION OF ASPECT TO BE CHANGED (Indicate Document Page No.)

_____

AREA OF CHANGE

( )	Scope	( )	Cost	( )	Time
( )	Stakeholders	( )	Communication		

CHANGE DETAILS (Indicate importance and urgency)

_____

_____

JUSTIFICATION

_____

_____

_____

RECOMMENDATION

_____

_____

_____

1

REQUESTER OF CHANGE: _____

JOB TITLE: _____

PHONE CONTACT: _____

EMAIL CONTACT: _____

SECTION 2

DATE INVESTIGATED (DD/MM/YY): _____

INVESTIGATOR OF CHANGE: _____

IMPACT: _____

_____

_____

SUGGESTED PRIORITY

( ) High ( ) Low ( ) Medium

INVESTIGATION OUTCOME: _____

_____

_____

ALTERNATIVE SOLUTION:

_____

Provisional Approval/Decline by:

_____ Date: _____
<Full Name>
Project Manager

Provisional Approval by:

_____ Date: _____
<Approvers Name>
Project Sponsor

SECTION 3

CHANGE CONTROL BOARD MEETING DATE: _____

MEETING VENUE: _____

ATTENDEES: _____

_____

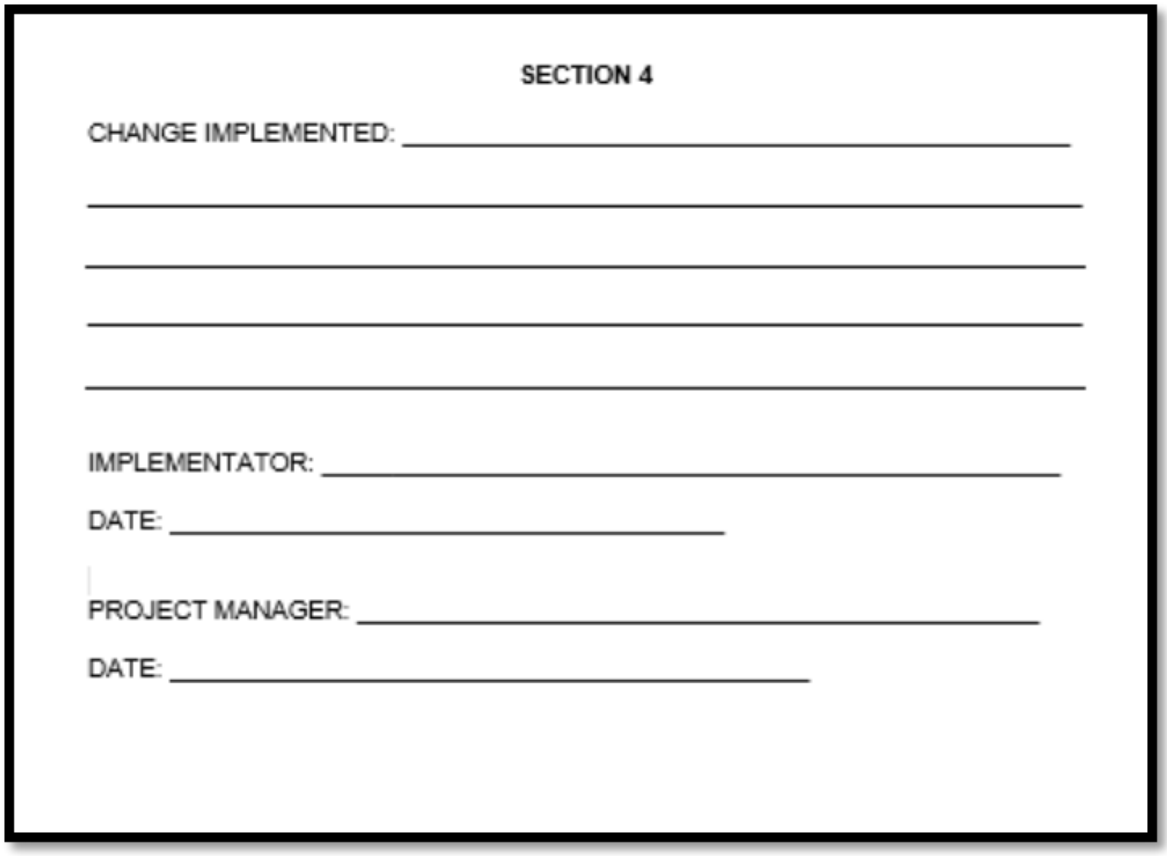
COMMENTS: _____

_____

_____

Approval by:

_____ Date: _____
Project Sponsor



SECTION 4

CHANGE IMPLEMENTED: _____

_____

_____

_____

_____

IMPLEMENTATOR: _____

DATE: _____

PROJECT MANAGER: _____

DATE: _____

Figure 9 Example Change Request (Internal Source)

According to PMI, an activity list is a comprehensive list with an activity identifier and scope of work description of the scheduled activities required to complete each work package (PMI, 2013, p. 152). Also, while defining activities, milestones were added and modified. Subsequently, after defining the activities, the milestone list found in the Project Charter and Schedule Management Plan were updated.

Activity Duration

Chart 11 Resource Assignment and Activity Durations (Source: A. Pech, The Author, June 2019)

Task Name	Duration	Resource Names
1.0 Initiation Phase	774 days	Project Manager
1.1.1 Development of Protocol for Sampling the national herd	4 days	Technical Team/ Project Manager
1.1.2 National tour to meet the cattle producers of the country	9 days	Technical Team/Project Manager
1.1.3 Hiring of project team	714 days	Project Manager
1.1.4 Generation of Cattle community list	122 days	Technical Team
1.2 Procurement Phase	774 days	Financial Director/Project Manager
1.2.1 Procuring Cattle Committee Support with Personnel	640 days	Financial Director/Technical Team
1.2.2 Updating of inventory Stocks of materials available	710 days	Financial Director/Project Manager
1.2.3 Procurement of Lab and equipment	636 days	Financial Director/Project Manager/ Technical Team
1.3 Field Testing Phase	774 days	Technical Team
1.3.1 Collecting from individual community and rancher	686 days	Technical Team
1.3.2 Field testing of all community in the official list	765 days	Technical Team
1.3.3 Lab testing and results reports	645 days	Technical Team
1.3.4 Populating the BLR Population	696 days	Technical Team/Project Manager
1.4 Capacity Building Phase	774 days	Project Manager

1.4.1 Training and capacity building of technical and admin staff	311 days	Project Manager/ Technical team/ Admin
1.4.2 Public Awareness and information sharing	638 days	Technical Team
1.5 Project Closure	696 days	Project Manager
1.5.1 Epidemiological study of sweep 4 and 5	561 days	Technical Team/Project Manager
1.5.2 Reports	696 days	Project Manager/Technical Team
1.5.3 Accounts consolidation and financial report	705 days	Financial Director
1.5.4 Auditing of Project along BLPA accounts	521 days	Financial Director
1.6 Project Management	122 days	Project Manager
1.6.1 Project Planning	122 days	Project Manager
1.6.2 Project Scheduling	774 days	Project Manager
1.6.3 Project Accounting	774 days	Project Manager
1.6.4 Project Reporting	774 days	Project Manager

