UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL

(UCI)

PROJECT MANAGEMENT PLAN FOR REAL TIME SYSTEM FOR COMMUNITY INFORMATION AND FEEDBACK CENTERS FOR ROHINGYA REFUGEES

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DEDICATION

This final graduation project is dedicated to my daughters Andrea and Sofia; and to my husband Carlos that have been my support and my inspiration during all this process. I would also like to dedicate this work to the hundreds of humanitarian workers who are currently providing life-saving response to over 700,000 Rohingya refugees who crossed the border to Bangladesh in hope for a better life.

ACKNOWLEDGMENTS

I will like to thank my tutor Mr. Fabio Muñoz Jiménez for all the advice and encouragement during this challenging process, as well as Dr. Carlos Brenes Mena for his outstanding guidance in the Graduation Seminary for this thesis. The work consolidated in this document would not have been possible without the support and patience from my friends from UNICEF Bangladesh, particularly Ms. Jasmin Khan and Mamunul Haque from the Communication for Development and Dr. Juanita Vasquez-Escallon from the Social Policy, Evaluation, Analytics and Research I Sections at UNICEF. Their inspirational work was the foundation for this thesis.

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Above all, I will like to thanks to God for giving me the strength and determination to study again after so many years.

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ABBREVIATIONS AND ACRONYMS

APP – Application

CP – Child Protection

CPA – Cooperation Project Agreement

FFP - Firm Fixed Price Contract

FGP – Final Graduation Project

GBV – Gender Based violence

IFCs - Information and Feedback Centres

IPC – Inter-personal Communication

ISPs – Information Service Providers

IT – Information Technology

KII - Key informant interviews

MMs – Model Mothers

NFI – Nonfood item

ODK – Open Data Kit

PM – Project Management

PMBOK – Project Management Body of Knowledge

PMI – Project Management Institute

PMP - Project Management Plan

PV – Planned Value

R – Registration

RBS – Risk Breakdown Structure

RTM – Real-Time Monitoring System

SPEAR – Social Policy, Evaluation, Analytics and Research

UCI – Universidad para la Cooperación Internacional

UNICEF – United National International Children’s Emergency Fund

WASH – Water Sanitation Hygiene

WBS – Work Breakdown Structure

EXECUTIVE SUMMARY

In August 25, 2017, Bangladesh experienced the most important influx of forcibly displaced population in recent decades. After a military operation initiated in Myanmar, more than 700,000 people for the Rohingya minority group located on the Rakihne State of Myanmar, crossed the border in a life-saving effort to relocate their families from harm's way. The Government of Bangladesh, with the support of the United Nations agencies and programs, and humanitarian NGOs, has responded with lifesaving support, and initiated diplomatic negotiations between governments to facilitate a safe and dignified return home. In the meantime, a series of makeshift camps have been put in place to provide shelter, relief distribution of food and basic non-food items, as well as basic services in health, nutrition, water-sanitation services, protection and education. As in all refugee emergencies, the Information and Feedback Centres (IFCs) are of vital importance for the registration, identification of needs and monitoring of refugees living in the camp.

This main objective of the FGP was to document the creation of a Real-Time Monitoring System that analyses the queries from the nine IFCs have been set-up in the makeshift camps, and to create a system that will facilitate the analysis of needs and identify trends of recurrent cases, hence helping to anticipate potential problems that might arise in the future.

The specific objectives were (1) to create a scope management plan that includes all the work required, (2) to create a time-wise management plan to ensure the project is completed on time, (3) to develop a cost management plan to estimate control costs, and make use of the resources wisely, (4) to formulate a quality management plan to assure beneficiaries satisfaction for the services we will be providing, (5) to create a stakeholder management plan that lists all the stakeholders that can affect positively or negatively the project, and ensure effective communication to meet their needs expectations, (6) to create a human resources management plan to identify and document responsibilities of the social workers and project team to provide all the necessary help for the refugees, (7) to create a communication management plan that can reach the adequate information for all refugees, (8) to create a risk management plan that identifies risks of the project, and develops a plan for implementing the necessary mitigation strategies, and (9) to create a procurement management plan to insure all the purchasing and contract need in the project have been meticulously reviewed and executed.

The methodology used for this project research was analytical, which included documentation review, key informant interviews (KII) and focus group discussion; the existing registry books from the Community Information and Feedback Centres

(IFCs) were reviewed and analysed, in order to identify the common issues that had been raised, in order to develop a digital forms to register the information from the communities, categorized by Water, Sanitation and Hygiene (WASH), Non-food items (NFI), Registration, Nutrition, shelter, Health, Protection, Child Protection, Livelihood and Gender Based Violence (GBV). In the development of this tool, KIIs where held with the frontline workers at the CIC to ensure that there was a common and easy understanding of the process of the recording the information. Finally, to validate the forms and train the frontline workers, a focus group discussion was held before rolling-out the system.

The Project Management Plan (PMP) was made using as reference the PMBOK 5th Edition, to give a more elaborated and thoughtful way to manage and develop a PMP. Currently, UNICEF does not use Project Management Institute (PMI) methodology and with the development of this project we would like to validate the utilities and benefits of using them.

Key recommendations of this report include the integration of PMI techniques into the development of similar initiatives, to facilitate the tracking of performance of this initiative. Additionally, recommended to disseminate the IFCs dashboard platform to ensure information reaches all stakeholders, and expand the platform to other information points managed by other NGO's in other camps. Furthermore, its recommended to package the dashboard, including software and procedures, to facilitate the replication in another humanitarian response. Lastly, a crucial recommendation is to review the questionnaire and instruments of the dashboard to ensure that sensitive information does not compromise the exposure and safety of the refugees.

1. INTRODUCTION

1.1 Background

In 2017, one of the world's greatest crisis emerged in the border between Myanmar and Bangladesh, where more than 700,000 of people belonging to the Rohingya ethnic minority from Myanmar crossed the border fleeing from persecution from the military forces of Myanmar.

The origin of the problem is a highly complex relationship between the mostly Muslim minority ethnic group, and the lack of integration and social investments in health and education, from a regime that is mostly Buddhist. As a result, the Rohingya have been isolated without a right to education, vote, citizenship and development as the rest of the country.

Since early 2017, there has been an escalation of military activities in the Rhakine state, which is mostly populated by Muslim Rohingya, ignited by fear of potential extremist groups infiltrating the community. As a result, in one of the biggest movement for forcibly displaced population in recent years, over 788,921 Rohingya (Myanmar Nationals) crossed the border to Bangladesh after 25th of august, in a period of just 17 weeks. The capacity of Bangladesh to receive these refugees and provide basic services has been extended beyond the limits, and makeshift camps have started to appear in several places in the Cox´s Bazaar District. Most of this population is women and children, with a depleted health and nutritional status which requires immediate attention from the global community.

Several UN Agencies in Bangladesh have already declared the situation a Corporate Level 3 Humanitarian Emergency.[1]

[1] L3 designation allows UN Agencies to use its entire global, or "corporate" human or financial resource base to respond.

1.1. Statement of the problem

Amid this unfortunate situation, international cooperation in support and coordination with the Government of Bangladesh has created makeshift camps to meet the basic needs of refugees. Within the nine camps there are information and feedback centres (IFCs), managed by UNICEF's implementing partners to refer refugees to basic services such as water, health, nutrition, education, protection services, and information on the distribution of food and necessities. In these IFCs, social workers fill a form with the information that the refugees request or the complaints and issues they present.

A key bottleneck of the operation speed in which the information emanating from this system is analysed, to identify patterns in complaints and recurring issues that emerge on a regular basis. To address this bottleneck, a real-time system will be established in the IFCs, to allow immediate analysis of the patterns of the information.

The main problem that will be addressed through this FGP is to improve the planning process and tools of the establishment of this real-time system, in order to enhance efficiency and effectiveness of the feedback system from the IFCs.

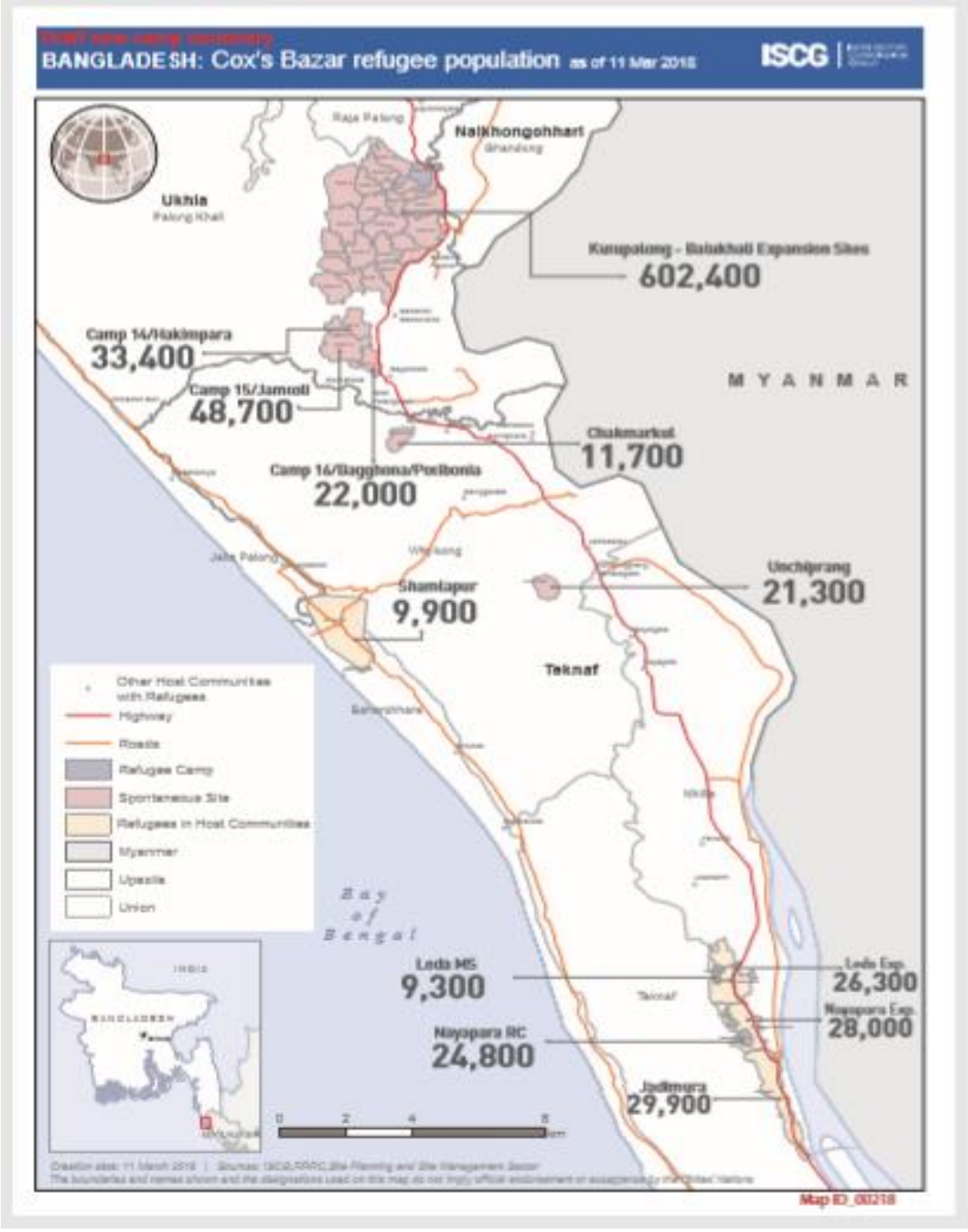


Figure 1. Rohingya refugee camps in Bangladesh. Retrieved from: https://www.humanitarianresponse.info/en/operations/bangladesh

1.2. Purpose

The purpose of this FGP is to define the concrete steps, limitations, and accountabilities in the process of developing a PMP for the real-time system to enhance efficacy, monitor and assess the grievances reported by the Rohingya community in the makeshift camps that have been established in Bangladesh. It will serve as a roadmap that will avoid shifting from the original objectives of the project, and serve as a baseline form cost, timeframe and intended results, which will in turn serve to evaluate the effectiveness and efficiency in which the project activities are carried-out and the results are achieved. This document will have an important communication value as it can be used as a reference to inform stakeholders of the process.

The FGP proposes to utilize the tools of PMI to develop a PMP to manage projects more efficiently and to increase possibilities of success. Also, will create a new view of comparison in between the way projects are been managed by UNICEF and the way PMI framework advices to manage projects.

The FGP Project Management will bring the following benefits:

- It will define the project in detail;
- It will establish project boundaries, scope and deliverables;
- It will identify the project management team and the project stakeholders;
- It will indicate the project schedule and major milestones;
- It will establish baseline plan for schedule, scope and cost;
- It will provide a tracking mechanism against an established baseline;
- It will help project performance reporting;
- It will identify and establish communication needs and methods;
- It will identify risks of the project and indicates a response mechanism;
- It will establish a process for implementing changes to project scope, schedule cost, quality and risk; and
- It will improve monitoring and control of the project activities.

Figure 2. Community Information and Feedback Centre (Source: C. Acosta Photo credit)

1.3. General objective

To develop a PMP for the establishment of a real-time system following PMBOK framework for establishing a better communication with all stakeholders and assure a better possibility of achieving project goals.

Figure 3. Refugee camps in Cox's Bazar, Bangladesh. (Source: UNICEF)

1.4. Specific objectives

1. To create a scope management plan that includes how the project scope will be defined, developed and verified during the project lifecycle.
2. To create a Schedule Management Plan to insure the project is completed on time.
3. To develop a cost management plan to estimate cost, control cost and make use of the resources wisely.
4. To formulate a quality management plan to assure beneficiaries satisfaction for the services we will be providing.
5. To create a stakeholder's management plan that list all the stakeholders that can affect positively or negatively the project, to insure an effective communication to ensure meet their needs or expectations.
6. To create a human resources management plan to identify and document responsibilities of the social workers and project team to provide all the necessary help for the refugees.