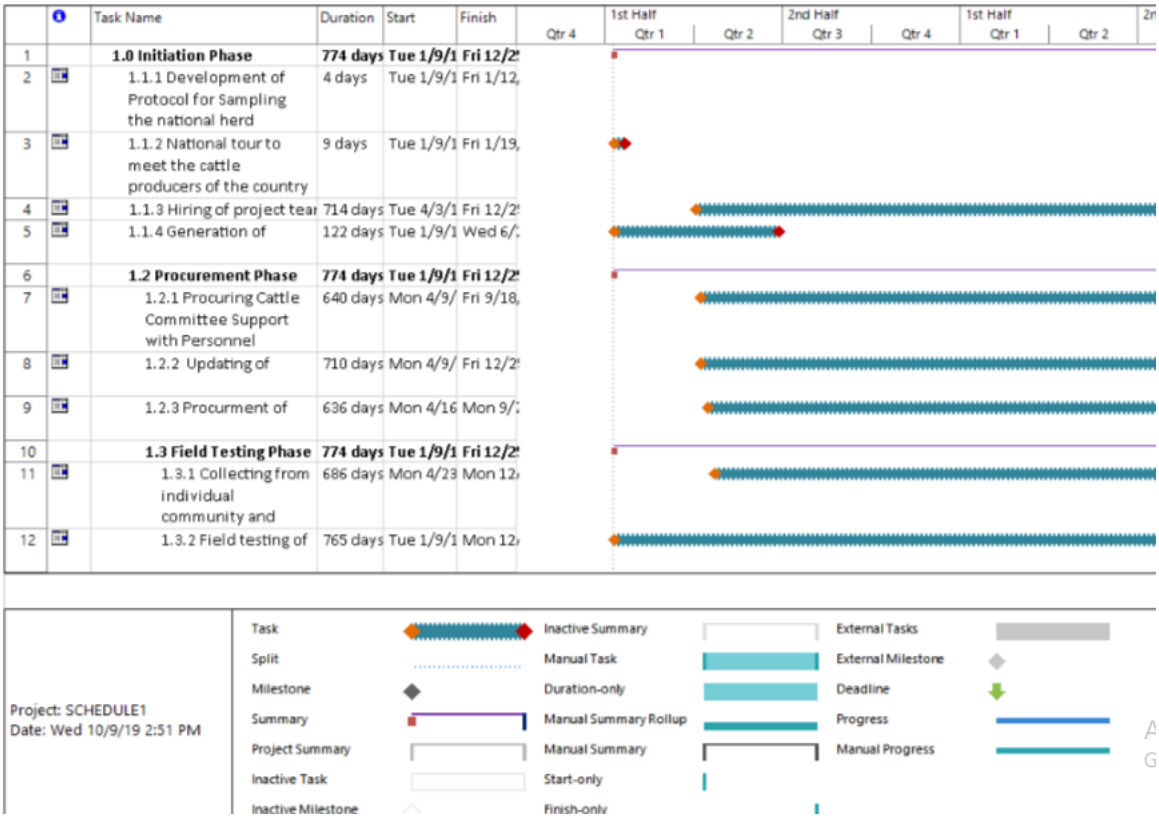
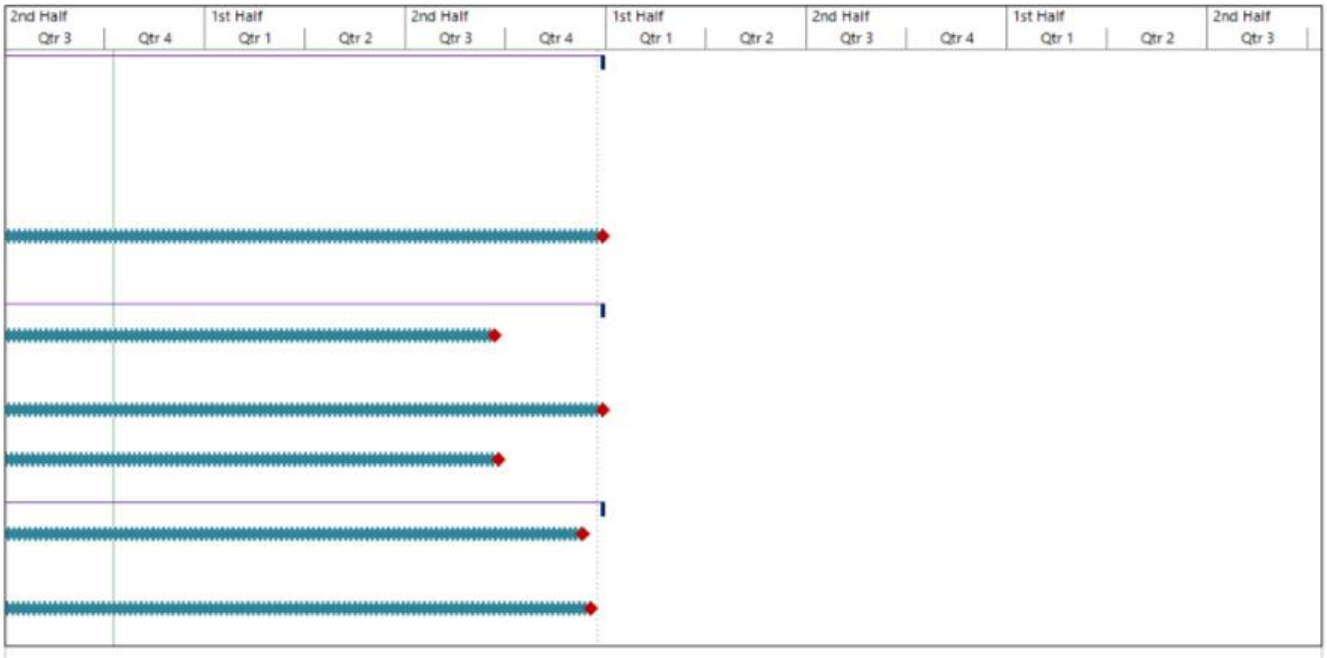
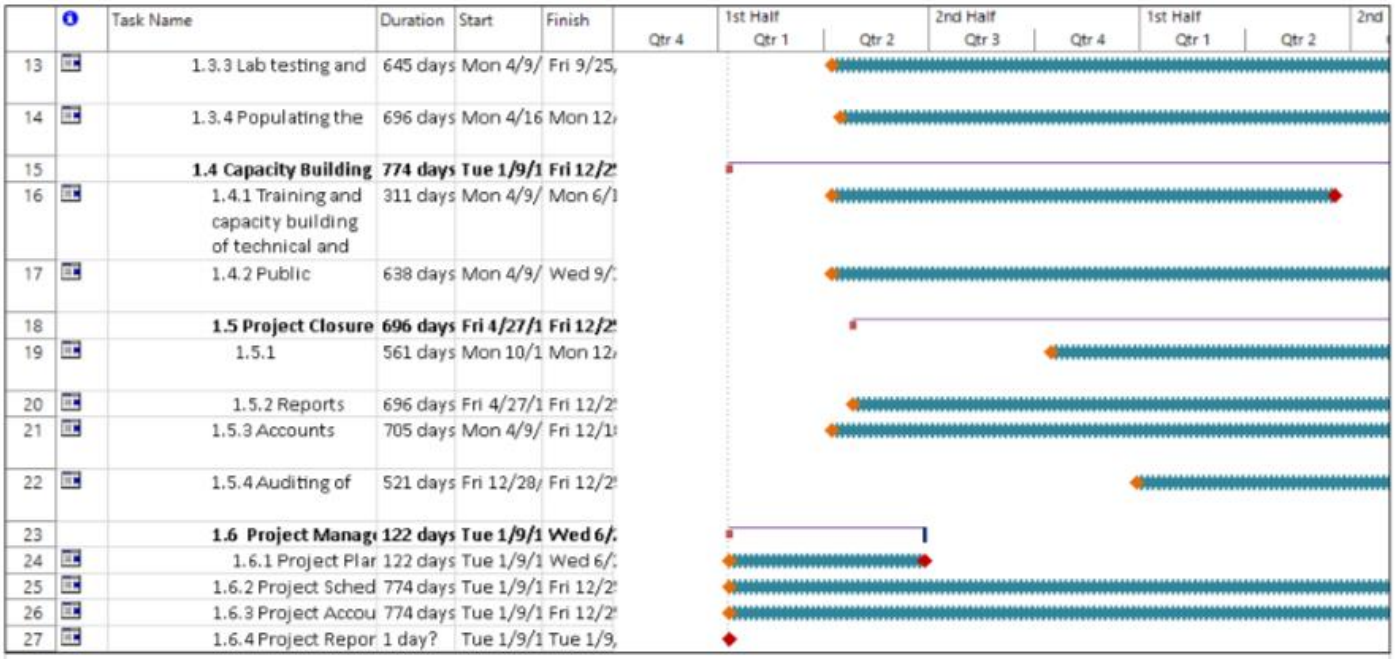
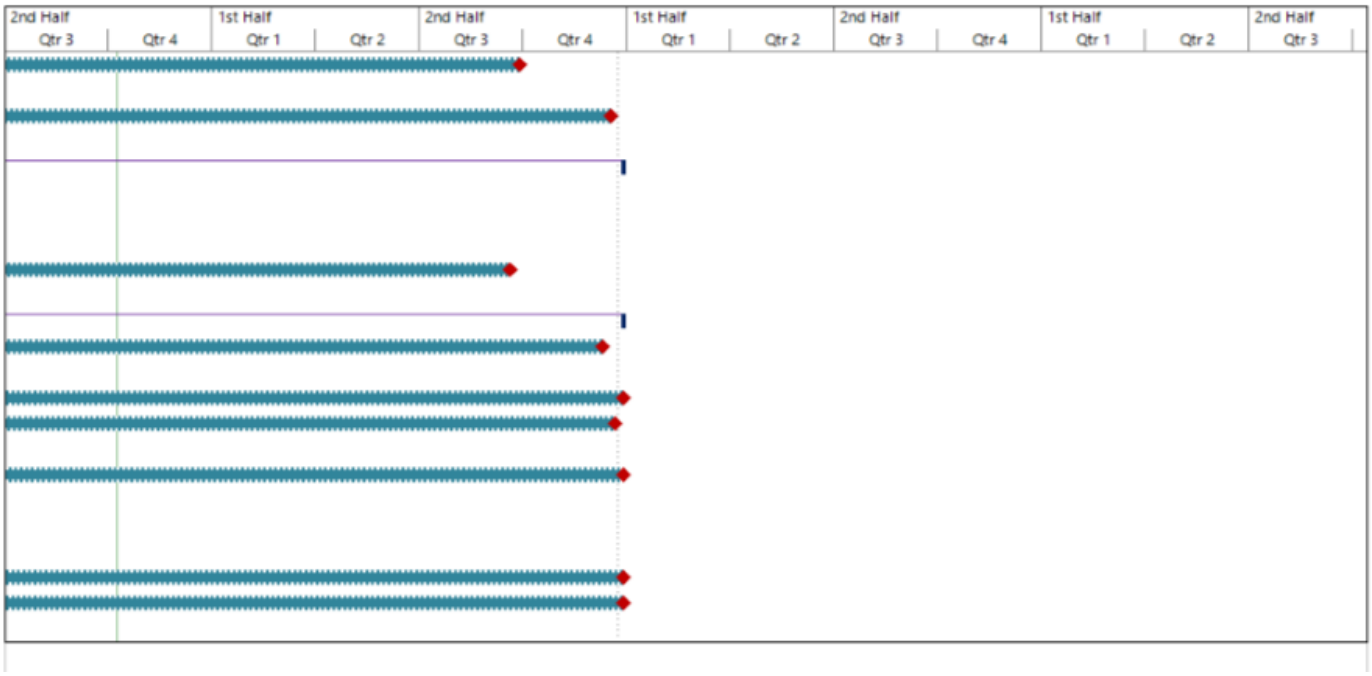


Figure 10 BLPA Surveillance System Project Gantt Chart. (Created in Microsoft Project Plan 365)





	Task Name	Duration	Start	Finish
13	1.3.3 Lab testing and	645 days	Mon 4/9/	Fri 9/25,
14	1.3.4 Populating the	696 days	Mon 4/16	Mon 12/
15	**1.4 Capacity Building**	**774 days**	**Tue 1/9/1**	**Fri 12/2**
16	1.4.1 Training and capacity building of technical and	311 days	Mon 4/9/	Mon 6/1
17	1.4.2 Public	638 days	Mon 4/9/	Wed 9/7
18	**1.5 Project Closure**	**696 days**	**Fri 4/27/1**	**Fri 12/2**
19	1.5.1	561 days	Mon 10/1	Mon 12/
20	1.5.2 Reports	696 days	Fri 4/27/1	Fri 12/2
21	1.5.3 Accounts	705 days	Mon 4/9/	Fri 12/1
22	1.5.4 Auditing of	521 days	Fri 12/28/	Fri 12/2
23	**1.6 Project Manag**	**122 days**	**Tue 1/9/1**	**Wed 6/**
24	1.6.1 Project Plar	122 days	Tue 1/9/1	Wed 6/7
25	1.6.2 Project Sched	774 days	Tue 1/9/1	Fri 12/2
26	1.6.3 Project Accou	774 days	Tue 1/9/1	Fri 12/2
27	1.6.4 Project Repor	1 day?	Tue 1/9/1	Tue 1/9,



4.4 Project Cost Management

Introduction

The Cost Management Plan defines how the costs on the project will be managed throughout the project's lifecycle. It sets the format and standards by which the project costs are measured, reported, and controlled. The Cost Management Plan:

- Identifies who is responsible for managing costs
- Identifies who has the authority to approve changes to the project or its budget
- How cost performance is quantitatively measured and reported upon
- Report formats, frequency and to whom they are presented

The Project Manager will be responsible for managing and reporting on the project's cost throughout the duration of the project. The Project Manager will meet with management to present and review the project's cost performance for the preceding month. The Project Manager is responsible of accounting for cost deviations and presenting the Project Sponsor with options for getting the project back on budget. The Project Sponsor has the authority to make changes to the project to bring it back within budget (Malsam,2018).

Cost Management Approach

Costs for this project will be managed at the fourth level of the Work Breakdown Structure (WBS). Control Accounts will be created at this level to track costs. Earned Value calculations for the CA's will measure and manage the financial performance of the project. Credit for work will be assigned at the work package level. The percentage (%) of credit granted to each work package will be calculated based on the amount of work completed at a point in time, and compared to the total costs required to complete

the work package. Costs may be rounded to the nearest dollar and work hours rounded to the nearest whole hour.

Cost variances of +/- 0.1 in the cost and schedule performance indexes, will change the status of the cost to cautionary; as such, those values will be changed to yellow in the project status reports. Cost variances of +/- 0.2 in the cost and schedule performance indexes, will change the status of the cost to an alert stage; consequently, those values will be changed to red in the project status reports. This will require corrective action from the Project Manager in order to bring the cost and/or schedule performance indexes below the alert level. Corrective actions will require a project change request and be must approved by the Project Sponsor before it can become within the scope of the project.

Measuring Project Cost

Schedule Variance is a measurement of the schedule performance for a project. It's calculated by taking the Earned Value and subtracting the Planned Value. Since EV is the actual value earned in the project and the PV is the value our project plan says we should have earned at this point, when we subtract what we planned from the actual we have a good measurement. This tells us if we are ahead or behind the baseline schedule according to our project plan. If SV is zero, then the project is perfectly on schedule. If SV is greater than zero, the project is earning more value than planned thus it's ahead of schedule. If SV is less than zero, the project is earning less value than planned thus it's behind schedule.

Cost Variance is a measurement of the budget performance for a project. CV is calculated by subtracting Actual Costs from EV. As we already know, EV is the actual value earned in the project. AC is the actual costs incurred to date, thus when we subtract what our actual costs from the EV we have a good measurement which tells us if we are above or below budget. If CV is zero, then the project is perfectly on budget.

If CV is greater than zero, the project is earning more value than planned thus it's under budget. If CV is less than zero, the project is earning less value than planned thus it's over budget.
Schedule Performance Index measures the progress achieved against that which was planned. SPI is calculated as EV/PV. If EV is equal to PV, the value of the SPI is 1. If EV is less than the PV, then the value is less than 1, which means the project is behind schedule. If EV is greater than the PV, the value of the SPI is greater than one, which means the project is ahead of schedule. A well performing project should have its SPI as close to 1 as possible, or maybe even a little under 1.

Cost Performance Index measures the value of the work completed compared to the actual cost of the work completed. CPI is calculated as EV/AC. If CPI is equal to 1 the project is perfectly on budget. If the CPI is greater than 1 the project is under budget, if it's less than 1 the project is over budget.

Performance of the project will be measured using Earned Value Management. The following four Earned Value metrics will be used to measure to projects cost performance:

- SV
- CV
- SPI
- CPI

If the Schedule Performance Index or Cost Performance Index has a variance of between 0.1 and 0.2, the Project Manager must report the reason for the exception. If the SPI or CPI has a variance of greater than 0.2, the Project Manager must report the reason for the exception and provide management a detailed corrective plan to bring the projects performance back to acceptable levels.

Chart 12 Performance Measure (Source: A. Pech, The Author, June 2019)

Performance Measure	Yellow	Red
SPI	Between 0.9 and 0.8 or Between 1.1 and 1.2	Less Than 0.8 or Greater than 1.2
CPI	Between 0.9 and 0.8 or Between 1.1 and 1.2	Less Than 0.8 or Greater than 1.2

Reporting Format

Reporting for cost management will be included in the monthly project status report. The Monthly Project Status Report will include a section labeled, “Cost Management”. This section will contain the Earned Value Metrics identified in the previous section. All cost variances outside of the thresholds identified in this Cost Management Plan will be reported on, including any corrective actions which are planned. Change Requests which are triggered based upon project cost overruns will be identified and tracked in this report.

Cost Variance Response Process

The Control Thresholds for this project is a CPI or SPI of less than 0.8 or greater than 1.2. If the project reaches one of these Control Thresholds, a Cost Variance Corrective Action Plan is required. The Project Manager will present the Project Sponsor with options for corrective actions, within five business days from when the cost variance is first reported. Within three business days from when the Project Sponsor selects a corrective action option, the Project Manager will present the Project Sponsor with a formal Cost Variance Corrective Action Plan. The Cost Variance Corrective Action Plan

will detail the actions necessary to bring the project back within budget and the means by which the effectiveness of the actions in the plan will be measured. Upon acceptance of the Cost Variance Corrective Action Plan, it will become a part of the project plan and the project will be updated to reflect the corrective actions.

Cost Change Control Process

The cost change control process will follow the established project change request process. The project budget/cost changes must be approved by the project sponsor.

Chart 13 Project Budget/Cost Changes (Source: A. Pech, The Author, June 2019)

Activities		**Total budget 24 months**	**Budget Annual (Bz)**
Development of Protocol for Sampling the national herd		**-**	**-**
National tour to meet the cattle producers of the country		**$4000**	**$2000**
A. Hiring of project team	Project Manager	**$48,000**	**$24,000**
	Admin Assistant	**$40,000**	**$20,000**
	Finance Officer	**$40,000**	**$20,000**
B. Technical Team	Field Director/ Vet Officer	**$120,000**	**$60,000**
	Data Operator	**$42,000**	**$21,000**
	Tagger	**$40,000**	**$20,000**

	Restrainer/ Cowboy	**$48,000**	**$24,000**
C. Other Technical team	2nd Technical team	**$125,000 (If required)**	
Generation of Cattle community list		**-**	**-**
Hiring of the first Team for testing of cattle in each community		**Line 3 b. 1**	
Procuring Cattle Committee Support with personnel		**$300,000**	**$ 150,000**
Updating of inventory Stocks of materials available		**-**	**-**
Procurement of lab materials and equipment for BLPA technical staff	Sweep 4	**$60,000 (If required)**	
	Sweep 5	**$300,000**	**$150,000**
Collecting from individual community and rancher		**$100,000**	**$50,000**
Populating the BLR with information		**-**	**-**
Field testing of all community in the official list (operational expense, transport and logistics)		**$180,000**	**$90,000**
Lab testing and results reports		**$36,000**	**$18,000**
Maintaining a mobile movement control unit		**$44,000**	**$22,000**
Training and capacity building of technical and admin staff		**$5000**	**$ 2500**
Public Awareness and information sharing		**$8,000**	**$4000**
Epidemiological study of sweep 4 and 5		**$60,000**	**$30,000**
Reports	Monthly	**-**	**-**
	Sweeps	**-**	**-**
	Field Reports	**-**	**-**
	Lab reports	**-**	**-**
	BLR	**-**	**-**

	Final	**-**	**-**
Accounts consolidation and financial report		**-**	**-**
Auditing of Project along BLPA accounts		**$10,000**	**$10,000**
TOTAL (Bz)		**$1,610,000**	**$717,500**

SPONSOR ACCEPTANCE

Approved by the Project Sponsor:

_____ Date:_____

<Project Sponsor>

Chart 14 Activity Preliminary Budget Estimates (Source: A. Pech, The Author, June 2019)

WBS #	**Activity Cost**	**Contingency Reserve**	**Control Account**
1.0	$382,000	$125,000	$507,000
1.2	$600,000	$60,000	$660,000
1.3	$324,000	$36,000	$360,000
1.4	$10,000	$3000	$13,000
1.5	$60,000	$10,000	$70,000
Aggregate	$1,376,000	$234,000	$1,610,000

4.5 Project Quality Management

The Quality Management Plan is an integral part of any project management plan. The purpose of the Quality Management Plan is to describe how quality will be managed throughout the lifecycle of the project. It also includes the processes and procedures for

ensuring quality planning, assurance, and control are all conducted. All stakeholders should be familiar with how quality will be planned, assured, and controlled.

Introduction

The Quality Management Plan for the BLPA Surveillance system project will establish the activities, processes, and procedures for ensuring a quality product upon the conclusion of the project. The purpose of this plan is to:

- Ensure quality is planned
- Define how quality will be managed
- Define quality assurance activities
- Define quality control activities
- Define acceptable quality standards

Quality Management Approach

The quality management approach for the BLPA Surveillance system project will ensure quality is planned for both the product and processes. In order to be successful, this project will meet its quality objectives by utilizing an integrated quality approach to define quality standards, measure quality, and continuously improve quality.
The project team will work with the Quality team to define and document all organizational and project specific quality standards, for both product and processes. All quality documentation will become a part of the Plan and will be transitioned to operations upon the successful completion of the project.
Metrics will be established and used to measure quality throughout the project life cycle for the product and processes. The Quality Team Manager will be responsible for working with the project team to define these metrics, conduct measurements, and analyze results. These product and process measurements will be used as one criterion in determining the success of the project and must be reviewed by the project sponsor. Metrics will include:

- Schedule
- Resources
- Cost
- Process performance
- Product performance
- Customer Satisfaction

Data quality control

Data quality control is an integral part of information management. It is a fatal mistake to assume that all data entering a system is good data.
Data will move from the field, to the district office, and then to database input. The more checks are conducted before input, the better. If a problem is detected while a piece of information is still relatively near to its source, it can be followed up and corrected with relative ease. The further data moves from its origin, the more difficult - and costly - corrections become.

In the field:

Careful questioning of the farmer to capture a true reflection of information. Leading questions should be avoided. If information comes from farmer recall, it may be worthwhile to cross-check information with other family members or in contact farmers.