7. To create a communication management plan that can reach the adequate information for all refugees.
8. To create a risk management plan that identifies all the risk of the project, implements all the necessary strategies and contingency plan in case the risk occurs.
9. To create a procurement management plan to insure all the purchasing and contract need in the project have been meticulously reviewed and executed.

2. THEORETICAL FRAMEWORK

2.1 Company/Enterprise framework

UNICEF was established on 11 December 1946 by the United Nations to meet the emergency needs of children in post-war Europe and China. Its full name was the United Nations International Children's Emergency Fund.

According to its mission statement, UNICEF is mandated by the United Nations General Assembly to advocate for the protection of children's rights, to help meet their basic needs and to expand their opportunities to reach their full potential.

The Sustainable Development Goals[2] as described by the United Nations are for all humankind, with essential elements to ensure the wellbeing of children and women. UNICEF is supported entirely by the voluntary contributions of governments, non-governmental organizations (NGOs), foundations, corporations and private individuals. UNICEF receives no funding from the assessed dues of the United Nations

2.2 Company/Enterprise background

UNICEF has been working in Bangladesh since 1952. UNICEF provided emergency relief to thousands of war refugees in 1971 and children caught up in several of the world’s worst cyclones. Millions of people have been benefited from UNICEF’s health, water, protection and education programmes. UNICEF’s regional office for Bangladesh, is in Kathmandu, Nepal. This region is known as South Asia and covers the area of Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

[2] https://sustainabledevelopment.un.org/?menu=1300

Figure 4. Sustainable Development Goals.
Retrieved from: http://www.sdgsforchildren.org/

2.3 Mission and Vision statements[3]

Mission

UNICEF is mandated by the United Nations General Assembly to advocate for the protection of children's rights, to help meet their basic needs and to expand their opportunities to reach their full potential. Its actions are guided by the Convention on the Rights of the Child and strives to establish children's rights as enduring ethical principles and international standards of behaviour towards children.

UNICEF insists that the survival, protection and development of children are universal development imperatives that are integral to human progress. The organization is committed to ensuring special protection for the most disadvantaged children; victims of war, disasters, extreme poverty, all forms of violence and exploitation and those with disabilities.

[3] Section retrieved from https://www.UNICEF.org/publicpartnerships/files/UNICEF_Mission(1).pdf

UNICEF responds in emergencies to protect the rights of children. United Nations partners together with humanitarian agencies facilitate a rapid response available to its partners to relieve the suffering of children and those who provide their care. (UN Strategic Plan 2014-2017).

Vision

UNICEF vision is to ensure a world where the rights of every child are realized.

"In everything we do, we work to achieve a world where all children, especially the most vulnerable and disadvantaged, have equal opportunities to survive and thrive."

2.4 Organizational structure

Currently, UNICEF Bangladesh is an organization with 200 (full time) employees including 38 international professionals working in the Dhaka offices.

In addition, there are about 130 employees for the response to the emergency situation with the Rohingya refugees in Cox's Bazar. For the Real-Time System there are 3 professionals from different backgrounds, including research, behaviour change communication and IT, directly involved in the development of this project, with the support of specialists as consultants.

Below, in the figure 1, there is the program organizational structure. The program has a Project Manager, a project Assistant, a Research and Evaluation Specialist, a Communication for Development Specialist and an outsourced IT Specialist for the development of the software. Additionally, the field implementation will be carried-out with the support of a local NGO that works as an implementing partner and recruits social workers for the IFCs.

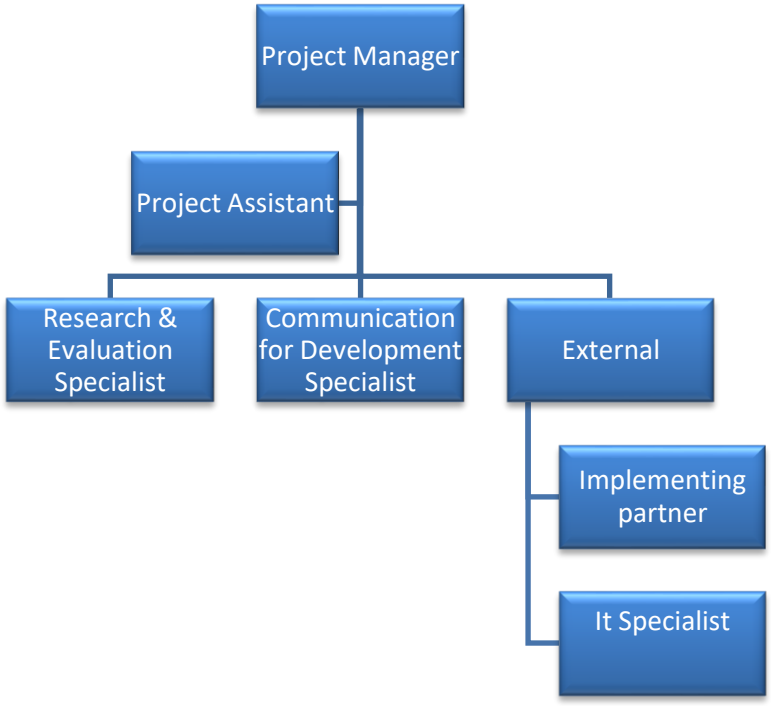


Figure 5. Organizational structure (Source: Own Elaboration)

2.5 Products offered

UNICEF is an intergovernmental organization across 190 countries that fights for the rights of every child. The organization has different focus areas which are the following:

- Child protection and inclusion
- Child survival
- Education
- UNICEF emergencies
- Gender
- Innovation for children
- Supply and logistic
- Research and analysis

2.6 Project Management concepts

2.6.1 Project

“A project is a temporary endeavour undertaken to create a unique product, service or result” (PMI, 2013, p. 3). It is temporary as it has a defined beginning and end in time, and therefore defined scope and resources.

A project should not be a repetitive operation, rather a specific set of processes designed to accomplish a singular goal. Depending on the complexity and nature of the intended results, a project team can include people from different organizations and across multiple countries with different time zones, cultures, languages and gender, which can make its implementation more complex.

In all cases, projects should be efficiently managed to deliver the project on time and in the established budget.

2.6.2 Project management

“Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. It is accomplished through the appropriate application and integration of the 47 logically grouped project management processes, which are categorized into five Process Groups which are initiating, planning, executing, monitoring and controlling, and closing” (PMI, 2013, p. 5).

To perform these five processes groups is a work of a team to achieve specific objectives and desired goals to specific success criteria at the right time.

The main challenge of project management achieving objectives within the given constraints. This information is usually described in project documentation, created at the beginning of the development process. The most important constraints are scope, time, quality and budget, and the purpose of project management is to produce a complete project which complies with the client's objectives.

The development of the Final Graduation Project (FGP) will consist of the creation of the PMP for the Real-Time System for IFCs for Rohingya refugees.

During the initiation phase, the project charter will be developed, the design of the software and the final approved charter will be signed. In the planning phase, the project team will be organized, meetings will be established, and the PMP will be developed, defining resources and timelines for the project. In the closing, the project will be handed over to the UNICEF implementing partner.

2.6.3 Project life cycle

A project life-cycle is a “series of phases that a project passes through from its initiation to its closure” (PMI, 2013, p. 38).

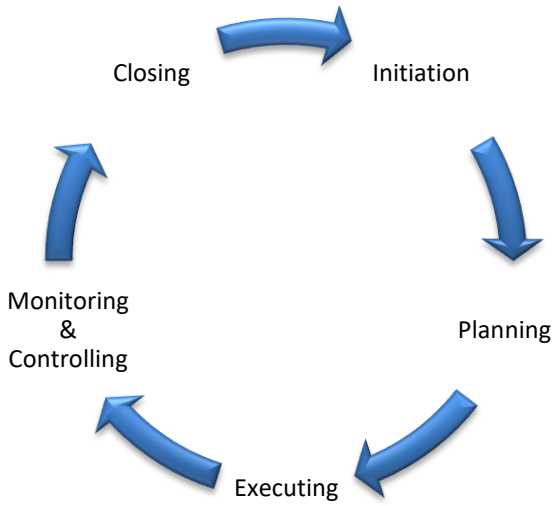


Figure 6. Project Life Cycle (Source: Own Elaboration)

2.6.4 Project management processes

The group processes from the initiating to the closing will be used for the development of the PMP for real-time system for IFCs.

Project management processes fall into five groups:

1. Initiating Processes
2. Planning Processes
3. Executing Processes
4. Monitoring and Controlling Processes
5. Closing Processes

2.6.4.1 Project management knowledge areas

Figure 7. Project Management Knowledge Area processes. (Source: Babou Srinivasan, 2015).

The ten knowledge areas of project management are the following:

1. **Project Integration Management**

“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.” (PMI, 2013, p. 63).

The project integration management will start with the development of a project charter to be able to have as a baseline to continue with the development of the PMP.

2. Project Scope Management

“Project Scope management includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully.” (PMI, 2013, p. 105). The Scope management plan covers how the scope will be defined, validated, and controlled.

The scope of a project is the clear identification of the work that is required to successfully complete or deliver a project. The documentation of the scope of the project will explain the limitations of the project, establish the responsibilities of each member of the project team, and set up procedures for how work that is completed will be verified and approved.

For defining scope, we should consider identifying the project objectives and goals, tasks, resources, budget and schedule.

Once this framework is established, the limitations of the project need to be clarified and those aspects that are not included in the project are supposed to be identified.

Another important part of the Scope Management Plan is to create the WBS to be provided to the project manager and the team with the opportunity to break down the scope into smaller and better manageable work packages units.

3. Project Schedule Management

“Project Schedule Management includes the processes required to manage the timely completion of the project.” (PMI, 2013, p.141).

Schedule Management is basically the ability to organize and plan the time spent on activities in a day, month, or year, depending on the duration of the project. It is a primary aspect of project management and entails skills such as planning, setting goals and prioritizing for a better execution. The result of good time management will increase efficiency and will have a higher probability of project success.

Time is one of the three constraints and any variation from the schedule influences the cost and scope of a project.

4. Project Cost Management

“Project Cost Management includes the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs, so that the project can be completed within the approved budget.” (PMI, 2013, p.193).

There are four processes in the knowledge area:

- Plan cost management
- Estimate cost
- Determine budget
- Control cost

The cost of a project should be estimated optimally to avoid cost overruns. This could happen due to insufficient scope definition, scope creep or change, market fluctuations, the realization or occurrence of risks or of factors directly or indirectly associated with the project.

5. Project Quality Management

“Project Quality Management includes the processes and activities of the performing organization that determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken.” (PMI, 2013, p.227).

6. Project Human Resources Management

“Project Human Resource Management includes the processes that organize, manage, and lead the project team. The project team is comprised of the people with assigned roles and responsibilities for completing the project. Project team members may have varied skill sets, may be assigned full or part-time, and may be added or removed from the team as the project progresses. Project team members may also be referred to as the project's staff. Although specific roles and responsibilities for the project team members are assigned, the involvement of all team members in project planning and decision making is beneficial. Participation of team members during planning adds their expertise to the process and strengthens their commitment to the project.” (PMI, 2013, p.255)

The most important resource in a project is its people, the project team. Acquiring and coordinating these human resources, in simultaneous correlation with managing the time aspect of the project, is critical for the project success.

7. Project Communication Management

“Project Communications Management includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information. Project managers spend most of their time communicating with team members and other project stakeholders, whether they are internal (at all organizational levels) or external to the organization. Effective communication creates a bridge between diverse stakeholders who may have different cultural and organizational backgrounds, different levels of expertise, and different perspectives and interests, which impact or have an influence upon the project execution or outcome.” (PMI, 2013, p.287)

8. Project Risk Management

"Project Risk Management includes the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project. The objectives of project risk management are to increase the like hood and impact of positive events and decrease the like hood and impact of negative events in the project." (PMI, 2013, p. 309)

"Project risk is an uncertain event or condition that, if it occurs, has a positive or negative effect on one or more project objectives such as scope, schedule, cost or quality." (PMI, 2013, p. 310)

A typical classification of risks is based on the level of knowledge about a risk event's occurrence (either known or unknown) and the level of knowledge about its impact (either known or unknown). The four possibilities are the following:

- Known–knowns (knowledge),
- Unknown–knowns (impact is unknown, but existence is known, i.e., untapped knowledge),
- Known–unknowns (risks), and
- Unknown–unknowns (unfathomable uncertainty). (Kim, 2012)

<table>
<tr><td colspan="2">Certainty
Identification</td><td>Certain (Known)</td><td colspan="2">Uncertain (Unknown)</td></tr>
<tr><td colspan="2"></td><td></td><td>Impact</td><td>Occurrence</td></tr>
<tr><td colspan="2">Identified (Known)</td><td>Known known
(identified
knowledge)</td><td colspan="2">Known unknown
(identified risk)</td></tr>
<tr><td rowspan="2">Unidentified
(Unknown)</td><td>Consequence</td><td rowspan="2">Unknown known
(untapped
knowledge)</td><td colspan="2" rowspan="2">Unknown unknown
(unidentified risk)</td></tr>
<tr><td>Event</td></tr>
</table>

Figure 8. Kim, S. D. (2012). Characterizing unknown unknowns. Paper presented at PMI® Global Congress 2012.

9. Project Procurement Management

“Procurement Management is the knowledge area involved in purchasing or acquiring products, services, or results from outside the project team, including developing and administering the contract or purchase order needed to obtain them.” (PMI, 2013, p. 355)

There are four project management processes in the Procurement Management Knowledge Area. One is the in-Planning Process Group, one is in the Executing Process Group, one is in the Monitoring & Controlling Group, and one is in the Closing Process Group.

Project Procurement Management includes the areas of plan procurement management, conduct procurement, control procurements, and close procurements.