At the district office:

Completed questionnaires are evaluated for legibility, correctness (eg. place names, code usage) accuracy and internal logic. What is written must, in other words be clear, neat, and make sense. Where a query arises, the district supervisor (preferably a veterinarian) must first contact the interviewer concerned to clarify the issue with him. If necessary, and if possible, a return should be made to the original data source (the farmer) to follow up. Not only is it easier (nearer) to do this while still at field level; it is also possible to recapture information while it is still within reasonable recall, and important details are not yet forgotten.

At the epidemiology unit

The data entry clerks will detect - and complain about - poor handwriting. The epidemiologist will further do spot checks on individual questionnaires before data entry, and also cross-check data entered onto the database with the questionnaires from which the data came on a random basis.

Data input staff will need good training and careful monitoring. It essential that data typists do not sit in front of computers for extended periods, as this leads to physical tiredness, eye and mental fatigue, and a lack of concentration. Where possible, data entry should be interspersed with other tasks, such as the sorting and filing of questionnaires, doing data backups, sending enquiries to the field about data quality, etc. Field management of veterinary staff remains an important aspect of basic management, not just data management. Staff must work according to fixed programs, and spot checks must be made by supervisors from time to time to ensure that they are actually “on program.”

Even where surveys are randomized, errors will creep in. If livestock numbers are incorrectly estimated, serum sampling tubes may be too few, resulting in unrealistically small sample sizes. Sampling animals of unknown vaccination history may result in the detection of vaccine titers during zero-surveillance. Farmers may lie about what diseases their animals have had.

Data input staff may quite literally have a bad day and miss the typing-in of a batch of data forms - or forms may get lost in the post, leaving a “hole” in the database.

Lists of possible wrongs are endless and very depressing, but can be minimized through:

- thorough staff training (at field and headquarters level)
- creating strong farmer awareness and gaining their co-operation
- good planning of data collection, routine surveillance and special surveys
- enforcing strong discipline amongst staff
- having a vigilant epidemiologist

Quality Assurance

In order to ensure quality, an iterative quality process will be used throughout the project life cycle. This iterative process includes measuring process metrics, analyzing process data, and continuously improving the processes.

The quality manager will provide day to day quality management and conduct process audits on a weekly basis, monitor process performance metrics, and assure all processes comply with project and organizational standards. If discrepancies are found, the quality manager will meet with the Project Manager and review the identified discrepancies.

The Project Manager will schedule regularly occurring project, management, and document reviews. In these reviews, an agenda item will include a review of project processes, any discrepancies and/or audit findings from the quality manager, and a discussion on process improvement initiatives.

Quality Control Measurement

All Project products and processes must be measured and fall within the established standards and tolerances. The below logs will be used by the project and quality teams in conducting these measurements and will be maintained for use as supporting documentation for the project's acceptance.

Quality Assurance Log

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

Quality Control Log

Cable #	Date	Item Measured	Required Value	Actual Measured	Acceptable? (Y/N)	Recommendation	Date Resolved

SPONSOR ACCEPTANCE

Approved by the Project Sponsor:

_____ Date:_____
<Project Sponsor>

4.6 Project Human Resource Management

Human resources management is an important part of the BLPA Project. The human resources management plan is a tool which will aid in the management of this project's human resource activities throughout the project until closure. The human resources management plan includes:

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

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

Roles and Responsibilities

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

Project Manager (PM):

Responsible for the overall success of the Surveillance system Project. The PM must authorize and approve all project expenditures. The PM is also responsible for approving that work activities meet established acceptability criteria and fall within acceptable variances. The PM will be responsible for reporting project status in accordance with the communications management plan. The PM will evaluate the performance of all project team members and communicate their performance to functional managers. The PM is also responsible for acquiring human resources for the project through coordination with functional managers.

Admin Assistant:

To assist PM with all admin and day today running of head office. Monitor Cess returns and ensure account receivables are kept in good standing. Ensure Payroll including sec and all relevant taxes are paid and up to date. Prepare all payments due and present same for approval. Answer phones and look after visitors and their enquiries. Administer petty cash. Banking of all cash and cheques received.

Financial Officer:

The finance officer is the custodian of the funds and financial records of the Project. The Finance officer duties will include overseeing the appropriate people to ensure that the financial records and reports are properly kept and maintained. The finance officer works closely with the BOD, CEO, auditor, and PM to ensure the integrity of the fiscal affairs of the association.

Project Organizational Chart

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

Chart 15 Activity RACI Chart (Source: A. Pech, The Author, June 2019)

	Project Manager	Admin Assistant	Finance Officer/Director	Vet Officer	Data Operator	Technical Team
Requirements Gathering	A			R	R	R
Change Requests	A	R		I	I	I
Contract Adminstration	A	R				
Permits/Approvals	A	R				I
Project Scope	A	R		I	I	I
Project Communication	A	R		I	I	I
Project Quality	A	R				I
Stakeholder Management	A	R				I
Account Status	A	R	R			I
Reports	A	R		I	I	R
Workers Procurement	A	R				

Key:
R – Responsible for completing the work
A – Accountable for ensuring task completion/sign off
C – Consulted before any decisions are made
I – Informed of when an action/decision has been made

Staffing Management

Staff Acquisition:

For the Surveillance System Project, the project staff will consist entirely of internal resources. There will be no outsourcing/contracting performed within the scope of this project. The Project Manager will negotiate with functional and department managers in order to identify and assign resources in accordance with the project organizational structure. All resources must be approved by the appropriate functional/department manager before the resource may begin any project work. The project team will not be co-located for this project and all resources will remain in their current workspace.

Training

Training is required for the project team/technical team employed directly by BLPA. This training will equip the workers with the necessary knowledge to retrieve and document data successfully.

With respect to the other employees and contracted workers, they are all fully capable of functioning in the capacity for which they have been hired.

Performance Reviews:

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

Recognition and Rewards:

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

- Upon successful completion of the Project, a party will be held to celebrate the success of each team member with the team members' families present.

- Upon successful completion of the project, any team member who satisfactorily completed all assigned work packages on time will receive a certificate of thanks from the CEO.

Sponsor Acceptance

Approved by the Project Sponsor:

_____ Date:_____

<Project Sponsor>

4.7 Project Communication Management

Introduction

This Communications Management Plan sets the communications framework for this project. It will serve as a guide for communications throughout the life of the project and will be updated as communication needs change. This plan identifies and defines the roles of persons involved in this project. It also includes a communications matrix which maps the communication requirements of this project.

Communication Management Approach

The Project Manager will take a proactive role in ensuring effective communications on this project. The communications requirements are documented in the Communications Matrix presented in this document. The Communications Matrix will be used as the

guide for what information to communicate, who is to do the communicating, when to communicate it, and to whom to communicate.

Stakeholder Communications Requirements

As part of identifying all project stakeholders, the project manager will communicate with each stakeholder in order to determine their preferred frequency and method of communication. This feedback will be maintained by the project manager in the project's Stakeholder Register. Standard project communications will occur in accordance with the Communication Matrix; however, depending on the identified stakeholder communication requirements, individual communication is acceptable and within the constraints outlined for this project.

When all stakeholders have been identified and communication requirements are established, the project team will maintain this information in the project's Stakeholder Register and use this, along with the project communication matrix as the basis for all communications.

Roles/Responsibilities

Project Sponsor

The project sponsor is the champion of the project and has authorized the project by signing the project charter. This person is responsible for the funding of the project and is ultimately responsible for its success. Since the Project Sponsor is at the executive level, communications should be presented in summary format unless the Project Sponsor requests more detailed communications.

Project Manager

The Project Manager oversees the project at the portfolio level and owns most of the resources assigned to the project. The PM is responsible for overall program costs and profitability as such they require more detailed communications than the Project Sponsor.

Key Stakeholders

Normally the term ‘Stakeholders’ includes all individuals and organizations who are impacted by the project. For this project, we are defining a subset of the stakeholders as Key Stakeholders. These are the stakeholders with whom we need to communicate with and are not included in the other roles defined in this section. The Key Stakeholders includes executive management with an interest in the project and key users identified for participation in the project.

Change Control Board

The Change Control Board is a designated group which is reviews technical specifications and authorizes changes within the organization’s infrastructure. Technical design documents, user impact analysis, and implementation strategies are typical of the types of communication this group requires.

Customer

The customer for this project is the Cattle Industry. As the customer who will be accepting the final deliverable of this project, they will be informed of the project status including potential impacts to the schedule for the final deliverable or the product itself.

Project Manager

The Project Manager has the overall responsibility of the execution of the project. The Project Manager manages day to day resources, provides project guidance and monitors and reports on the projects metrics as defined in the Project Management Plan. As the person responsible for the execution of the project, the Project Manager is the primary communicator for the project distributing information according to this Communications Management Plan.

Project Team

The Project Team is comprised of all persons who have a role performing work on the project. The project team needs to have a clear understanding of the work to be completed and the framework in which the project is to be executed. Since the Project Team is responsible for completing the work for the project, they played a key role in creating the Project Plan including defining its schedule and work packages. The Project Team requires a detailed level of communications which is achieved through day to day interactions with the Project Manager and other team members along with weekly team meetings.

Steering Committee

The Steering Committee includes management representing the departments which make up the organization. The Steering Committee provides strategic oversight for changes which impact the overall organization. The purpose of the Steering Committee is to ensure that changes within the organization are affected in such a way that it benefits the organization as a whole. The Steering Committee requires communication on matters which will change the scope of the project and its deliverables.

Technical Lead

The Technical Lead is a person on the Project Team who is designated to be responsible for ensuring that all technical aspects of the project are addressed and that the project is implemented in a technically sound manner. The Technical Lead is responsible for all technical designs, overseeing the implementation of the designs and developing as-build documentation. The Technical Lead requires close communications with the Project Manager and the Project Team.

Communication Escalation Process

In order to ensure projects, stay on schedule and issues are resolved, BLPA, will use its standard escalation model to provide a framework for escalating communication issues. The table below defines the priority levels, decision authorities, and timeframes for resolution.

Chart 16 Communication Escalation Process (Source: A. Pech, The Author, June 2019)

Priority	Definition	Decision Authority	Timeframe for Resolution
Priority 1	Major impact to project or business operations. If not resolved quickly there will be a significant adverse impact to revenue and/or schedule.	CEO	Within 4 hours
Priority 2	Medium impact to project or business operations which may result in some adverse	Project Sponsor	Within one business day

	impact to revenue and/or schedule.		
Priority 3	Slight impact which may cause some minor scheduling difficulties with the project but no impact to business operations or revenue.	Project Manager	Within two business days
Priority 4	Insignificant impact to project but there may be a better solution.	Project Manager	Work continues and any recommendations are submitted via the project change control process

Sponsor Acceptance

Approved by the Project Sponsor: Date:

<Project Sponsor>

4.8 Project Risk Management

Introduction

The purpose of the risk management plan is to establish the framework in which the project team will identify risks and develop strategies to mitigate or avoid those risks. However, before risks can be identified and managed, there are preliminary project elements which must be completed. These elements are outlined in the risk management approach.