10. Project Stakeholder Management

“Project Stakeholder Management includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyse stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution. Stakeholder management also focuses on continuous communication with stakeholders to understand their needs and expectations, addressing issues as they occur, managing conflicting interests and fostering appropriate stakeholder engagement in project decisions and activities. Stakeholder satisfaction should be managed as a key project objective”. (PMI, 2013, p. 391).

Stakeholder Management is an important aspect of any project. Most projects have direct or indirect stakeholders (social workers, government, host communities, project team, project manager, other NGOs) that can potentially affect positively or negatively. Identifying the different stakeholders, in an early stage of the project, is

always useful since maintaining them informed and meeting their expectations will certainly reduce the risk of project failure.

3. METHODOLOGICAL FRAMEWORK

3.1 Information sources

The Oxford Living dictionary describes “information as facts told or discovered” and states that source is a place, person, or thing from which something originates or can be obtained.”

3.1.1 Primary sources

Primary Sources are immediate, first-hand accounts of a topic, from people who had a direct connection with it. They can include:

- Texts of laws and other original documents.
- Newspaper reports by reporters who witnessed an event or who quote people who did.
- Speeches, diaries, letters and interviews - what the people involved said or wrote.
- Original research.
- Datasets and survey data (census or economic statistics.)
- Photographs, videos, or audios that capture an event.[4]

For the development of the Final Graduation Project, primary sources will be used, and they are the following:

- Interview with Technical lead
- Interview with the Communication for Development Specialist working in Cox’s Bazar.

[4] Heuristic (n.a.) In Healey Library, University of Massachusetts Boston Retrieved from https://umb.libguides.com/PrimarySources/secondary

- Interview with the Project Manager.
- Interview with the SPEAR Section Team
- Interview with the Communication for Development Section
- Interview with the Project Assistant
- Analysis of the data recorded by the IFCs.

Refer to Chart 1 for the list of primary sources used for each specific objective.

3.2.2 Secondary sources

Secondary Sources are one step ahead from primary sources, though they often quote or otherwise use primary sources. They can cover the same topic but add a layer of interpretation and analysis. Secondary sources can include:

- Most books about a topic.
- Analysis or interpretation of data.
- Scholarly or other articles about a topic, especially by people not directly involved.
- Documentaries (though they often include photos or video portions that can be considered primary sources).[5]

For the development of the FGP, secondary information sources that will be used are: PMBOK Guide 5th edition, Internet, and PMI website. Refer to Chart 1 for the list of secondary sources used for each specific objective.

Table 1. Information sources (Source: Own Elaboration)

Objectives	Information sources	
	Primary	Secondary
To create a scope management plan that includes all the work required.	Interview with the Communication for development Specialist.	PMBOK Guide 5th Edition

[5] Heuristic (n.a.) In Healey Library, University of Massachusetts Boston. Retrieved from https://umb.libguides.com/PrimarySources/secondary

	Analysis of the Data recorded by the IFCs Interview with a Consultant in Communication Section.	
To create a detailed time management plan to ensure the project is completed on time.	Interview with the Communication for Development Specialist.	PMBOK Guide 5th Edition
To develop a cost management plan to estimate cost, control cost and ensure effectively use of the resources.	Interview with the Communication for development Specialist and Research and Evaluation Specialist.	PMBOK Guide 5th edition.
To formulate a quality management plan to assure beneficiaries satisfaction for the services we will be providing.	Interview with the Research and Evaluation Specialist and Communication for development Specialist.	PMBOK Guide 5th Edition
To create a stakeholder management plan that list all the stakeholders that can affect positively or negatively the project, to insure an effective communication to ensure we meet their needs or expectations.	Interview with the Communication for development Section and Research and Evaluation Specialist.	PMBOK Guide 5th Edition
To create a human resources management plan to identify and document responsibilities of the social workers and project team to provide all the necessary help for the refugees.	Interview with the Technical lead	PMBOK Guide 5th Edition
To create a communication management plan that can reach the adequate information for all refugees.	Interview with the Communication for development Specialist. Interview with the Research and Evaluation Specialist.	PMBOK Guide 5th Edition

To create a risk management plan that identifies all the risk of the project, implements all the necessary strategies and contingency plan in case the risk occurs.	Interview with the Communication for Development Specialist and Research and Evaluation Specialist. Analysis of the Data recorder by the IFCs.	PMBOK Guide 5th Edition
To create a procurement management plan to insure all the purchasing and contract need in the project have been meticulously reviewed and executed.	Interview with the Technical lead.	PMBOK Guide 5th Edition

3.2 Research methods

According to Cambridge Dictionary research is defined as “a detailed study of a subject, especially in order to discover (new) information or reach a (new) understanding:

- scientific/medical research
- a research student/assistant/laboratory

3.2.1 Analytical method

Analytical techniques are methods that study problems, facts or status to accurately forecast potential outcomes while factoring in project variables. They are used to solve specific issues in a task. Unlike management methods that affect the organization, analytical techniques are both task and time-limited thus they only affect a particular project in question. (*Project Management Knowledge*, 2017)

3.2.2 Observation method

Observation, as the name implies, is a way of collecting data through observing. Observation data collection method is classified as a participatory study,

because the researcher must immerse herself in the setting where her respondents are, while taking notes and/or recording.

Observation as a data collection method can be structured or unstructured. In structured or systematic observation, data collection is conducted using specific variables and according to a pre-defined schedule. Unstructured observation, on the other hand, is conducted in an open and free manner in a sense that there would be no pre-determined variables or objectives. (The Ultimate Guide to writing a dissertation in Business studies, *John Dudovski, 2018)*

3.2.3 Deductive – Inductive method

This method of inference is based on logic and studies particular facts, although it is deductive in a sense (part of the general to the particular) and inductive in the opposite (goes from the particular to the general). (Bernal, 2010, p.60)

The summary of research methods is shown below in chart 2.

Table 2. Research methods (Source: Own Elaboration)

Objectives	**Research method**		
	Analytical method	Observation method	Deductive – Inductive method
To create a scope management plan that includes all the work required.	The analytical method will be employed by using facts or information from the sources identified above in Chart 1 objective 1, to create a scope management plan	Interview with the project manager and project team.	

To create a detailed time management plan to insure the project is completed on time.	The analytical method will be employed by using facts or information from the sources identified in Chart 1 objective 2, to create a time management plan.	Interview with the project team	
To develop a cost management plan to estimate cost, control cost and ensure effectively use of the resources.	The analytical method will be employed by using facts or information from the sources identified in Chart 1 objective 3, to develop a cost management plan.	Interview with the project manager and Research and Evaluation Specialist	
To formulate a quality management plan to assure beneficiaries satisfaction for the services we will be providing.	The analytical method will be employed by using facts or information from the sources identified in Chart 1 objective 4, to formulate a quality management plan.	Interview with the Communication for Development Specialist and the Research and Evaluation Specialist	
To create a stakeholder management plan that list all the stakeholders that can affect positively or negatively the project,	The analytical method will be employed by using facts or information from the sources identified in Chart	Interview with the project team in UNICEF offices in Dhaka.	

to insure an effective communication to ensure we meet their needs or expectations.	1 objective 5, to create a stakeholder management plan.		
To create a human resources management plan to identify and document responsibilities of the social workers and project team to provide all the necessary help for the refugees.	The analytical method will be employed by using facts or information from the sources identified in Chart 1 objective 6, to formulate a human resources management plan.	Interview to the Project Manager	
To create a communication management plan that can reach the adequate information for all refugees.	The analytical method will be employed by using facts or information from the sources identified above in Chart 1 objective 7, to create a communication management plan.	Interview to the Communication for Development specialist and Research and Evaluation Specialist	
To create a risk management plan that identifies all the risk of the project, implements all the necessary strategies and contingency plan in case the risk occurs.	The analytical method will be employed by using facts or information from the sources identified above in Chart 1 objective 8 to create the risk management plan.	Interview with the research and evaluation specialist	

To create a procurement management plan to insure all the purchasing and contract need in the project have been meticulously reviewed and executed.	The analytical method will be employed by using facts or information from the sources identified above in Chart 1 objective 9, to create the procurement management plan.	Interview with the project manager and research and evaluation specialist	

3.3 Tools

PMBOK Guide 5th Edition, defines tools as “something tangible, such as a template or software program, used in performing an activity to produce a product or result.” (*PMI*, 2013, p. 565)

The definitions of the tools used in FGP are described below and a summary of them are below in chart 4.

- Project Charter Template is the document issued by the project initiator or sponsor that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities. (*Project Management Institute*, 2013, p.71)
- Project Management Plan is the document that describes how the project will be executed, monitored and controlled. (*Project Management Institute*, 2013, p.554)
- Requirements Traceability Matrix Template is a grid that links products requirements from their origin to the deliverables that satisfy them. (*Project Management Institute*, 2013, p.558)

- Scope Management Plan is the process of creating a scope management plan that documents how the project scope will be defined, validated, and controlled (*Project Management Institute*, 2013, p. 107).
- Work Breakdown Structure is the process of subdividing project deliverables and project work into smaller, more manageable components. (*Project Management Institute*, 2013, p. 125)
- Interviews to approach to elicit information from stakeholders by talking to them directly. (*Project Management Institute*, 2013, p.114)
- Facilitated workshops to bring key stakeholders together to define product requirements. (*Project Management Institute*, 2013, p.114)
- Observations to view individuals in their environment and how they perform their jobs or tasks and carry out processes. (*Project Management Institute*, 2013, p.116)
- Expert Judgment is the input received from knowledgeable and experienced parties. (*Project Management Institute*, 2013, p.109)
- Inspection to measure, examinee, and validate activities to determine whether work and deliverables meet requirements and product acceptance criteria. (*Project Management Institute*, 2013, p.135)
- Schedule Management Plan is the process of establishing the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule. (*Project Management Institute* 2013, p.145)
- Activity List Template is a documented tabulation of schedule activities that shows the activity description, activity identifier, and a sufficiently detailed scope of work description so project team members understand what work is to be performed. (*Project Management Institute*, 2013, p.527)
- Microsoft Project 2016 Gantt Chart is a bar chart of schedule information where activities are listed on the vertical axis, dates are shown on the horizontal axis, and activity durations are shown as horizontal bars placed

according to start and finish dates. (*Project Management Institute*, 2013, p.542)

- Critical Path Method is a schedule method that allows the project team to place buffers on any project schedule path to account for limited resources and project uncertainties. (*Project Management Institute*, 2013, p.536)
- Estimate Activity Duration Template is the process of estimating the number of work periods needed to complete individual activities with estimated resources. (*Project Management Institute*, 2013, p.539)
- Cost Management Plan is a component of a project management plan that describes how costs will be planned, structured, and controlled. (*Project Management Institute*, 2013, p.534)
- Estimate Costs is the process of developing an approximation of the monetary resources needed to complete project activities. (*Project Management Institute*, 2013, p.539)
- Reserve Analysis is an analytical technique to determine the essential features and relationship of components in the project management plan to establish a reserve for the schedule duration, budget, estimated costs, or funds for a project. (*Project Management Institute*, 2013, p.558)
- Control Costs is the process of monitoring the status of the project to update the project costs and managing changes to the cost baseline. (*Project Management Institute*, 2013, p.534)
- Quality Management Plan is the process of identifying quality requirements and standards for the project and its deliverable and documenting how the project will demonstrate compliance with relevant quality requirements or standards (*Project Management Institute*, 2013, p. 231).
- Quality Management Tools (Cost –Benefit Analysis) to analyze each quality activity to compare the cost of the quality step to the expected benefit. (*Project Management Institute*, 2013, p.235)

- Control Quality (inspection) is the process of monitoring and recording results of executing the quality activities to assess performance and recommend necessary changes. (*Project Management Institute*, 2013, p.534)
- Stakeholder Management Plan Template is a subsidiary plan of the project management plan that defines the processes, procedures, tools, and techniques to effectively engage stakeholders in project decisions and execution based on the analysis of their needs, interests, and potential impact. (*Project Management Institute*, 2013, p.563)
- Stakeholder Analysis is a technique of systematically gathering and analyzing quantitative and qualitative information to determine whose interests should be taken into account throughout the project. (*Project Management Institute*, 2013, p.563)
- Human Resources Management Plan is a component of the project management plan that describes how the roles and responsibilities, reporting relationships, and staff management will be addressed and structured. (*Project Management Institute*, 2013, p. 542)
- Organization Chart (Hierarchical – type charts) is used to show positions and relationships in a graphical, top-down format. (*Project Management Institute*, 2013, p. 561)
- Acquire Project Team Tools is the process of obtaining the team necessary to complete project activities by pre-assignment, negotiation, acquisition, virtual team, and multi-criteria decision analysis. (*Project Management Institute*, 2013, p.567 - 272)
- Develop Project Team Tools (training) is the process of improving competences, team members interaction and overall team environment to enhance project performance. Tools and techniques used are interpersonal skills, training, team building activities, ground rules, collocation, recognition and rewards and personnel assessment tools. (*Project Management Institute*, 2013, p.273 - 278)

- Manage Project Team (Observation and conversation) is the process of tracking team members performance, providing feedback, resolving issues, and managing team changes to optimize project performance. Tools and techniques used are observation and conversation to stay in touch with the work and attitudes of project team. (*Project Management Institute*, 2013, p.279 - 282)
- Communication Management Plan is the process of developing an appropriate approach and plan for project communications based on stakeholder's information needs and requirements, and available organizational assets (*Project Management Institute*, 2013, p. 289).
- Risk Management Plan is a component of the project that describes how risk management activities will be structured and performed. (*Project Management Institute*, 2013, p.560)
- Risks Register Template is a document in which the results of risk analysis and risk response planning are recorded. (*Project Management Institute*, 2013, p.560)
- Probability and Impact Matrix is a grid for mapping the probability of each risk occurrence and its impact on project objectives if that risk occurs. (*Project Management Institute*, 2013, p. 551)
- Plan Risk Response is the process of developing options and actions to enhance opportunities and to reduce threats to project objectives. (*Project Management Institute*, 2013, p. 550)
- Procurement Management Plan is a component of the project management plan that describes how a project team will acquire goods and services from outside the performing organization. (*Project Management Institute*, 2013, p. 552)
- Contract Change Control System is the system used to collect, track, adjudicate, and communicate changes to a contract. (*Project Management Institute*, 2013, p.533)