Define Risk Management Roles and Responsibilities

- Project Manager chairs the risk assessment meetings
- Project team participates in risk assessment meetings and members serve as meeting recorders and timekeeper
- Key stakeholders participate in risk assessment meetings

- Project Sponsor may participate in risk assessment meetings

The top high probability and high impact risks to this project are:

- Mexico enforces current export requirements with strict guidelines
- The epidemiological report detects none compliance of the export guidelines
- The project unit does not have the required expertise to implement and coordinate a project of this complexity
- Farmers do not pay due on time
- Farmers do not comply with the internal movement control of cattle
- Brucellosis and tuberculosis are detected in Belize and there is no rapid response

Risk Management Approach

The approach we have taken to manage risks for this project included a methodical process by which the project team identified, scored, and ranked the various risks. The most likely and highest impact risks were added to the project schedule to ensure that the assigned risk managers take the necessary steps to implement the mitigation response at the appropriate time during the schedule. Risk managers will provide status updates on their assigned risks in the bi-weekly project team meetings, but only when the meetings include their risk's planned timeframe. Upon the completion of the project, during the closing process, the project manager will analyze each risk as well as the risk management process. Based on this analysis, the project manager will identify any improvements that can be made to the risk management process for future projects. These improvements will be captured as part of the lessons learned knowledge base.

Risk Identification

For this project, risk identification was conducted in the initial project risk assessment meeting. The method used by the project team to identify risks was the Crawford Slip method. The project manager chaired the risk assessment meeting and distributed notepads to each member of the team and allowed 10 minutes for all team members to record as many risks as possible (Verma, 2016)

Expert Interview

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

Risk Assessment Meeting

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

Historical Review of Similar Projects

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

Analyzing Risks

The impact and probability of risks will be evaluated using a probability impact matrix during qualitative risk analysis. There will be a response plan developed for all risks identified as having any impact on the project, positive or negative.

Planning Risk Response

The project management team, including consultants, vendors, and contractors, will identify and assist with planning risk responses. However, the Project Manager will be in charge of planning risk responses with the Assistant Project Manager managing data collection and storage.

Monitoring and Controlling Risks

The Assistant Project Manager will monitor the status of risks by comparing the data collected during project execution with the risk register and risk analysis summary. The risk register will be updated weekly and communicated to the Sponsors and project

management team during project status meetings. The Project Manager is responsible for deciding when to execute a risk response.

Risk ID	Risk Description	Category	Responsible Individual	Probable cause of risk	Prevention strategy	Contingency Plan
1	Mexico enforces current export requirements with strict guidelines	Stakeholder	Project Manager	Mexican Government initiated a special program to strengthen exportations regulations.The main purpose of this program is to protect local industry against counterfeiting	Having an agreement with Mexico Government and ongoing negotiation	Contact Mexican Government and meet regarding terms and agreements. Have a close relationship with Ministry of Foreign affairs to guide with exportation matters
2	The epidemiological report detects none compliance of the export guidelines	Planning	Project Manager/Field Director	A lack of harmonized criteria to assess the most likely defects during the investigation	To conduct a breakdown investigations and provide opinions about the possible cause of each breakdown	For each possible cause a decision tree will be developed and key questions where included in each of them to target loop holes
3	The project unit does not have the required expertise to implement and coordinate a project of this complexity	Stakeholder	Project Manager	Mismanagment of poorly qualified personnel and not sufficient training to fully build skills	Full screening of each personnel to verify their level of expertise and invest more time in capacity building	Have additional fully trained staff on board

4	Farmer do not pay dues on time	Financial	Project Manager/Field Director	The Community (farmers) are not fully aware of the importance of their support/contribution to the Project: Poor participation during awareness/training sessions	Ensure 100% participation of community farmers for training and awareness	Have farmers sign an agreement
5	Farmers do not comply with the internal movement control of cattle	Stakeholder	Project Manager/Field Officer	The Community (farmers) are not fully aware of the importance of their support/contribution to the Project: Poor participation during awareness/training sessions	Ensure 100% participation of community farmers for training and awareness and include incentives/benefits	Have farmers sign an agreement
6	Brucellosis and tuberculosis is detected in Belize and there is no rapid response	Planning	Project Manager/Head Vet	Lack of Finance/equipment and Little knowledge of expertise	Have selected experts on the basis of their knowledge, and from a variety of disciplines concerned	Invest on more experts

					with the subject. The participants in the Workshops will includ experts with different backgrounds (i.e., researchers working on domestic and wildlife bTB epidemiology, veterinarians working at regional and central administrations	
7	Underestimation of the project	Financial	Project Manager/Finance Officer	Human Error/Mis-management	Project Manager & Finanace Officer will both check budget more than 3 times to ensure accuracy	Contingency added to Budget
8	Probability of undetected infection	Planning	Project Manager/ Head Vet/Field Director	Mismanagment during data entry/data analysis (Human Error)	To conduct a breakdown investigations and provide opinions about the possible	Data Quality Control

					cause of each breakdown/ Train Quality control experts	

Chart 17 Risk Register (Source: A. Pech, The Author, June 2019)

Risk Register

The Risk Register for this project is a log of all identified risks, their probability and impact to the project, the category they belong to, mitigation strategy, and when the risk will occur. The register was created through the initial project risk management meeting led by the project manager. During this meeting, the project team identified and categorized each risk. Additionally, the team assigned each risk a score based on the probability of it occurring and the impact it could potentially have. The Risk Register also contains the mitigation strategy for each risk as well as when the risk is likely to occur.

Figure 11 Risk Matrix (Risk ID 1-8)

Risk ID 1: Mexico enforces current export requirements with strict guidelines

Risk Matrix:

	LOW	**MEDIUM**	**HIGH**
HIGH			
MEDIUM		❖	
LOW			

Trigger Events: Increase request of documentation interferes with schedule

Risk ID 2: The epidemiological report detects none compliance of the export guidelines

Risk Matrix:

	LOW	MEDIUM	HIGH
HIGH			❖
MEDIUM			
LOW			

Trigger Events: Denied permits and/or inspections/ or permission to export

Risk ID 3: The project unit does not have the required expertise to implement and coordinate a project of this complexity

Risk Matrix:

	LOW	MEDIUM	HIGH
HIGH		❖	
MEDIUM			
LOW			

Trigger Events: Project will have several mishaps due to lack of expertise

Risk ID 4: Farmers do not pay dues on time

Risk Matrix:

	LOW	MEDIUM	HIGH
HIGH			
MEDIUM		❖	
LOW			

Trigger Events: Can tamper with the proper procedure for field investigation

Risk ID 5: Farmers do not comply with the internal movement control of cattle

Risk Matrix:

	LOW	MEDIUM	HIGH
HIGH		❖	
MEDIUM			
LOW			

Trigger Events: Can tamper with the proper procedure for field investigation and final results

Risk ID 6: Brucellosis and tuberculosis is detected in Belize and there is no rapid response

Risk Matrix:

	LOW	MEDIUM	HIGH
HIGH			❖
MEDIUM			
LOW			

Trigger Events: This is a negative reputation (financially as well) for the country and can trigger a rapid spread of disease

Risk ID 7: Underestimation of the project

Risk Matrix:

	LOW	MEDIUM	HIGH
HIGH			
MEDIUM		❖	
LOW			

Trigger Events: Project can show poor financial management and cost deviations

Risk ID 8: Probability of undetected infection

Risk Matrix:

	LOW	MEDIUM	HIGH
HIGH			❖
MEDIUM			
LOW			

Trigger Events: Can trigger a Rapid spread of virus and can be exported

Sponsor Acceptance

Approved by the Project Sponsor: Date:

<Project Sponsor>

4.9 Stakeholder Management Plan

Introduction

The Stakeholder Management Strategy for BLPA Surveillance System Project will be used to identify and classify project stakeholders; determine stakeholder power, interest, and influence; and analyze the management approach and communication methodology for project stakeholders. This will allow us to identify key influential

stakeholders to solicit input for project planning and gain support as the project progresses. This will benefit the project by minimizing the likelihood of encountering competing objectives and maximizing the resources required to complete the project Neil. (2016).

Early identification and communication with stakeholders are imperative to ensure the success of Project by gaining support and input for the project. Some stakeholders may have interests which may be positively or negatively affected by the Project. By initiating early and frequent communication and stakeholder management, we can more effectively manage and balance these interests while accomplishing all project tasks.

Identify Stakeholders

The BLPA Team will conduct a brainstorming session in order to identify stakeholders for the project. The brainstorming session will include the primary project team and project sponsor. The session will be broken down into two parts. The first part will focus on internal stakeholders within BLPA. These stakeholders may include functional managers, operations personnel, finance personnel, Field Personnel, and any other BLPA employee who will be affected by the project. The second part of the session will focus on external stakeholders. These may Cattle Ranchers, Veterinary Association of Belize, Ministry of Forestry, Fisheries, and Sustainable Development; Belize Agriculture Health Organization, Ministry of Health.

The following criteria will be used to determine if an individual will be included as a stakeholder:

1) Will the person or their organization be directly or indirectly affected by this project?
2) Does the person or their organization hold a position from which they can influence the project?
3) Does the person have an impact on the project's resources (material, personnel, funding)?

4) Does the person or their organization have any special skills or capabilities the project will require?
5) Does the person potentially benefit from the project or are they in a position to resist this change?

Any individual who meets one or more of the above criteria will be identified as a stakeholder. Stakeholders from the same organization will be grouped in order to simplify communication and stakeholder management.

Key Stakeholders

As a follow on to Identify Stakeholders, the project team will identify key stakeholders who have the most influence on the project or who may be impacted the most by it. These key stakeholders are those who also require the most communication and management which will be determined as stakeholders are analyzed. When identified, the Project Manager will develop a plan to obtain their feedback on the level of participation they desire, frequency and type of communication, and any concerns or conflicting interests they have.

Stakeholder Analysis

When all Project stakeholders have been identified, the project team will categorize and analyze each stakeholder. The purpose of this analysis is to determine the stakeholders' level of power or influence, plan the management approach for each stakeholder, and determine the appropriate levels of communication and participation each stakeholder will have on the project.

The chart below will be used to establish stakeholders and their levels of power and interest for use on the power/interest chart as part of the stakeholder analysis.

Chart 18 Stakeholder Analysis (Source: A. Pech, The Author, June 2019)

Key	Organization	Power (1-5)	Interest (1-5)
A	BLPA	3	5
B	Cattle Ranchers	5	5

C	VAP	4	4
D	MAFFESD	3	3
E	Ministry of Health	5	4
F	BAHA	5	4
G	Ministry of Foreign Affairs	4	2
H	Meat Shop	4	2
I	Beef Consumers	4	2
J	International Donors	3	3
K	Slaughering Facility Owners	3	4

Below is the power/interest chart for the Implementation of the Surveillance System Project BLPA component stakeholders. Each letter represents a stakeholder in accordance with the key in the chart above.

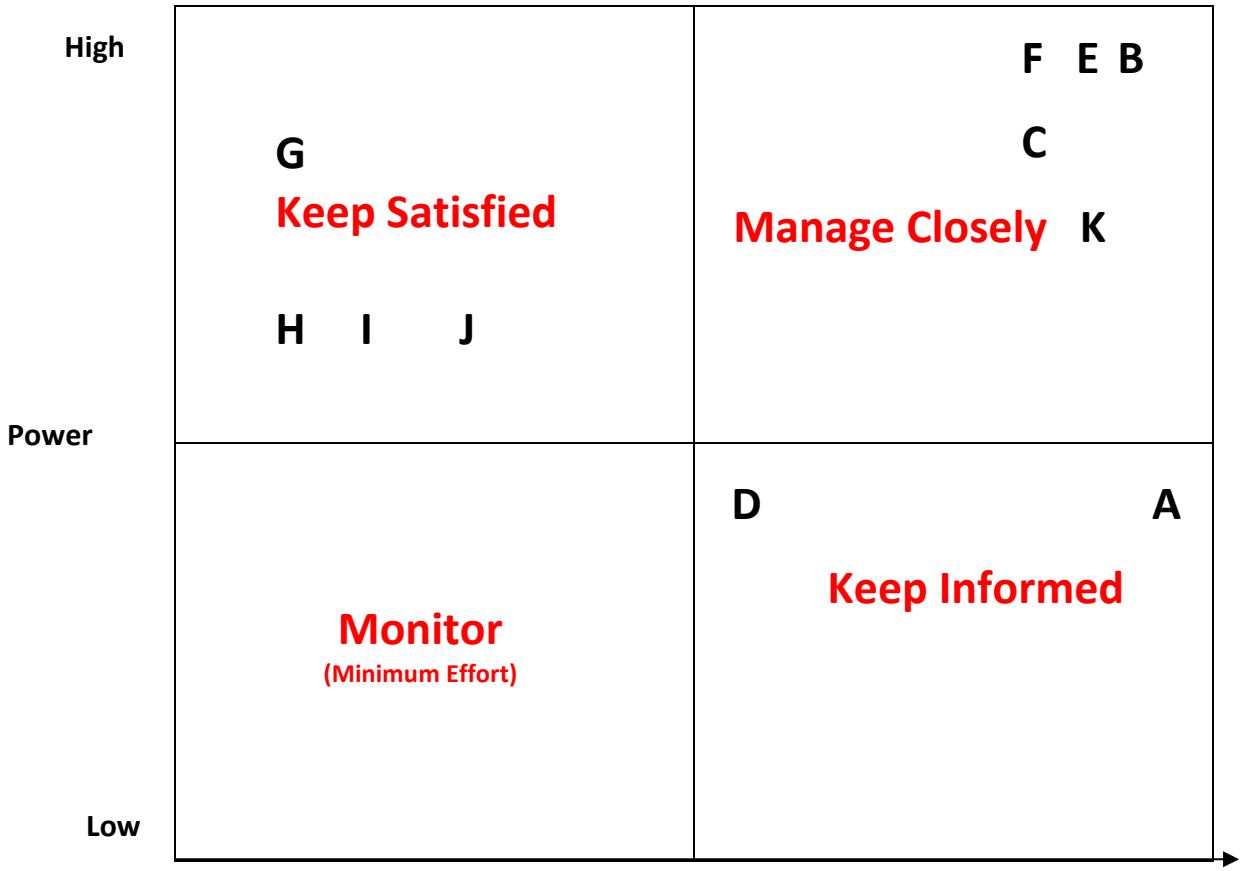


Figure 12 Stakeholder Power/Interest Matrix

The stakeholder analysis matrix will be used to capture stakeholder concerns, level of involvement, and management strategy based on the stakeholder analysis, and power/interest matrix above. The stakeholder analysis matrix will be reviewed and updated throughout the project's duration in order to capture any new concerns or stakeholder management strategy efforts.

Chart 19 Activity Stakeholder Management Strategy (Source: A. Pech, The Author, June 2019)

Stakeholder	Issues and Risks	Quadrant	Strategy	Present attitude to change in favour or opposed
BLPA	Varying levels of incompetence or low level of productivity	Keep Informed	Incentivize (Human Resource Management)	Favour
Cattle Ranchers	Little Coorporation	Manage Closely	Incentivize: Have them sign agreements	Neutral
VAP	Varying levels of incompetence or low level of productivity	Manage Closely	Ensure well experienced and Equiped experts	Favour
MFFSD	Might stray away due to other duties	Keep Informed	Compliance and negatiations	Fabour
Ministry of Health	Varying levels of incompetence or low level of productivity	Manage Closely	Ensure well experienced and Equiped experts	Favour
BAHA	Varying levels of incompetence or low level of productivity	Manage Closely	Ensure well experienced and Equiped experts	Favour
Ministry of Foreign Affairs	Might stray away due to other duties	Keep Satisfied	Compliance and negatiations	Favour

Meat Shop	Little Cooperation	Keep Satisfied	Incentivize: Have them sign agreements	Favour
Beef Consumers	Can créate complaints	Keep Satisfied	Incentivize	Favour
International Donors	Might stray away due to other duties	Keep Satisfied	Compliance and negatiations	Favour
Slaughering Facility Owners	Little Cooperation	Manage Closely	Incentivize: Have them sign agreements	Neutral

Sponsor Acceptance

Approved by the Project Sponsor: Date:

<Project Sponsor>

5. CONCLUSIONS

1. The Project Management Plan was designed using the analytical research method and the 6th edition of the *PMBOK® Guide,* to be used as a developmental tool for the BLPA surveillance system Project Management team. The PMBOK® Guide 6th Edition; it acted as an excellent project management guide used by the project team to develop a more detailed project management plan, and to improve the way the BLPA will manage any future project.
2. The Project Charter was the first supplementary component of the Project Management Plan generated as the deliverable for Objective 1.
3. To create the Scope Management Plan, the deliverable created from objective two was the WBS, WBS dictionary were developed from a table, capturing the information gathered during meetings with project stakeholders and from project document reviews.
4. The output from specific objective number three, was created along with the Activity List, Schedule Network Diagram, Resource Assignments table, and Project Gantt chart, in order to recognize and arrange each project activity to ensure the project's completion within the time constraints.
5. The output from specific objective number four, Microsoft Excel was used to adequately develop the project budget and Budget Estimates. Financial planning was undertaken to ensure that adequate funds were received.
6. The output from specific objective number five, a template was used to identify the project's quality, quality requirements, and the quality control that will be used during the project, so as to guarantee that quality was established into the project's products and services.
7. To address specific objective number six, the Human Resource Management Plan, all human resources required to complete the project were identified and classified in a complete list based on their roles and responsibilities. Furthermore, the project organization chart, and details identifying how the human resources will be managed throughout the project are detailed in the plan.

8. The output from specific objective number seven, a template was used along with a list of all stakeholders and their roles and responsibilities, which includes a communications Matrix. A Communications Team was developed, and they with the Project Manager, lead the most pertinent components of this subsidiary plan.
9. The deliverable for specific objective number eight, was created using a Risk Register template to capture and classify project risks, so that effective risk responses could be planned.
10. The Stakeholder Management Plan, developed for specific objective nine, was also developed using a template of the Stakeholder Register, Stakeholder Analysis, and Level of Engagement to provide more information for effective stakeholder engagement. Potential and affected stakeholders were identified, classified, and management measures were developed for each based on their individual categorizations.
11. The Project Management Plan package for the clients BLPA did not include a procurement management plan, and therefore, will be placed as a major recommendation.

12. RECOMMENDATIONS

1. The development of a procurement management plan to facilitate the acquisition of services or products from outside sources, since a project procurement management plan was not developed in this package.
2. All projects managed by BLPA should be headed by a project management team, using developed standard project planning documents tailored for the project.
3. BLPA project management team should practice care and caution during the development of each plan of the Project Management Plan to ensure that all planning subsets for each knowledge area or respective application area are thorough and accurate.
4. The Senior manager of BLPA should ensure that the complete project management team be hired prior to the execution of any project and ensure that this team conduct all project planning related activities in order to enhance the proper management of the project during its lifecycle.
5. The development of complementary training modules for staff in the effective use of project management tools, techniques and material, and M&E skills.
6. Involving the use of GIS for a project of this magnitude and type. The main advantage of GIS software is not just that the user is enabled to see how a disease is distributed geographically, but also that an animal disease can be viewed against other information. The disease presence can then be related to other factors and more easily appreciated visually.
7. Invite the FAO as a main source for the Project. FAO can take the initiative of organizing regional workshops for veterinary epidemiologists to share and disseminate information more effectively.

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14. APPENDIX

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:**
19th May 2019	Project Management Plan for the implementation of the surveillance system project BLPA component
Knowledge Areas / Processes	**Application Area (Sector / Activity)**
Knowledge areas: Integration, Scope, Time, Cost, Quality, Human resources, Communication, Risk & Stakeholders **Process groups**: Initiating, planning, executing	Cattle sector
Start date	**Finish date**
May 13th 2019	November 8th 2019
Project Objectives (general and specific)	
General Objective: To create a project management plan, framed within the standards of the project management institute, to manage the Implementation of the Surveillance System Project BLPA component. **Specific Objectives:** 1. To create a project charter which formally authorizes the project and provide the project manager with the authority to apply organizational resources to the project and to produce the project management plan. 2. To create a scope management plan which ensures that all works required are included to successfully complete the project.	