- Records Management System is a specific set of processes, related control functions, and tools that are consolidated and combined to record and retain information about the project. (*Project Management Institute*, 2013, p.527)

Table 3. Tools (Source: Own Elaboration)

Objectives	Tools
To create a scope management plan that includes all the work required.	Requirement Management Plan Template, Requirements Traceability Matrix Template, Scope Management Plan Template, WBS, interviews and meetings, expert judgment, inspection, facilitated workshops, observations.
To create a detailed time management plan to insure the project is completed on time.	Schedule Management Plan Template, Activity List Template, Microsoft Project 2016, Critical Path Method, Estimate Activity Duration Template, analytical techniques, meetings, expert judgment, three-point estimating.
To develop a cost management plan to estimate cost, control cost and ensure effectively use of the resources.	Cost Management Plan Template, Microsoft Project 2016, Estimate Costs Template, Control Costs Template, expert judgment, reserve analysis.
To formulate a quality management plan to assure beneficiaries satisfaction for the services we will be providing.	Quality Management Plan Template, Quality Management Tools, Control Quality (inspection)
To create a stakeholder management plan that list all the stakeholders that can affect positively or negatively the project, to insure an effective communication to ensure we meet their needs or expectations	Stakeholders Management Plan Template, Stakeholder Analysis
To create a human resources management plan to identify and document responsibilities of the	Human Resources Management Plan Template, Organization Chart, Acquire Project Team Tools, Develop Project Team

social workers and project team to provide all the necessary help for the refugees.	Tools (training), Manage Project Team (Observation and conversation)
To create a communication management plan that can reach the adequate information for all refugees.	Communication Management Plan Template
To create a risk management plan that identifies all the risk of the project, implements all the necessary strategies and contingency plan in case the risk occurs.	Risk Management Plan Template, Risks Register Template, Probability and Impact Matrix, Plan Risk Response
To create a procurement management plan to insure all the purchasing and contract need in the project have been meticulously reviewed and executed.	Procurement Management Plan Template, Bidder Conference, Records Management System.

3.4 Assumptions and constraints

PMBOK defines *constraint "*as a limiting factor that affects the execution of a project, program, portfolio, or process." (*PMI*, 2013, p.533).

PMBOK defines *assumption* "as a factor in the planning process that is considered to be true, real, or certain, without proof or demonstration." (*PMI*, 2013, p.529).

The summary of assumptions and constraints are showed here below:

Table 4. Assumptions and constraints (Source: Own Elaboration)

Objectives	Assumptions	Constraints
To create a scope management plan that	It's assumed that the scope management	Scope been affected due to not enough

Objectives	Assumptions	Constraints
includes all the work required.	plan will include all the work required.	resources and time available from the specialists.
To create a detailed time management plan to insure the project is completed on time.	It is assumed that all the project activities that are identified in the plan are sufficient to completed project.	Limited time of the specialists assigned to this project could affect the completion time.
To develop a cost management plan to estimate cost, control cost and ensure effectively use of the resources.	It is assumed that the estimated cost will be within a reasonable range and not exceed the estimated budget.	Price fluctuations can happen.
To formulate a quality management plan to assure beneficiaries satisfaction for the services we will be providing.	It's assumed that the app will be working properly 24/7.	Electricity and internet are unreliable on the area.
To create a stakeholder management plan that list all the stakeholders that can affect positively or negatively the project, to insure an effective communication to ensure we meet their needs or expectations.	It's assumed that the stakeholder management plan will list all key stakeholders.	Stakeholders can switch positions and priorities.
To create a human resources management plan to identify and document responsibilities of the social workers and project team to provide all the necessary help for the refugees.	The project team and social workers assigned to this project are enough to complete the project.	Lack of education from most of the refugees and social workers could affect the development of the project.

Objectives	Assumptions	Constraints
To create a communication management plan that can reach the adequate information for all refugees.	It's assumed that the communication plan will help inform all the Refugees in the camps.	The availability of electricity and internet access must be constant.
To create a risk management plan that identifies all the risk of the project, implements all the necessary strategies and contingency plan in case the risk occurs.	It's assumed that no major risk will take place during the project.	All the project risk should be identified in the early stages of the project.
To create a procurement management plan to insure all the purchasing and contract need in the project have been meticulously reviewed and executed.	It's assumed that the purchasing of products will be done on time and in budget.	Market price fluctuations.

3.5 Deliverables

PMBOK defines deliverable, "as any unique and verifiable product, result, or capability to perform a service that is required to be produced to complete a process, phase, or project." (*PMI*, 2013, p.537).

The summary of deliverables for the FGP is showed above in chart 5.

Table 5. Deliverables (Source: Own Elaboration)

Objectives	Deliverable
To create a scope management plan that includes all the work required.	Scope Management Plan, Requirement documentation, Define Scope, Create WBS

To create a detailed time management plan to insure the project is completed on time.	Plan Schedule Management, Activity list, Milestone list, Schedule in Gantt Chart, Estimate Activity Resources and Duration, Critical Path method, Schedule baseline,
To develop a cost management plan to estimate cost, control cost and ensure effectively use of the resources.	Plan Cost Management, Estimate Costs, Cost Baseline, Control costs, Cost Forecasts, Work Performance Information
To formulate a quality management plan to assure beneficiaries satisfaction for the services we will be providing.	Plan Quality Management, Perform Quality Assurance, Control Quality
To create a stakeholder management plan that list all the stakeholders that can affect positively or negatively the project, to insure an effective communication to ensure we meet their needs or expectations.	Plan Stakeholder Management, Identify Stakeholders, Manage Stakeholders Engagement, Control Stakeholders Engagement.
To create a human resources management plan to identify and document responsibilities of the social workers and project team to provide all the necessary help for the refugees.	Plan Human Resources Management, Acquire Project Team, Develop Project Team, Manage Project Team.
To create a communication management plan that can reach the adequate information for all refugees.	Plan Communication Management; Manage Communications, Control Communications, and Issue Log.
To create a risk management plan that identifies all the risk of the project, implements all the necessary strategies and contingency plan in case the risk occurs.	Plan Risk Management, Identify Risks, Perform Qualitative Risk Analysis, Plan Risk Response, and Control Risks.
To create a procurement management plan to insure all the purchasing and contract need in the project have been meticulously reviewed and executed	Plan Procurement Management, Conduct Procurement, Control and Close Procurement.

4. RESULTS

The main objective of this chapter is to develop a PMP for Real-Time System for nine IFCs located in the different refugee camps in Cox's Bazar. In order to do so, the expert judgments and brainstorming techniques will be used in the project team meeting as tools. This process is implemented by completing a series of clearly defined steps:

Step 1. Create a project charter. This charter was made by using interviews with the project manager and the PMBOK, as sources. Both of them, together with the analytical and observation research methodologies were key elements to create and deliver the FGP.

Step 2. Developing a Plan Scope Management tool, including the collection of requirements and defining the scope to set a baseline of the requirements that are needed for this project.

Step 3. Preparing a Plan Schedule Management tool that defines a sequence and estimates the duration of the activities as well as controls the schedule to avoid cost overruns.

Step 4. Cost Analysis. A Plan Cost Management to determine budget and control the cost of the project.

Step 5. Develop a Plan Quality Management. Perform Quality Assurance and Control Quality.

Step 6. ***Develop a Human Resources Management Plan*** that defines roles and responsibilities of all the members involved in the development of the project.

Step 7. To Create a Communication Matrix. This will set the different channels of communication in the project.

Step 8. To Plan Risk management. Risk Analysis including a Probability and Impact Scale and Matrix; a Risk Register that includes the trigger and the strategy if the risk occurs.

Step 9. To Plan Procurement Management elaborating a Make or Buy analysis, a Purchase Plan and the types of contract to be used in the project.

Step 10. To Plan Stakeholders Management by identifying the stakeholders, creating stakeholders register and describing tools and techniques to manage and control the stakeholder's engagement.

4.1. PROJECT CHARTER

Real Time System for IFCs for Rohingya Refugees

The project Real-Time System for IFCs has developed a mobile application called the Open Data Kit (ODK) to digitalize feedback and generate a dashboard that will provide real time information about the queries, needs and issues being faced by the affected population and generate detailed analysis of the types and nature of complaints / feedback received from the refugees.

IFCs ensure two-way information by providing life-saving messages to communities as well as receiving and responding to feedbacks. They also provide referral information on service points and maintain logbook to document community feedback and complaints. The affected community can share concerns or grievances regarding the service they receive, the quality and relevance of service, and the behaviour of the service providers. They can also get information on service delivery points.

Through the development of a questionnaire, that would be asked by the ISPs to the affected refugee attending to the centres; we would be able to understand the necessity, monitor and control demands and prioritize urgent matters in the community of refugees.

Each IFCs is currently managed by two Information Service Providers (ISPs), one male and one female, along with sixteen mobile ISPs. The ISPs are trained on Inter-Personal Communication (IPC), demonstration of key life-saving

messages/behaviours, dissemination of IEC materials, and ODK application. In addition to the centre-based ISPs there are eighty Model Mothers (MMs) that are also trained to help bring he affected refugees to the IFCs.

UNICEF Bangladesh explores this initiative to create this mobile application to help the refugees and to focus aid in the areas that is most required.

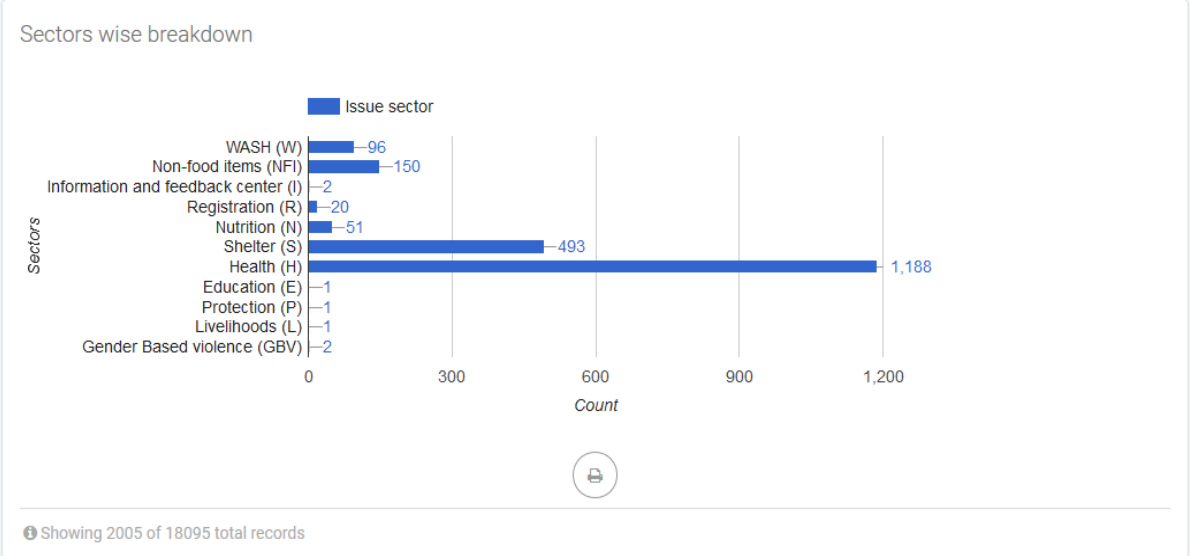


Figure 9. Breakdown graph of reasons for information request (weekly basis). Retrieved from http://ifc.UNICEFbangladesh.org

Constraints and assumptions

a. Constraints

- Not being able to evaluate the non-registered cases
- Level of education of the refugees
- Not being able to train the ISPs
- Not being able to train the Model Mothers
- Cost overrun due to unavailability of team specialist

- There is no reliable electricity in the area

b. Assumptions

In order to identify and estimate the required tasks and timing for the project, certain assumptions and premises need to be made. In the event an assumption is invalidated later, then activities and estimates in the project plan should be adjusted accordingly. Based on the current knowledge, here below we list the project assumptions:

- Project schedule dates will be accurate
- Design and development of the Real-Time System will be executed on time.
- Community workers will perform as planned
- Training process will take place with professionalism approach, as expected
- Project members have the required knowledge, skills and experience and will perform optimally to ensure the project objectives are achieved
- Vital project team members will be available for the duration of the project
- Full commitment from project sponsor throughout the life of the project
- All the contracts for the development of the project will be submitted and approved

Table 6. Flexibility matrix (Source: Own Elaboration)

Flexibility Matrix	Rigid	Relatively Flexible	Flexible
Scope		x	
Schedule		x	
Cost		x	
Quality	X		

Table 7. Stakeholders

Direct	Indirect
Refugees	Host Community in Cox's Bazar
Project Manager	Government
Social workers	Other NGO's working in the area
Project Team	
Development partners	
Outsource employees	
Sponsor	

Scope

The scope of the project includes developing the mobile application ODK to monitor the necessities of the refugees, as well as to train the community workers that will be administrating or providing guidance to refugees. Furthermore, will include the purchasing of the equipment and personal to develop the mobile application.

Figure 10. Information and Feedback centre (Source: UNICEF)

Budget

The cost of the project will include the development of the App and questionnaire, the training material, cost of required equipment, the cost of travelling of a research and evaluation specialist, and the cost of communication for development specialist.

Estimation of $ 42,271.85

Table 8. Project Milestones (Source: Own Elaboration)

Main Milestones	Expected date
Project Charter	March 5, 2018
Develop questionnaire	March 21, 2018
Design app	April 4, 2018
Purchase equipment	March 26, 2018
Install app	April 6, 2018
Testing phase	April 12, 2018
Training of the social workers	April 23, 2018
Hand-over of the project	May 5, 2018

Project Risks

The following are deemed as the uncertain things that can jeopardize the project's success:

1. Possibility of app malfunction
2. Possibility of not been able to access the app due to lack of electricity
3. Possibility of no internet connection
4. Possibility of conflict arising between project stakeholders.