3. To create a time management plan which supports the development and management of a project schedule that ensures the project is completed within the time constraints.
4. To create a cost management plan which defines the processes for developing and managing the project budget that ensures the project is completed within the budget constraints.
5. To develop a quality management plan which identifies the quality requirements for the project to ensure the results meet expectations for approval within the time, cost and scope constraints.
6. To create a human resource management plan which ensures that all human resources are identified and managed effectively to complete the project within time, cost and scope constraints.
7. To develop a communication management plan which ensures the timely and effective communication of the project status and other key information.
8. To create a risk management plan to identify and examine risks to the successful completion of the project and develop plans to minimize probabilities of risks.
9. To develop a stakeholder management plan which identifies and supports all the project stakeholders and have an effective stakeholder engagement.

Project purpose or justification (merit and expected results)

Result 1: Strengthening of BLPA to ensure cattle producer's participation, investment and support in the sector.

Result 2: Strengthening of BAHA. BAHA is the Competent Authority for the surveillance and implementation of Animal Health regulation in the agriculture and cattle sector. But many of the services provided by BAHA are not all provided at a cost recovery method, some are considered public goods and therefore require the support of the Ministry responsible for the sector. With the implementation of the BNSCPP many new activities and relevant structures were created at the service of the Cattle sector, therefore BAHA requires additional resources to maintain and continue providing. The Exit Strategy of the BNSCPP and the Epidemiological Report highlighted that for the continuation until the Tuberculosis free status is required the following activities are required.

Result 3: Strengthening of the public health that supports the cattle industry related activities. This key area was not included in the previous BNSCPP, but it is important that the legislative support is clear as to the role and responsibility of BAHA

and Ministry of Health in this matter. It will require that the public health aspect be taken into consideration.

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

The project management plan for the implementation of the Surveillance System Project BLPA Component. This plan will consist of all of the subsidiary documents of a project management plan.

Assumptions

- The charter will be created before all other minor documents
- The Clients will disclose some of the information required to develop the scope.
- The time allocated for the development of the Project Management Plan and the implementation of the surveillance system for BLPA will be sufficient
- It is assumed that funding will be made available for the implementation of the project by the association BLPA.
- The project team has sufficient expertise that permit the elaboration of final epidemiological reports required
- The implementing association has some technical and administrative capacity to implement a project with this complexity
- The association has the technology required to suffice the communication needs of all stakeholders.
- There is sufficient information required to adequately identify most of the project risks.
- Stakeholders continue to provide the required commitments for the implementation of the project as per agreement

Constraints

- There are only a couple of days allocated to create the project charter. Also, stakeholder identification is scheduled to occur at the same time as the development of the project charter.
- A substantial amount of work has to be collected in a short space of time.
- Delays in Government developments may impede project progress.

- The budget for the project must not exceed $1,610,000 million dollars. The project cost can be elevated due to inflation or increase in prices of goods and services.
- The proper amount of veterinary expertise is available at a reasonable price of services.
- Only the Human Resources identified and planned for will be included in the budget. The man hours and overtime hours are predetermined.
- The availability of electricity and consistency of internet access must be dependable.
- All of the project risks need to be identified within the planning phase (stage) or as early as possible.
- The information required to plan and manage stakeholders must be accurate.

Preliminary risks

- Insufficient time to complete the study will impact the scope and quality of the project.

Inadequate support from BLPA personnel involved in the provision of initial information will impact the overall project scope.

Budget

The overall budget for the project is $1,610,000 BZD

Milestones and dates

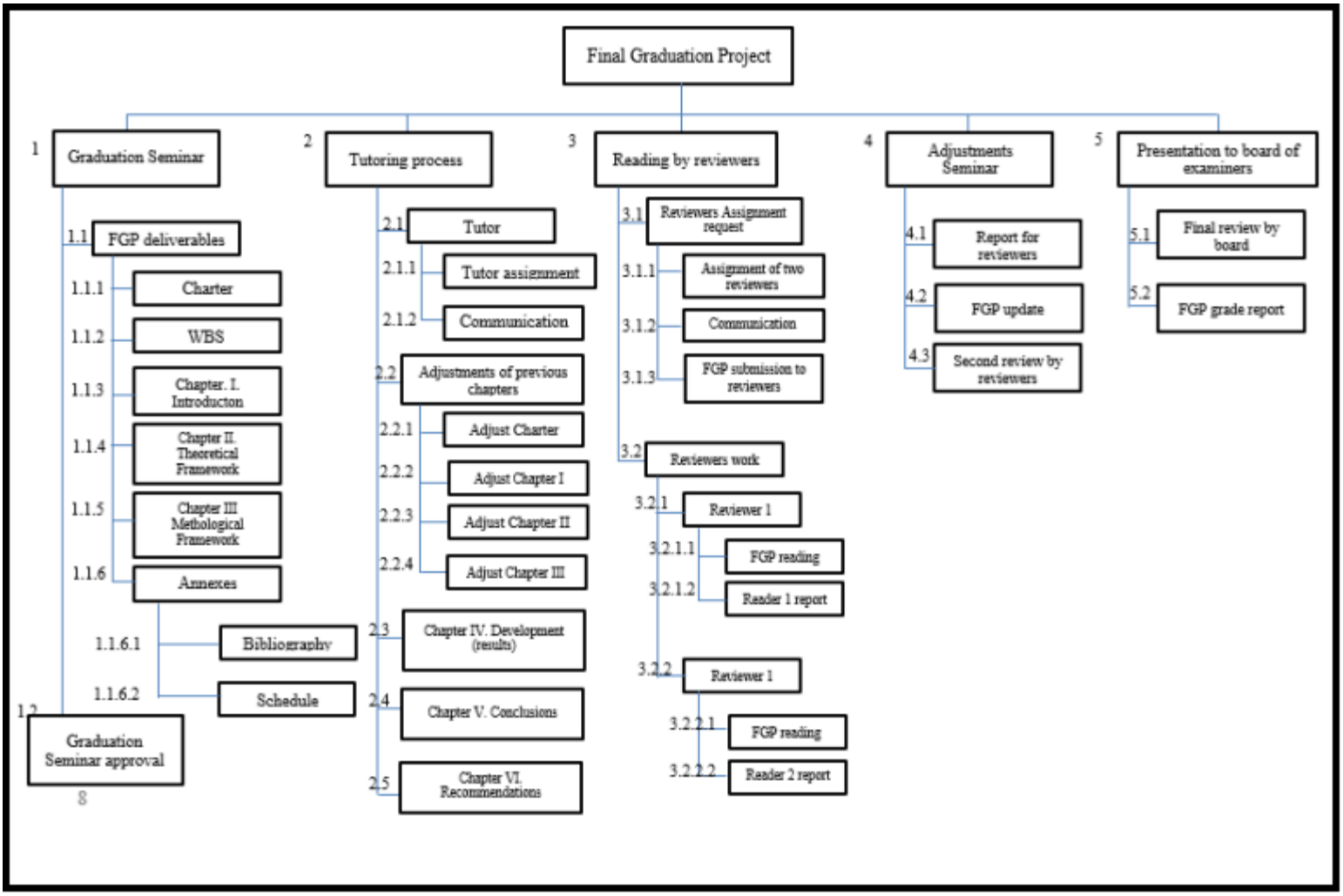
Milestone	Start date	End date
Final Graduation Project	May 13th 2019	November 8th 2019
1. Graduation Seminar	May 13th 2019	June 12th 2019
1.1. FGP Deliverables	June 13th 2019	July 7th 2019
1.1.1 Project Charter	June 13th 2019	May 19th 2019
1.1.2 WBS	May 13th 2019	May 19th 2019
1.1.3 Chapter 1 introduction	May 20th 2019	May 24th 2019

1.1.4 Chapter 2 Theoretical Framework 1.1.5 Chapter 3 Methodological Framework 1.1.6 Annexes 1.1.6.1 Bibliography 1.1.6.2 Schedule	May 27th 2019 June 3rd 2019 May 20th 2019 June 2nd 2019 May 20th 2019	May 31st 2019 June 7th 2019 June 9th 2019 June 6th 2019 May 24th 2019
1.2 Graduation Seminar Approval	June 10th 2019	June 14th 2019
2. Tutoring Process 2.1 Tutor 2.1.1 Tutor Assignment 2.1.2 Communication	June 17th 2019 June 17th 2019 June 17th 2019 June 18th 2019	September 13th 2019 June 19th 2019 June 17th 2019 June 19th 2019
2.2 Adjustments of previous chapters 2.2.1 Adjust Charter 2.2.2 Adjust WBS 2.2.3 Adjust Chapter 1 2.2.4 Adjust Chapter 2 2.2.5 Adjust Chapter 3	June 20th 2019 June 20th 2019 June 20th 2019 June 20th 2019 June 20th 2019 June 20th 2019	June 26th 2019 June 26th 2019 June 26th 2019 June 26th 2019 June 26th 2019 June 26th 2019
2.3 Charter 4 Development results 2.4 Chapter 5 Conclusions 2.5 Chapter 6 Recommendations Tutor approval	June 27th 2019 September 2th 2019 September 9th 2019 September 13th 2019	August 30th 2019 July 6th 2019 September 13th 2019 September 13th 2019
3. Reading by Reviewers 1.1 Reviewers assignment request	September 16th 2019 September 16th 2019	October 4th 2019 September 20th 2019 September 17th 2019 September 19th 2019