5. Possibility of stakeholders becoming disengaged.
6. Possibility of stakeholders having inaccurate expectations because of poor communications.
7. Inaccurate cost estimates.
8. Possibility of late delivery of equipment
9. Possible delays due to financial approvals and processes to release funds.
10. Possibility of late training due to availability of the specialist
11. Possibility of flooding, tropical cyclone and land slide in the rainy season.
12. Possibility of electronic tablets get stolen or misplaced.
13. High rotation of social workers in the Information and Feedback Centres.
14. Possibility of mismanaged database putting in risk confidential information of the refugees
15. Possibility of misunderstanding due to language barriers

4.2. PROJECT SCOPE MANAGEMENT

To create a PMP there was used the project charter as an input and as tools, the meetings between project manager, the research and evaluation specialist and the communicator for development specialist.

The Project Scope Management will include the following processes: plan scope management, collect requirements, define scope, create WBS, verify scope, and control scope (PMI, 2013).

Roles and Responsibilities

The Project manager, team members and implementing partner will play a role in managing the scope. The responsibilities of each area are described below:

Table 9. Responsibility Matrix (Source: Own Elaboration)

Role	Responsibility
Project Manager	Approve Design and manage of the project Risk management
Assistant for the project	Organize the meetings Updates documentation Minutes of every meeting Providing quotations for the purchase of the equipment Make air flights reservations
Research and Evaluation Specialist	Field visit Training of the ISPs Trouble shooting.
Communication for Development Specialist	Organize the place for the training Revise questionnaire Insure linkage with other activities with community accountability Communicate with the implementing partner
IT Specialist	Development of the app Development of the dashboard Server setup and support after delivery for 6 months.
Implementing Partner	Manage the refugee camps and run the application in the IFCs

Collect Requirements

PMBOK describes “Collects requirements as a process of determining, documenting, and managing stakeholder needs and requirements to meet project objectives.“ (PMI, 2013, p. 110)

To collect requirements was necessary interview major stakeholders, realize some focus groups, workshops with the project team to identify and define the desired product deliverable. Also, the group creativity technique used was the brainstorming during team meetings.

4.2.2. Define Scope

“Is the process of developing a detailed description of the project and product.” (PMI, 2013, p. 105)

The development of the application requires a set of crucial requirements that need to be complied with:

Table 10. Table of Requirements

Development of App	**Review of the data collection tool**
	Development of the application
	Updates and incorporation of the user’s feedback.
	Deployment of final application and operational support
Development of dashboard	Review of dashboard application documentation.
	Dashboard / reporting application development.
	Development of reports and support for mobile devices.
	Updates and incorporation of user feedback.
	Development of web-services for data accessibility.
	Downloadable labelled datasets via dashboard
	Operational support.
	Installation of server applications i.e, JDK, MySQL, PHP, Apache. Tomcat 8 & ODK Aggregate Server

Server Setup	Testing and configuration of server applications.
	Operational support for server applications.
Support / maintenance for 6 months	

Beyond the constraints and assumptions identified in the project charter, there are no major restrictions in the development of this assignment.

Requirement Traceability Matrix

The Requirements Traceability Matrix, indicated in Appendix 4, is the tool through which the requirements are monitored during the life of the project and allows assigning them a responsible person; what facilitates the control and the rendering of accounts. This matrix is useful to analyse the impact of proposed changes to project requirements.

4.2.3. Create WBS

A Work Breakdown Structure is the process of sub-diving the project deliverables and work into small packages to make it more manageable.

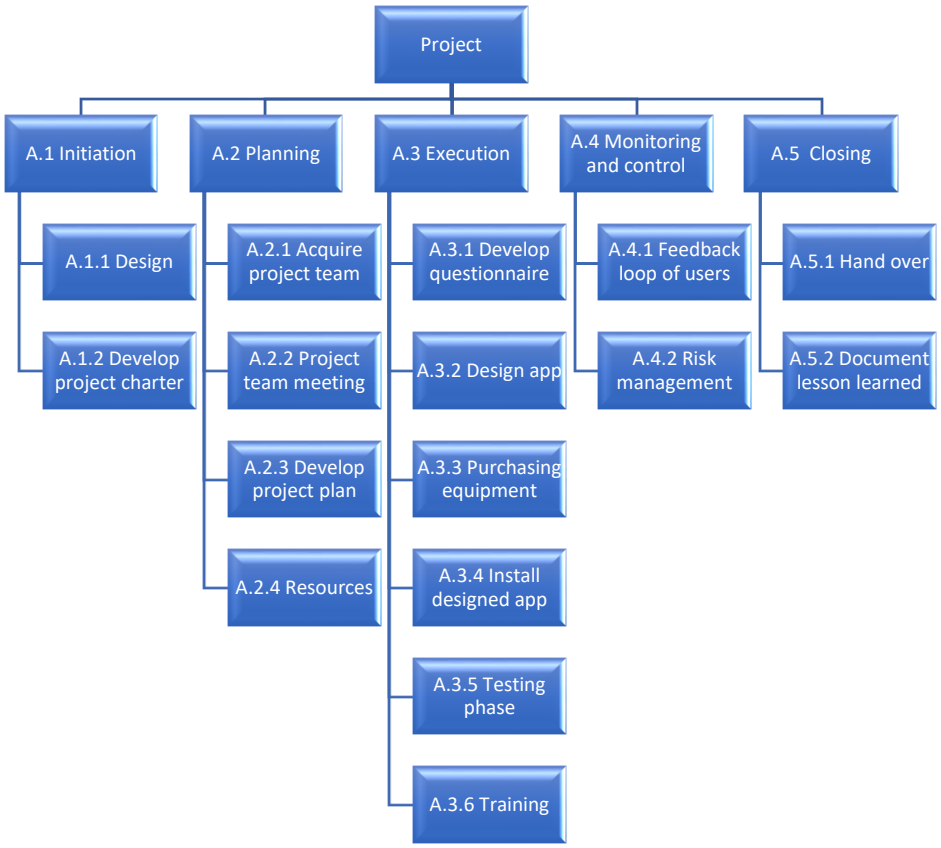


Figure 11. Work Breakdown Structure (Source: Own Elaboration).

4.2.4. Verify Scope

It is the process that consists of formalizing the acceptance of the deliverables of the project that have been completed. For the verification of Scope, the Project Manager will take as a reference and guide, the scope statement defined in this document.

To ensure the satisfactory quality of the products the Project Manager will verify and test the deliverables, alongside the technical team. Further, payment to outsourced consultants will be done upon completing the inspection of the products.

4.2.5. Control Scope

Control Scope is the process of monitoring the status of the project and product scope and managing changes to the scope baseline. (PMI, 2013, p. 136).

The control of the scope of the project represents the steps used to give continuity to the objectives set by the project, considering changes that may arise due to any unforeseen event, changes in costs and other variations that may lead to difficulty in planning of the project.

To be able to control scope, the Project Manager and the project team will work together to achieve the planned deliverables of the project. In the event it is necessary to change the project scope, the project team will present the reasons for the change to the Project Manager. The Project Manager will review the changes and approve or deny the proposal. In case of approval, the Project Manager will communicate the change to all the project team and make the relevant changes in project documents.

4.3. PROJECT SCHEDULE MANAGEMENT

4.3.1 Schedule Management Plan

“Plan Schedule Management is the process of establishing the policies, procedures and documentation for planning, developing, managing, executing and controlling the project schedule” (PMI, 2013, p. 145).

To plan the Schedule Management, there will be used, as an input the scope statement, WBS and any other relevant information to be able to define activities, and duration.

The MS Project (2016) will be used to develop the schedule with activities, sequence and duration. The processes of project schedule management include: plan schedule management, define activities, sequence activities, estimate activity resources, estimate activity duration, develop schedule, and control schedule.

Define Activities

Define activities is the process of identifying and documenting he specific actions to be performed to produce the project deliverables. (PMI, 2013, p. 149)

Table 11. Activity list (Source: Own Elaboration)

WBS	Activity Name	Description of work	Responsibility
A.1	**INITIATION**		
A.1.1	**Design**		Project Team
A.1.1.2	Meeting with the Implementing Partner	Meet the Field offices	Research & Evaluation Specialist
A.1.1.3	Programmed visit to the Refugee camps	Visit the IFCs	Project Assistant
A.1.1.4	Analyze necessities of the IFCs	Analyze books of the register complaints	Research & Evaluation Specialist
A.1.2	**Develop project charter**	Elaborate project charter	
A.1.2.1	Sign approved project charter	Approval of project charter	Project Manager
A.2	**PLANNING**		
A.2.1	**Acquire project team**	Team Selection	Project Manager
A.2.1.1	Interview qualified candidates	Team Selection	Project Manager
A.2.2	Project Team Meeting	Kick-off meeting	Project Manager
A.2.3	Develop project management plan	Documentation	
A.2.4	Resources	Establish the resources needed to develop the project	Project Manager
A.3	**EXECUTION**		
A.3.1	**Develop questionnaire**	Develop the set of question that will be asked by the social workers to the refugees	Project Team
A.3.1.1	Review questionnaire with the Cox's Bazar implementing partner	Review the set of question that will be asked by the social workers to the refugees	Project Team

A.3.2	**Design App**	IT Specialist will develop the app	IT Specialist
A.3.2.1	Meeting with IT Specialist	Meeting to discuss the expected	Research & Evaluation Specialist
A.3.2.2	Development of the App	IT Specialist will develop the app	IT Specialist
A.3.2.3	Development of the Dashboard	IT Specialist will develop the dashboard	IT Specialist
A.3.2.5	Server setup		IT Specialist
A.3.3	Purchasing equipment	Purchase the tables, batteries and sims	Project Assistant
A.3.14	Install App in the tablet	Install the app in the tables for each IFCs	Project Team
A.3.5	**Testing phase**		
A.3.5.1	Performance testing	Test the app	IT Specialist
A.3.5.3	Interphase Testing	Test the app	Research & Evaluation Specialist
A.3.5.2	Device testing	Test the app	Research & Evaluation Specialist
A.3.6	**Training**		
A.3.6.2	Create support material for the training	Document the training and create support material	Research & Evaluation Specialist
A.3.6.1	Coordination for the training in Cox's Bazar	Establish a date for the training	
A.3.6.3	Implement the training	Training for 2 social workers of each IFCs	Research & Evaluation Specialist
A.4	**MONITORING AND CONTROL**		
A.4.1	**Feedback loop of the user**	Monitor the IFCs	
A.4.1.2	Daily monitoring results	Monitor the IFCs	Research & Evaluation Specialist
A.4.1.1	Weekly report	Develop weekly reports	Project Manager and Research & Evaluation Specialist
A.4.2	Risk Management	Review risks	Project Manager

A.5	**CLOSING**		
A.5.1	**Hand-over**	Hand over the project to the implementing partner	Project Manager
A.5.1.1	Coordinated meeting with implementing partner	Establish a date for the hand-over	Project Assistant and Development for Communication Specialist
A.5.1.4	Review the support documentation, contract and training		Project Team
A.5.1.2	Sign the hand-over to the implementing partner	Sign the hand-over	Project Manager
A.5.4	Document lessons learned	Document lessons learned	Development for Communication Specialist

Estimate Activity Duration and Sequence

"Activity duration estimates are quantitative assessments of the likely number of time period that are required to complete an activity" (PMI, p. 172).

For estimating the duration of the activities, the project will utilize expert judgment and analogous estimating. The activities chart and schedule of the project will be created in Gantt Chart - Project 2016.

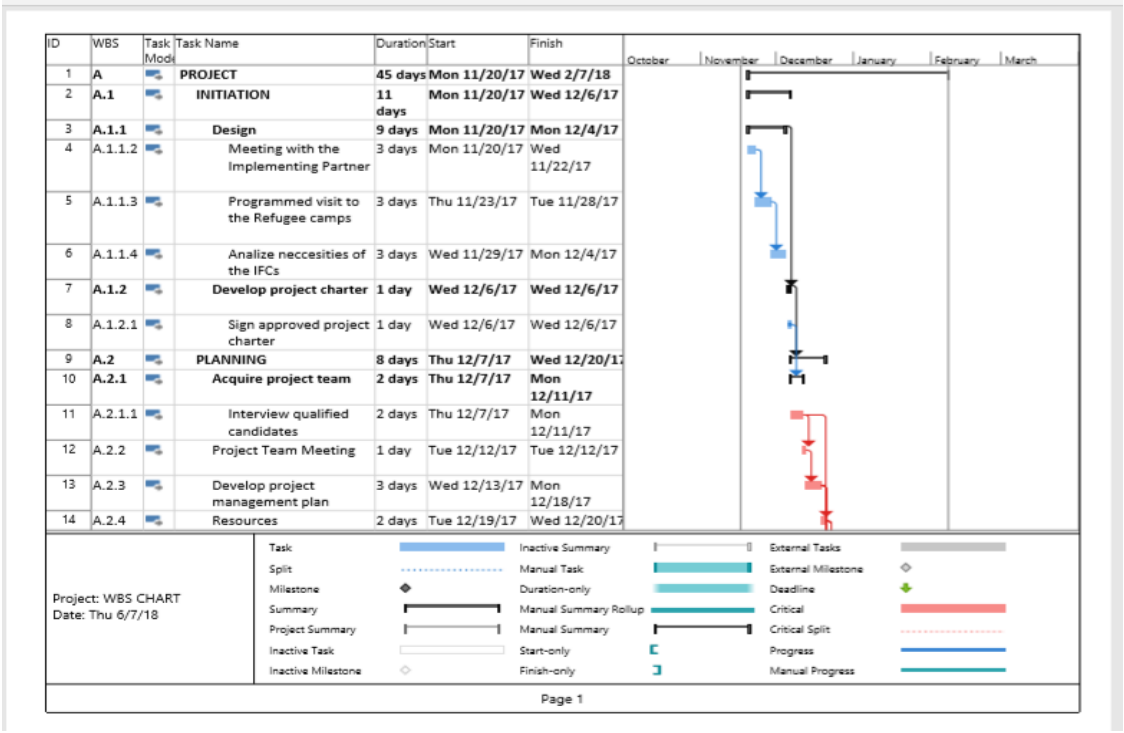
Expert Judgement and a three-point estimating will be utilized, to estimate deviations in schedule as described below in the table 12.

Table 12. Three-Point Estimating (Source: own elaboration)

Description	Optimistic Duration	Most likely Duration	Pessimistic Duration	Expected Duration	Variance	Standard Deviation
Start	0	0	0	0	0	0
Design	7	9	11	54	0.44	0.667
Develop project charter	0.5	1	3	7.5	0.17	0.417

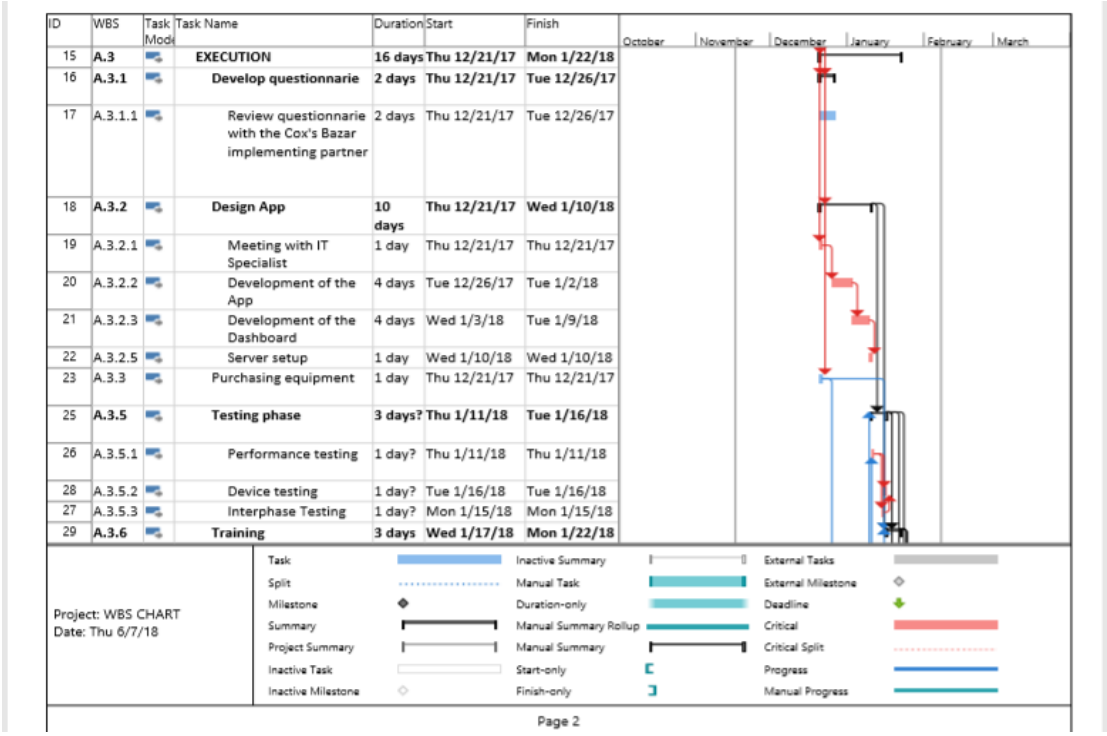
Acquire project team	1	2	4	13	0.25	0.500
Project Team meeting	0.5	1	2	6.5	0.06	0.250
Develop project plan	1	3	5	18	0.44	0.667
Resources	1	2	4	13	0.25	0.500
Develop questionnaire	0.5	2	2	10.5	0.06	0.250
Design app	8	10	15	63	1.36	1.167
Purchase equipment	0.5	1	2	6.5	0.06	0.250
Install designed app	0.5	1	2	6.5	0.06	0.250
Testing phase	1	3	5	18	0.44	0.667
Training	1	3	5	18	0.44	0.667
Feedback loop of the user	4	7	10	42	1.00	1.000
Risk management	1	2	4	13	0.25	0.500
Hand over	4	6	8	36	0.44	0.667
Document lesson learned	1	2	4	13	0.25	0.500
					Critical Variance	0.93056
					Critical path standard Deviation	0.96465

For sequencing of the activities expert judgement will be applied.



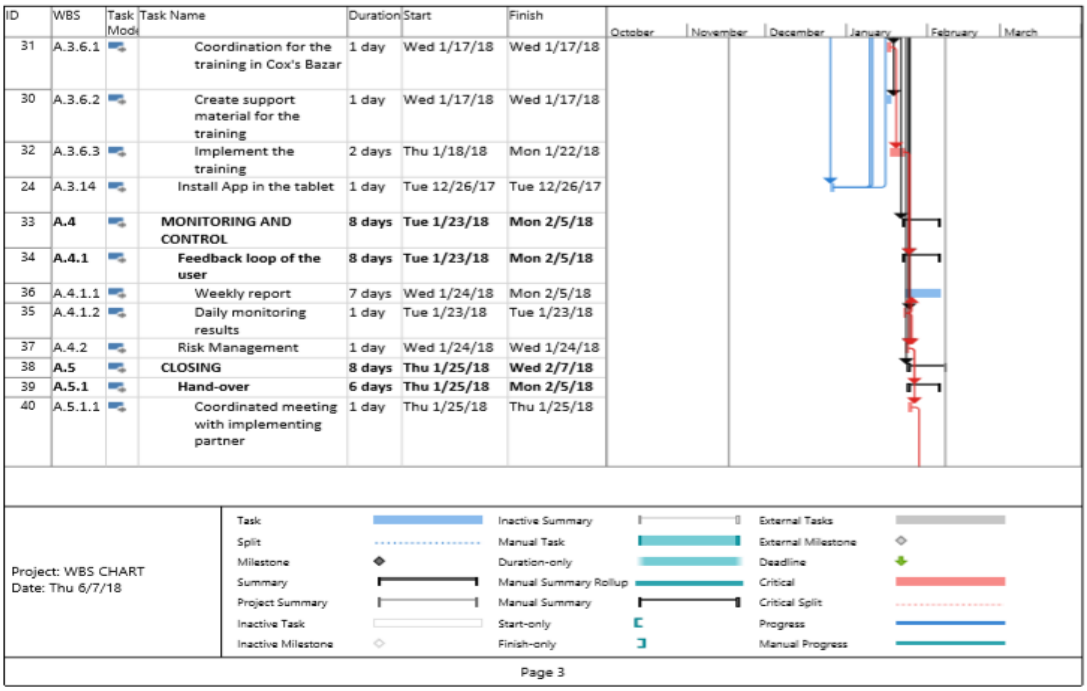
ID	WBS	Task Mode	Task Name	Duration	Start	Finish
1	**A**		**PROJECT**	**45 days**	**Mon 11/20/17**	**Wed 2/7/18**
2	**A.1**		**INITIATION**	**11 days**	**Mon 11/20/17**	**Wed 12/6/17**
3	**A.1.1**		**Design**	**9 days**	**Mon 11/20/17**	**Mon 12/4/17**
4	A.1.1.2		Meeting with the Implementing Partner	3 days	Mon 11/20/17	Wed 11/22/17
5	A.1.1.3		Programmed visit to the Refugee camps	3 days	Thu 11/23/17	Tue 11/28/17
6	A.1.1.4		Analize neccesities of the IFCs	3 days	Wed 11/29/17	Mon 12/4/17
7	**A.1.2**		**Develop project charter**	**1 day**	**Wed 12/6/17**	**Wed 12/6/17**
8	A.1.2.1		Sign approved project charter	1 day	Wed 12/6/17	Wed 12/6/17
9	**A.2**		**PLANNING**	**8 days**	**Thu 12/7/17**	**Wed 12/20/17**
10	**A.2.1**		**Acquire project team**	**2 days**	**Thu 12/7/17**	**Mon 12/11/17**
11	A.2.1.1		Interview qualified candidates	2 days	Thu 12/7/17	Mon 12/11/17
12	A.2.2		Project Team Meeting	1 day	Tue 12/12/17	Tue 12/12/17
13	A.2.3		Develop project management plan	3 days	Wed 12/13/17	Mon 12/18/17
14	A.2.4		Resources	2 days	Tue 12/19/17	Wed 12/20/17

Figure 12. Project Schedule - Gantt Chart (Source: Own Elaboration)



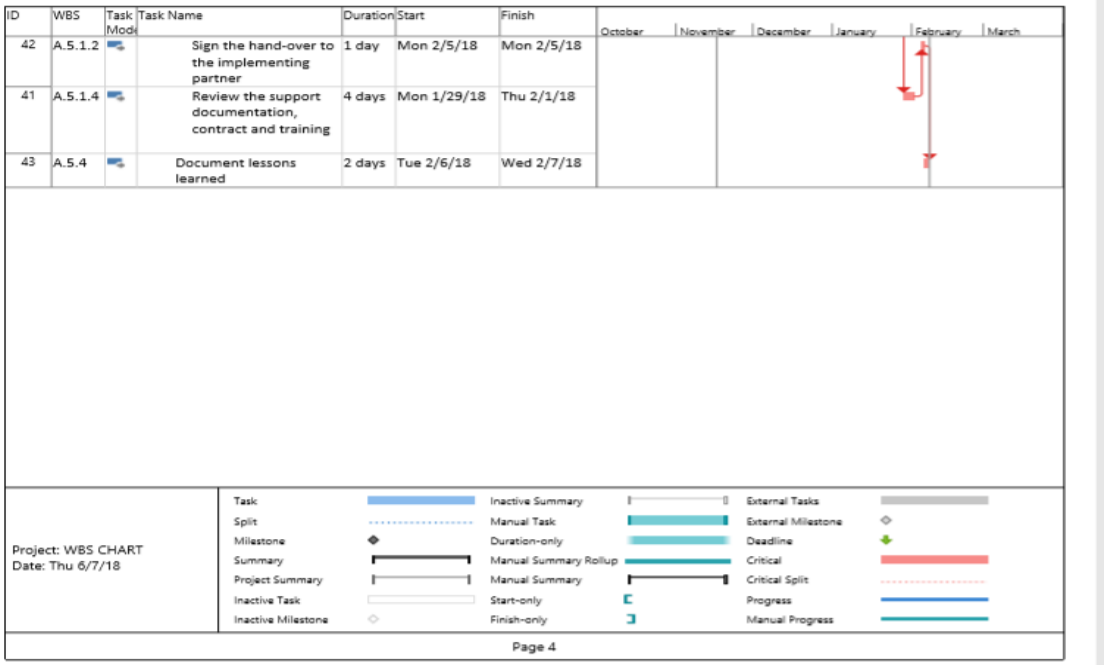
ID	WBS	Task Mode	Task Name	Duration	Start	Finish
15	**A.3**		**EXECUTION**	**16 days**	**Thu 12/21/17**	**Mon 1/22/18**
16	**A.3.1**		**Develop questionnarie**	**2 days**	**Thu 12/21/17**	**Tue 12/26/17**
17	A.3.1.1		Review questionnarie with the Cox's Bazar implementing partner	2 days	Thu 12/21/17	Tue 12/26/17
18	**A.3.2**		**Design App**	**10 days**	**Thu 12/21/17**	**Wed 1/10/18**
19	A.3.2.1		Meeting with IT Specialist	1 day	Thu 12/21/17	Thu 12/21/17
20	A.3.2.2		Development of the App	4 days	Tue 12/26/17	Tue 1/2/18
21	A.3.2.3		Development of the Dashboard	4 days	Wed 1/3/18	Tue 1/9/18
22	A.3.2.5		Server setup	1 day	Wed 1/10/18	Wed 1/10/18
23	A.3.3		Purchasing equipment	1 day	Thu 12/21/17	Thu 12/21/17
25	**A.3.5**		**Testing phase**	**3 days?**	**Thu 1/11/18**	**Tue 1/16/18**
26	A.3.5.1		Performance testing	1 day?	Thu 1/11/18	Thu 1/11/18
28	A.3.5.2		Device testing	1 day?	Tue 1/16/18	Tue 1/16/18
27	A.3.5.3		Interphase Testing	1 day?	Mon 1/15/18	Mon 1/15/18
29	**A.3.6**		**Training**	**3 days**	**Wed 1/17/18**	**Mon 1/22/18**

Figure 13. Project Schedule - Gantt Chart continued (Source: Own Elaboration)



ID	WBS	Task Mode	Task Name	Duration	Start	Finish
31	A.3.6.1		Coordination for the training in Cox's Bazar	1 day	Wed 1/17/18	Wed 1/17/18
30	A.3.6.2		Create support material for the training	1 day	Wed 1/17/18	Wed 1/17/18
32	A.3.6.3		Implement the training	2 days	Thu 1/18/18	Mon 1/22/18
24	A.3.14		Install App in the tablet	1 day	Tue 12/26/17	Tue 12/26/17
33	**A.4**		**MONITORING AND CONTROL**	**8 days**	**Tue 1/23/18**	**Mon 2/5/18**
34	**A.4.1**		**Feedback loop of the user**	**8 days**	**Tue 1/23/18**	**Mon 2/5/18**
36	A.4.1.1		Weekly report	7 days	Wed 1/24/18	Mon 2/5/18
35	A.4.1.2		Daily monitoring results	1 day	Tue 1/23/18	Tue 1/23/18
37	A.4.2		Risk Management	1 day	Wed 1/24/18	Wed 1/24/18
38	**A.5**		**CLOSING**	**8 days**	**Thu 1/25/18**	**Wed 2/7/18**
39	**A.5.1**		**Hand-over**	**6 days**	**Thu 1/25/18**	**Mon 2/5/18**
40	A.5.1.1		Coordinated meeting with implementing partner	1 day	Thu 1/25/18	Thu 1/25/18

Figure 14. Schedule – Gantt Chart continued (Source: Own Elaboration)



ID	WBS	Task Mode	Task Name	Duration	Start	Finish
42	A.5.1.2		Sign the hand-over to the implementing partner	1 day	Mon 2/5/18	Mon 2/5/18
41	A.5.1.4		Review the support documentation, contract and training	4 days	Mon 1/29/18	Thu 2/1/18
43	A.5.4		Document lessons learned	2 days	Tue 2/6/18	Wed 2/7/18

Figure 15. Schedule – Gantt Chart (Source: Own Elaboration)

Critical Path Method

The critical path method (CPM) determines the minimum total project duration and the earliest possible finish date of the project as well as the amount of scheduling flexibility (total float) in the schedule model.