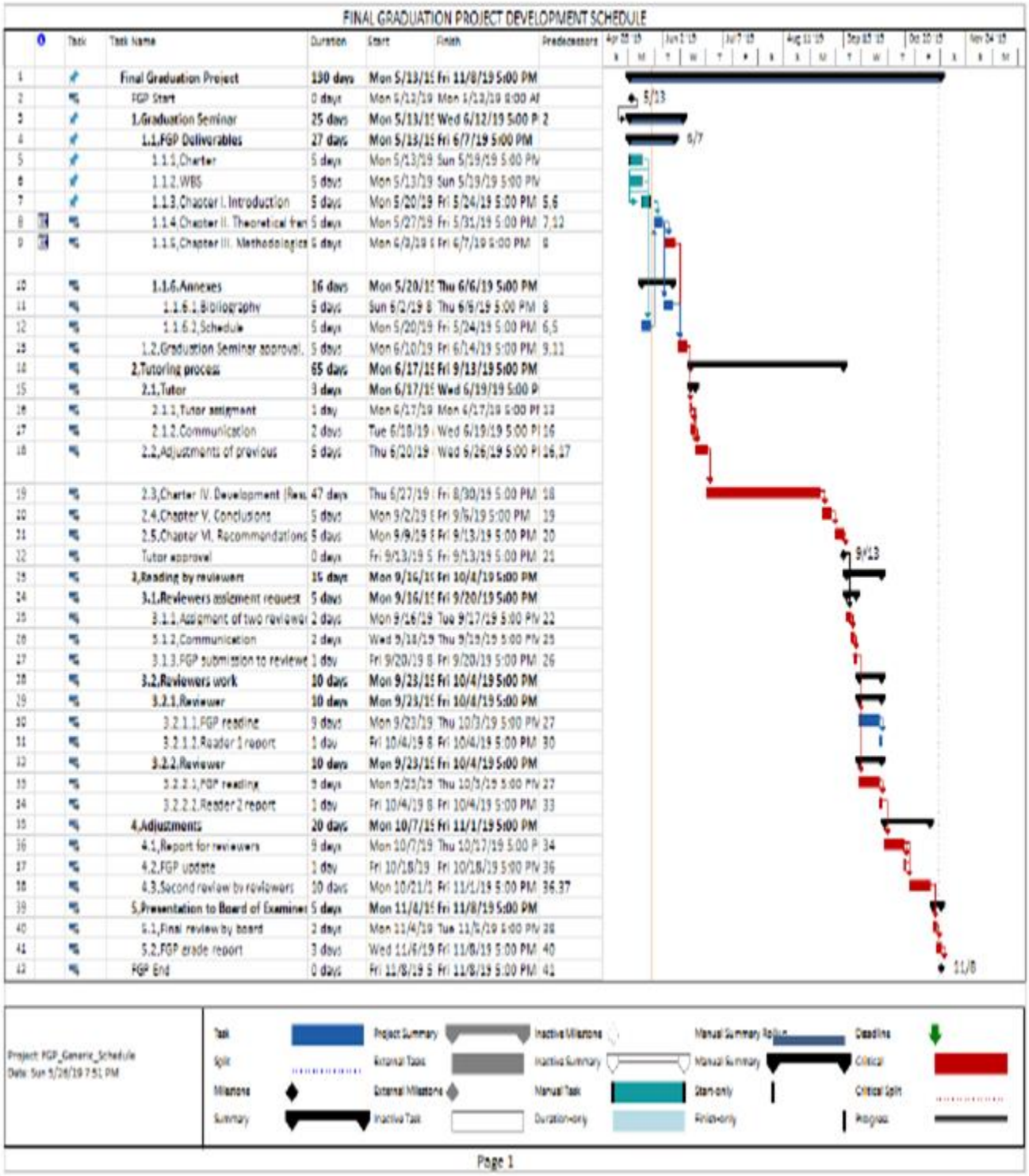
1.1.1 Assignment of 2 reviewers 1.1.2 Communication 1.1.3 Submission to reviewers	September 16th 2019 September 18th 2019 September 20th 2019	September 20th 2019
1.2 Reviewers Work 1.2.1 Reviewer 1.2.1.1 FGP Reading 1.2.1.2 Reader 1 report 1.2.2 Reviewer 3.2.1.1 FGP Reading 3.2.1.2 Reader 1 Report 3.2.2 Reviewer 3.2.2.1 FGP Reading 3.2.2.2 Reader 2 Report	September 23th 2019 September 23th 2019 September 23th 2019 October 4th 2019 September 23th 2019 October 4th 2019 October 4th 2019 September 23th 2019 September 23th 2019 October 4th 2019	October 4th 2019 October 4th 2019 October 3rd 2019 October 4th 2019 October 4th 2019 October 4th 2019 October 4th 2019 October 4th 2019 October 4th 2019 October 4th 2019
2. Adjustments 2.1 Report for reviewers 2.2 FGP Update 2.3 Second review by reviewers	October 7th 2019 October 7th 2019 October 18th 2019 October 20th 2019	November 1st 2019 October 17th 2019 October 18th 2019 November 1ST 2019
3. Presentation to board of examiners 3.1 Final Review by board 3.2 FGP Grade Report	November 4th 2019 November 5th 2019 November 7th 2019	November 8th 2019 November 6th 2019 November 8th 2019
FGP END	November 8th 2019	November 8th 2019

Relevant historical information	
The Belize Livestock Producers' Association (BLPA) is a private non-profit organization established under the Meat and Livestock Act Chapter 214, (Revised Edition 2000 showing the law as of 31st December, 2000). The Association was established under the Meat and Livestock Commission, for the purpose of implementing the Meat and Livestock Act. The livestock industry was formally organized in the late 1970's, when the Belize Government passed the Meat and Livestock Act (1), which established an association of livestock producers known as the Belize Livestock Producers' Association (BLPA). The Association is run by a nine-member Board of Directors.	
Stakeholders	
Direct: Program Lecturer Tutor PM **Indirect:** Academic Assistant Reviewers BLPA	
Project Manager: **Abihail Pech**	 **Signature:**
Authorized by:	**Signature:**

Appendix 2: Work Breakdown Structure



Appendix 3: FGP Schedule



Appendix 4: Revision Dictum

Revision Certificate

This is to certify that Ms. Abihail Marianela Pech has submitted the final graduation project entitled, "Project Management Plan For the Implementation of the Surveillance System Project BLPA Component", for revision.

I Ms. Emelie Stephanie Augustine, former secondary and tertiary level English Language instructor and holder of a Bachelor of Arts (in English) Degree, confirm that this document has been carefully examined and edited accordingly.

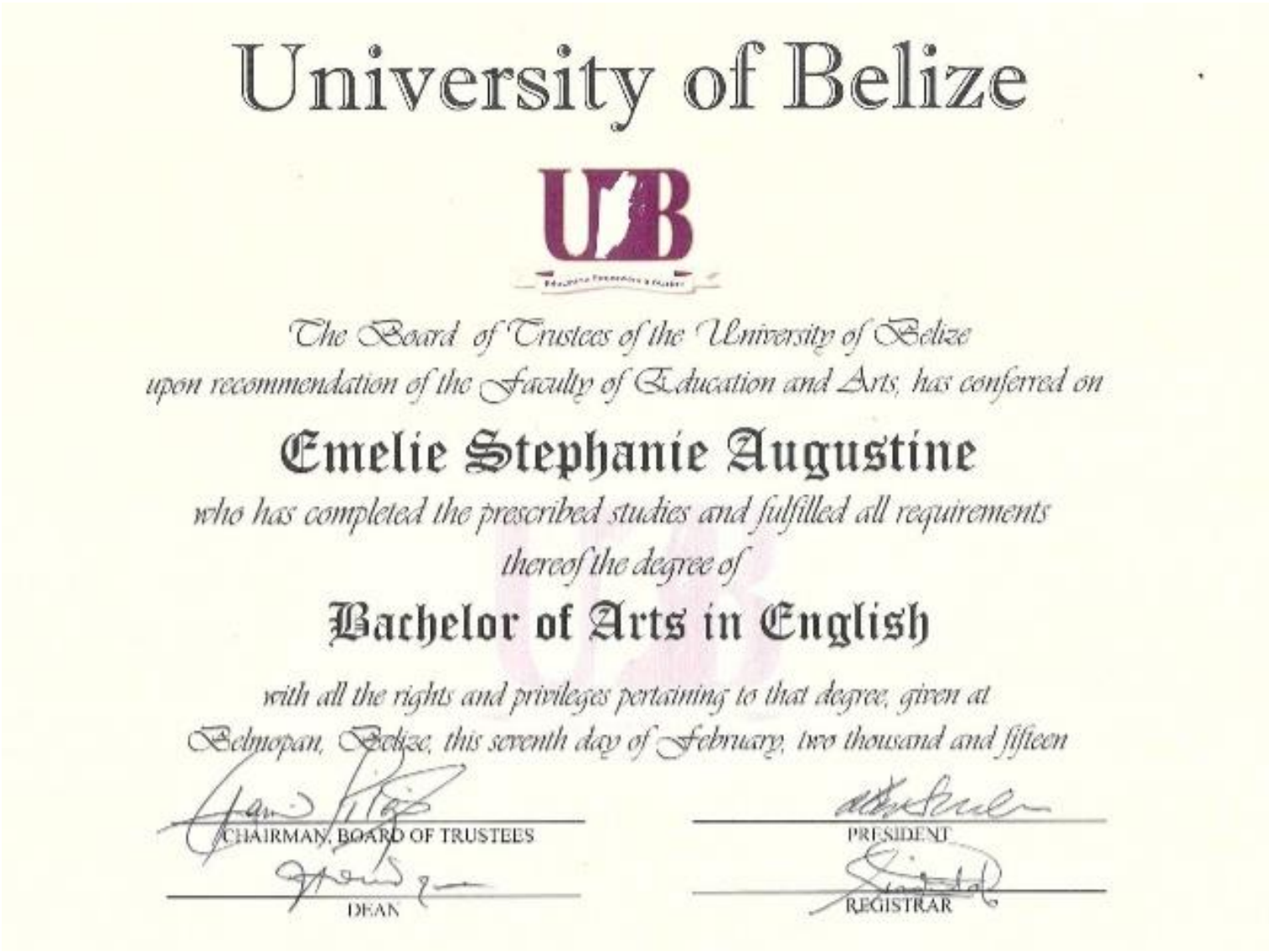
During the revision, errors in the following areas were rectified: sentence structure, subject verb agreement, misuse of commas, word choice, parallelism, and spelling. As stated before, all these mentioned errors have been corrected. Beyond the errors, the paper is rich in context and well organized.

I give Ms. Pech my full approval, this work is now ready for final submission and exceeds expected standards.

19.10.19

Ms. Emelie Augustine
B.A. (English)

Appendix 5: Reader Credentials



University of Belize

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

Emelie Stephanie Augustine

who has completed the prescribed studies and fulfilled all requirements
thereof the degree of

Bachelor of Arts in English

with all the rights and privileges pertaining to that degree, given at
Belmopan, Belize, this seventh day of February, two thousand and fifteen

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