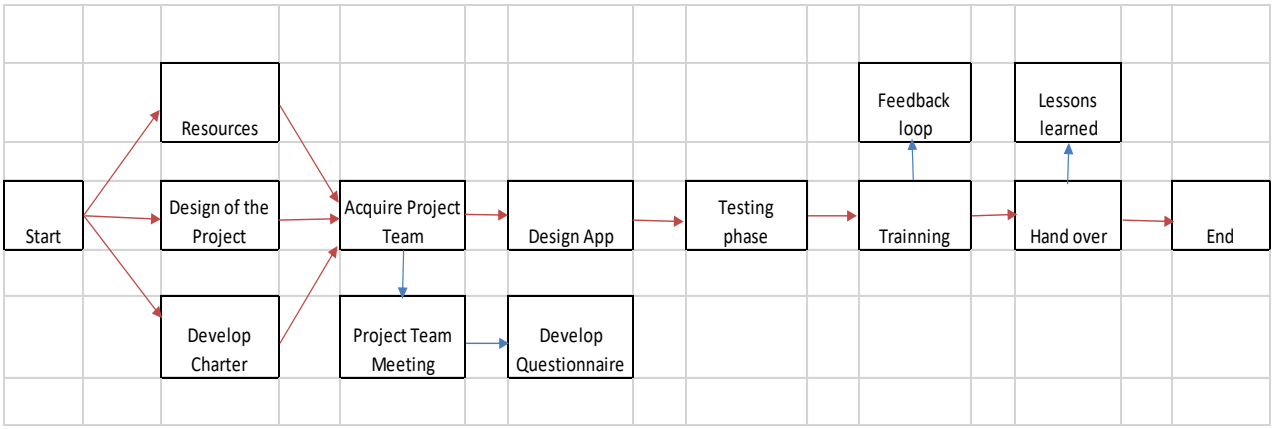


Figure 16. Critical Path (Source: Own Elaboration)

4.3.3 Control Schedule

The Project Schedule will be revised and updated as necessary. The Project Manager is responsible for revising, updating, making changes and authorizing changes to the schedule, if it's needed. The Sponsor will be informed of the project schedule status and will review change requests submitted by the Project Manager. The Project Team will participate in all the meetings where schedule updates are reviewed and will communicate any change to the Project Manager.

For Change control processes, the project manager will review and document progress in the activities.

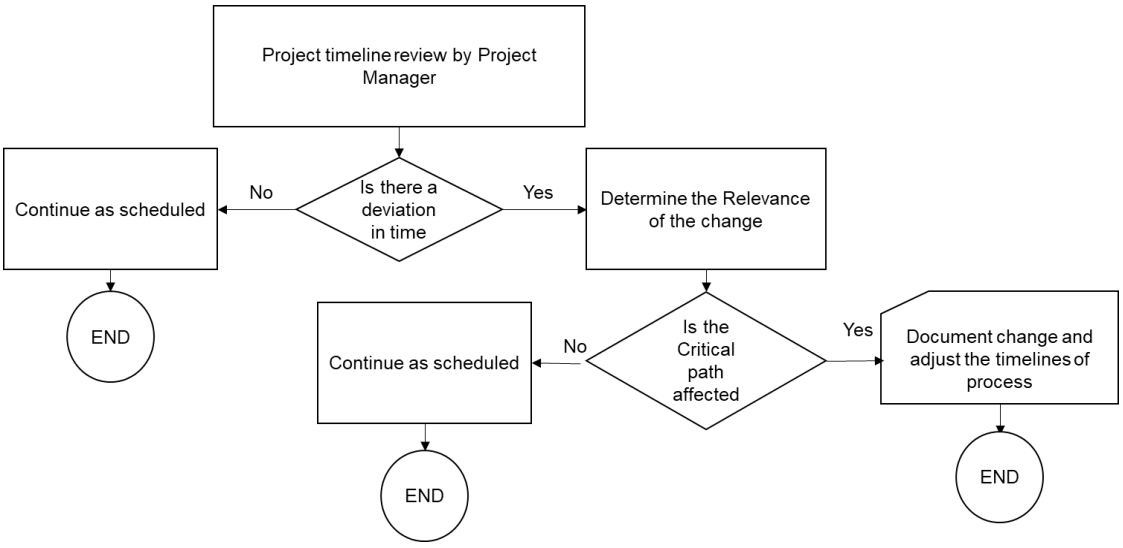


Figure 17. Schedule – Change control (Source: Own Elaboration)

4.4. PROJECT COST MANAGEMENT

4.4.1 Plan Cost Management

“Plan Cost management is the process that establishes policies, procedures, and documentation for planning, managing, expending, and controlling project costs” (PMI, 2013, p. 195).

To develop the cost management plan it will be used the expert judgment and meetings with the project team.

4.4.2 Estimate Costs

Estimate cost is the process of developing an approximation of the monetary resources needed to complete de project activities. (PMI 2013, p.436)

Expert judgment and analogous estimating tools and techniques will used, analysing historical information of similar projects to be estimate cost of this project. Additionally, the reserve analysis was made to include the contingency reserve to cover the identify risks that have been accepted and for which contingent or mitigation responses are developed. Also, the management reserve was included

as well to address the risks that still haven't been identified that could affected the project.

4.4.3 Determine Budget

Determine budget is the process of aggregating the estimated costs of individual activities or work packages to establish authorized cost baseline. (PMI 2013, p. 437)

To determine the budget, it's fundamental to calculate the expenses for the initiation, planning, execution, monitoring, control and hand over of the project. As the location of the project is in Cox's Bazar and the project manager, assistant of the project, IT Specialist, and the Resource & Evaluation Specialist are working daily in Dhaka, some expenses in travelling, per diem and food must be included in the project's budget. The Communication for Development Specialist is based in Cox's Bazar.

When the application is ready, the Research & Evaluation Specialist will travel to Cox's Bazar to deliver the nine electronic tablets, the power banks and the sim cards that have been previously purchased; will install the application and will train the ISPs that work daily in the nine IFCs in the different refugee camps.

Table 13. Project Budget (Source: Own Elaboration)

PROJECT BUDGET				
Description	Quantity	Unit cost	Total Cost	
Personnel				
Project Manager	14	500	$	7,000.00
Project Assistant	10	200	$	2,000.00
Research and Evaluation Specialist	20	350	$	7,000.00
Communication for Development Specialists	24	350	$	8,400.00
			$	-
Initial Travel			$	-
Per diem	4	75	$	300.00
Air flight	2	120	$	240.00

			$	-
Second Travel			$	-
Air flight	2	120	$	240.00
Per diem	4	75	$	300.00
			$	-
Training			$	-
Air fight	1	120	$	120.00
Per diem	2	75	$	150.00
Food	26	10	$	260.00
Venue	2	200	$	400.00
			$	-
Purchasing equipment			$	-
Tablet	11	500	$	5,500.00
Power banks batteries	11	42	$	462.00
SIM Cards	11	2	$	22.00
			$	-
Outsource			$	-
IT Specialist	10	250	$	2,500.00
Miscellaneous	1		$	1,705.00
Sub-Total			$	36,599.00
Contingency Reserve (10 %)			$	3,659.90
Sub-Total (Cost Baseline)			$	40,258.90
Management Reserve (5 %)			$	2,012.95
TOTAL OF PROJECT BUDGET			$	42,271.85

4.4.4 Change Control Process

The chance control process is initiated by a periodic review of the project implementation, and associated cost, led by the project manager.

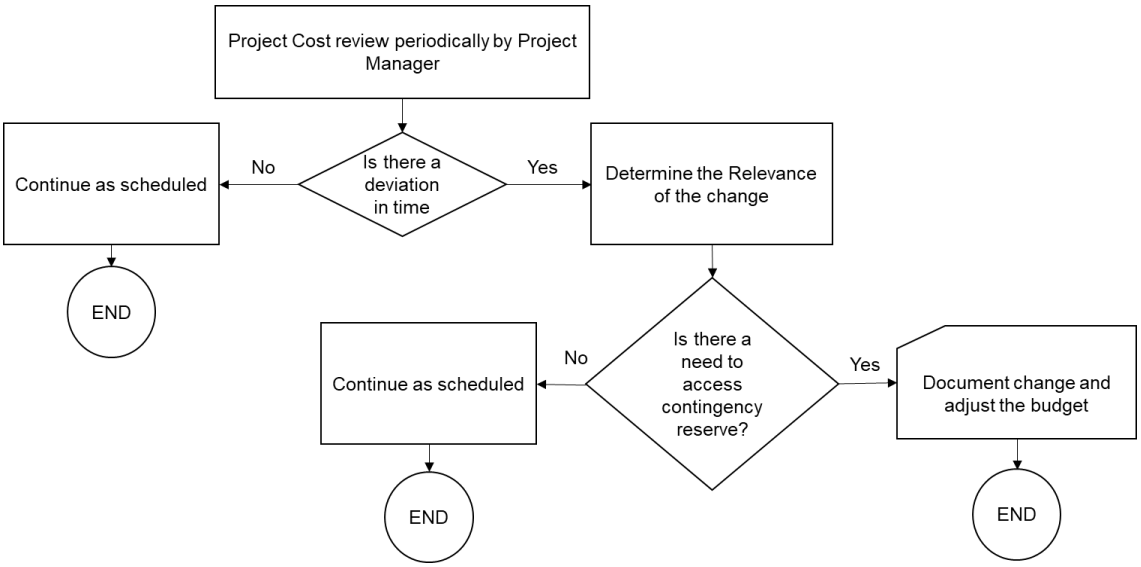


Figure 18. Change control process (Source: Own Elaboration)

4.5. PROJECT QUALITY MANAGEMENT

The Quality Management for the Real Time System for IFCs will include all the processes and activities necessary to insure quality product at the completion of the project.

Quality Management Approach

At the beginning of the emergency in the IFC a box for complains was created in order to gather a feedback from the refugees. This method was substituted afterwards because most of the refugee have none or small education and could not read or write. As a second idea, the IFCs implemented a new approach asking a questionnaire to the refugees attending the centres. They were register manually in a complaint book that then was send to the Dhaka offices for evaluating trends and shared with the relevant sections. This system was operated for months with an ineffective response to the emergency. After some field visit to the refugee camps, the UNICEF Social Policy, Evaluation, Analytics and Research (SPEAR) section decided to create and implement the Real-Time System Open Data Kit (ODK) application to digitalize feedback and generate a dashboard.

In order to define the quality standard for this project, we will need, as an input, the following: scope, cost and schedule baseline and any other relevant information defined in this document before. The project manager will define the quality standard for the development of the platform ODK (Open Data Kit).

Plan Quality Management: Tools and Techniques

Table 14. Cost of Quality

Cost of Conformance	Cost of Nonconformance
Training the ISPs	Redo the platform and app
Air flight	Training again
Per diem	Rework for all the project team
Inspections	Extra expenses
Testing	

Other tools that will be used are the following:

- Meeting: a meeting will be held at outset to introduce the project to the team, identify and prioritize stakeholders and their requirements and to get ideas via brainstorming in order to establish a quality management plan. Said meetings will also be held periodically to ascertain the progress of the team and if there are any delays determine corrective actions to be applied to get back on track.
- Flowchart: a flowchart will be used to establish the sequence of events. To avoid possible points of deviation, and if things are going wrong they will be identified and appropriate corrective measures would be established.
- Benchmarking: this tool will be used by examination of past similar projects to obtain best practices for supplier selection, to prioritize these suppliers and to provide the basis for measuring performance.
- Inspection: frequent inspections will be carried out to ensure that the project is progressing as planned.

Table 15. Quality Metrics (Source: Own Elaboration)

Quality Requirements	Quality Metrics	Quality Metrics description	Result	Responsible	Frequency
Meet the Scope of the project	Percentage of activities completed by deliverable	Through this tool it's possible to visualize the progress of the project. Total of activities completed against the total planned activities. X= AC / AP AC = Activities Completed AP = Planned Activities	Greater than 90%	Project Team	Weekly
Meet the Project Timeline	Schedule performance index (SPI)	It allows to measure the efficiency of the timetable. SPI = EV / PV EV = Earned Value PV = Planned Value	Minor or equal to 1	Project Team	Weekly
Meet the project budget	Cost performance index (CPI)	It allows to measure the efficiency of the timetable. CPI= EV / AC EV= Earned Value AC= Actual Cost	Greater than or equal 1%	Project Team	Weekly

Perform Quality Assurance

“Perform Quality Assurance is the process of auditing the quality requirements and the results from quality control measurements to ensure that appropriate quality standard and operational definitions are used.” (PMI, p. 242).

In order to perform quality assurance, the following steps will be performed by the project team:

1. Review the quality metrics and use the quality audits tool to identify if the project has been developed as expected in terms of quality, time, budget and scope.
2. Investigate other emergencies where IFCs have been developed to take advantages of the methodology used though benchmarking.
3. Ensure that the main stakeholders have fully understood how the requirements will be met and maintain communication with them thought the entire development of the project to avoid misunderstanding.
4. Find the necessary resources to accomplish the requirements of the project.

Through the process and steps described above, if there are any lesson learned that could contribute to the organization, it should be documented for future emergencies or similar projects in the future.

When any change in the project is suggested, it is required to submit a Change Request Form, as it is described in Appendix 5.

Control Quality

Control quality is the process of monitoring and recording results of executing the quality activities to assess performance and recommend necessary changes. (PMI, 2013, p. 248)

In order to control quality, the following steps will be performed:

1. Establish control measurements in which specific requirements will be assigned to each person of the project team. This member of the project team

will be responsible for overseeing and verifying that requirements are delivered. However, the project manager will provide oversight in all areas.

2. Routine inspection will be held by the Communication for Development Specialist to assure that the ISPs are performing as expected and updating the mobile software.
3. Periodical visits for inspection will be held by the Research and Evaluation Specialist to give extra support and train new ISPs.
4. With reference to the mobile software platform, the IT Specialist will be required to provide a full maintenance during six months after the hand-over of the project. After this period, the UNICEF implementing partner, in charge of the refugee camps, will take over the platform maintenance and will monitor the IFCs in order to make sure the platform is being updated.
5. Produce frequent progress reports to verify that results are accurate and in alignment with project scope. Reports will be delivered in regular meetings.
6. Analyze the results of quality audits - non-compliant activities identified will undergo immediate corrective or preventative action in accordance with the established integrated change control process and change logs will be updated.
7. Monitor cost and schedule performance by examining planned versus actual results - source of variances will be identified and the necessary corrective actions taken.
8. Monitor and evaluate the results of corrective actions and produce quality control reports.
9. As a quality control, the project team and the project manager will verify and compare if the work was in compliance with the written project with the Quality Metrics (table 15) described above. Additionally, the project manager will review any modification added to the original Management Plan.

Change Control Process

To ensure alignment with the objectives of the charter, it is crucial to document the changes in any quality aspect of the project.

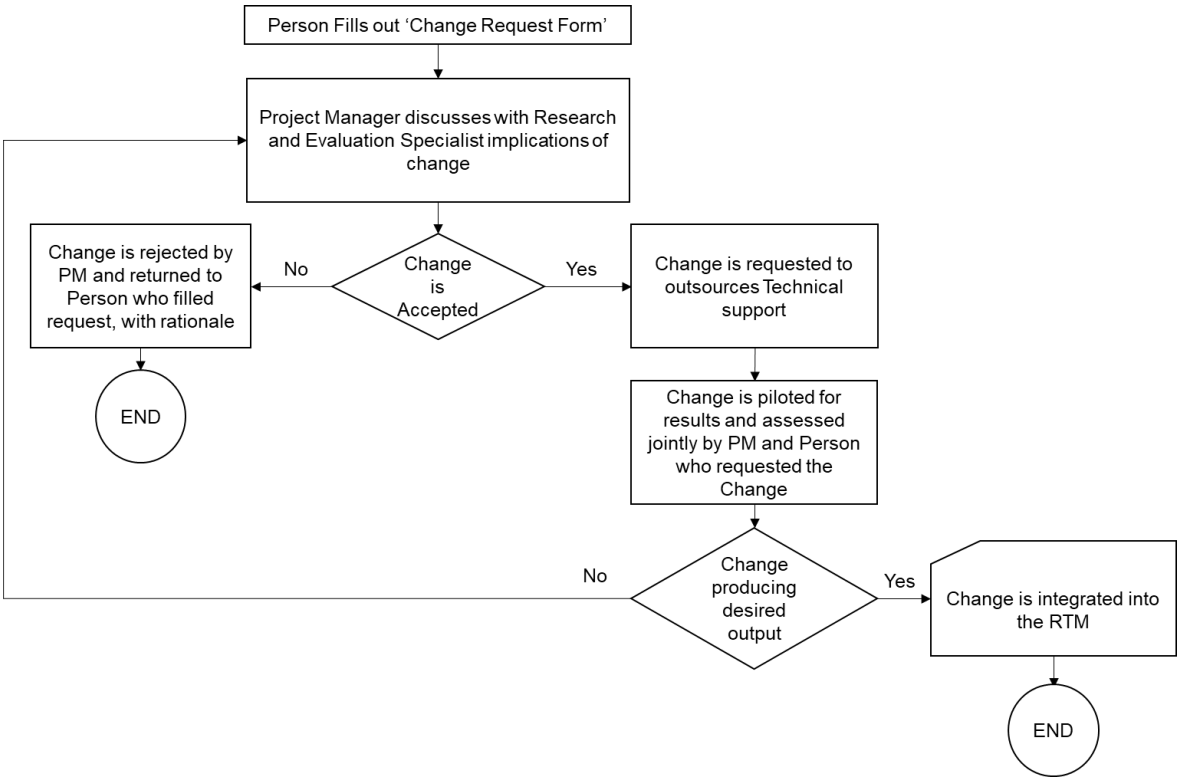


Figure 19. Change control process (Source: Own Elaboration)

4.6. PROJECT HUMAN RESOURCE MANAGEMENT

4.6.1 Plan Human Resource Management

Roles and Responsibilities

Defining roles and responsibilities for each member of the project team involved in the Project Real-Time System, is vital to achieve the project goals. All team members must clearly understand their roles and responsibilities to successfully accomplish their part of the work. Roles and responsibilities are detailed as follows:

1. Project Manager

The project manager creates and manages the detailed work plan, tracks progress, and reports the status against the work plan; manages the project scope and the project risk management; Manage project changes control.

2. Assistant of the project

The assistant of project will be responsible of updating documentation and reserving air flights and scheduling visit for the field visit of the project team. Additionally, will support the project team on their daily work.

3. Research and Evaluation Specialist

The Research and Evaluation Specialist work hand to hand with the project manager to design the project and participate in the creation of the questionnaire for the IFCs. In addition, will visit the refugee camps to evaluate and train the ISPs.

4. Communication for Development Specialist

The Communication for Development Specialist will be responsible for organizing the gathering for the training, revising questionnaires and monitoring the IFCs. Also, he will be involved with other activities to ensure a linkage with the community accountability and communication with the implementing partner.

5. Implementing partner

The implementing partner will be responsible of the operating of the IFCs in the refugee camps and the run of the application.

6. IT Specialist

The IT Specialist will be responsible of programming the platform and design of the application.

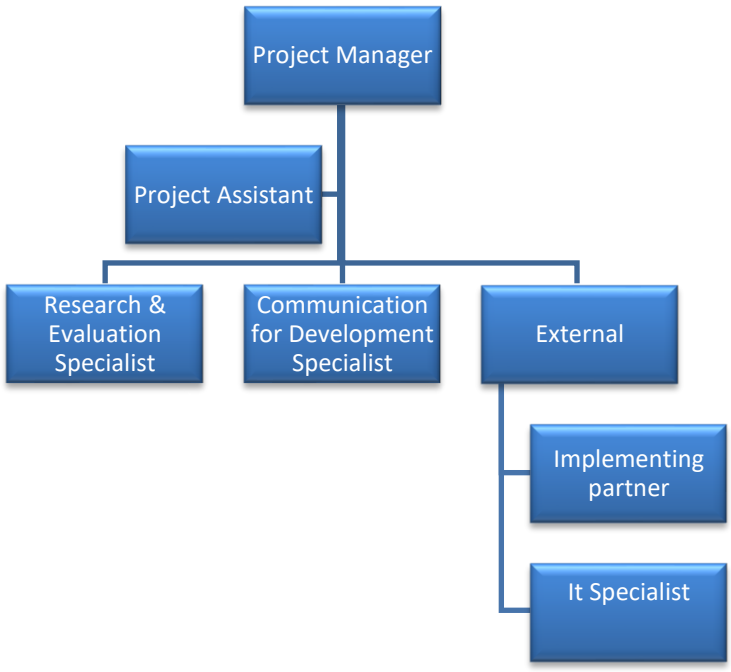


Figure 20. Project Organizational Chart. (Source: Own elaboration)

The RACI Chart, described below in table 13, shows the relationship between project tasks and team members. If there is any change in project responsibilities, the proposed changes should be reviewed and approved by the project manager. These changes should be proposed in accordance with the project's change control process. When changes are made, all project documents should be updated and redistributed accordingly.

Table 16. RACI Chart (Source: Own Elaboration)

	PERSON					
Activity	PM	R & E Specialist	Communication for Development Specialist	Project Assistant	Implementing Partner	IT Specialist
Design	R	A	I	I	C	
Meeting with the Implementing Partner	R	A	C	I	C	
Programmed visit to the Refugee camps	R	A	I	I	I	
Analyze necessities of the IFCs	R	R	R	I	C	
Develop project charter	C	R	C	I	I	
Sign approved project charter	R	I	I	I	I	
Acquire project team	R	A	A	A	I	
Interview qualified candidates	R	A				I
Project Team Meeting	R	I	I	I	I	
Develop project plan	R	A	C	I	C	
Resources	R	I	I	I		

Develop questionnaire	R	C	C	I	C	
Review questionnaire with the Cox's Bazar implementing partner	C	R	A		C	
Design App	A	R	C	I	C	A, R
Meeting with IT Specialist	A	R				A
Development of the App	A	C				A, R
Development of the Dashboard	A	C				A, R
Server Setup	A	C				A, R
Purchasing equipment	A	A	I	R	I	
Install designed App	A	R	I	I	C	
Testing phase	C	R	I	I	C	A
Performance testing	C	R				A
UI Testing	C	R				A
Device Testing	C	R				A
Training	A	R	C	I	C	
Create support material for the training	A	R	I	I	I	

Coordination for the training in Cox's Bazar	A	C	R	I	C	
Implement the training	C	R	C	I	C	
Feedback loop of the user	A	C	R	I	A	
Daily monitoring results	I	R	C		I	
Weekly report	R	A	I	I	I	
Risk Management	A	R	I	A	A	
Hand-over	R	A	A	I	A	
Coordinated meeting with implementing partner	A	A	R	R	I	
Review the support documentation, contract and training	C	R	A	I		
Sign the hand-over to the implementing partner	R	A	C	I		
Document lessons learned	A	A	R	I	I	

R – Responsible for completing the work.

A – Accountable for ensuring task completion.

C – Consulted before any decisions are made.

I – Informed of when an action or decision has been made.

4.6.2 Acquire project Team

The staff for the development of the project will be provided by UNICEF-Dhaka and one staff member by UNICEF Cox's Bazar. The IT Specialist will be the only outsourced employee for this project.

Training

The Research and Evaluation Specialist will plan and schedule a training phase for the Implementing Partner and ISPs who work in the IFCs and Cox's Bazar offices. Two persons from each IFCs and staff members of the UNICEF implementing partner will be trained to run the application and continue training the employees as needed.

Team Meetings

The project team will meet every week via Skype or face to face to give updates and discuss any arising issues in the process.

Resource Calendars

This project cycle will last 45 days during which the Project Manager and the project team won't work on weekends and holidays, unless the project is running behind schedule. All the resources must be available before the project begins.

- Project Manager: 14 days of work (some days will be in the field offices in Cox's Bazar and some others in the office in Dhaka, Bangladesh)
- Project Assistant: 10 days of work in Dhaka, Bangladesh
- Research and Evaluation Specialist: 20 days of work (some days in the field offices in Cox's bazar and some others in the office in Dhaka).
- Communication for Development Specialist: 24 days in the refugee camps.
- IT Specialist will work for 10 days in the development of the application platform.

Table 17. Resource Calendar (Source: Own Elaboration)

WBS	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Name
A	**Auto Scheduled**	**PROJECT**	**45 days**	**Mon 11/20/17**	**Wed 2/7/18**		
A.1	**Auto Scheduled**	**INITIATION**	**11 days**	**Mon 11/20/17**	**Wed 12/6/17**		
A.1.1	**Auto Scheduled**	**Design**	**9 days**	**Mon 11/20/17**	**Mon 12/4/17**		Project Team
A.1.1.2	Auto Scheduled	Meeting with the Implementing Partner	3 days	Mon 11/20/17	Wed 11/22/17		Project Manager
A.1.1.3	Auto Scheduled	Programmed visit to the Refugee camps	3 days	Thu 11/23/17	Tue 11/28/17	4	Project Manager, Research & Evaluation Specialist
A.1.1.4	Auto Scheduled	Analyze necessities of the IFCs	3 days	Wed 11/29/17	Mon 12/4/17	5	Project Team
A.1.2	**Auto Scheduled**	**Develop project charter**	**1 day**	**Wed 12/6/17**	**Wed 12/6/17**	**3**	**Research & Evaluation Specialist**
A.1.2.1	Auto Scheduled	Sign approved project charter	1 day	Wed 12/6/17	Wed 12/6/17		Project Manager
A.2	**Auto Scheduled**	**PLANNING**	**8 days**	**Thu 12/7/17**	**Wed 12/20/17**	**7**	
A.2.1	**Auto Scheduled**	**Acquire project team**	**2 days**	**Thu 12/7/17**	**Mon 12/11/17**	**8**	**Project Manager**
A.2.1.1	Auto Scheduled	Interview qualified candidates	2 days	Thu 12/7/17	Mon 12/11/17		Project Manager and Research & Evaluation Specialist
A.2.2	Auto Scheduled	Project Team Meeting	1 day	Tue 12/12/17	Tue 12/12/17	11	Project Manager

A.2.3	Auto Scheduled	Develop project management plan	3 days	Wed 12/13/17	Mon 12/18/17	12	Project Team
A.2.4	Auto Scheduled	Resources	2 days	Tue 12/19/17	Wed 12/20/17	13	Project Manager
A.3	**Auto Scheduled**	**EXECUTION**	**16 days**	**Thu 12/21/17**	**Mon 1/22/18**	**13**	
A.3.1	**Auto Scheduled**	**Develop questionnaire**	**2 days**	**Thu 12/21/17**	**Tue 12/26/17**	**14,13**	**Project Team**
A.3.1.1	Auto Scheduled	Review questionnaire with the Cox's Bazar implementing partner	2 days	Thu 12/21/17	Tue 12/26/17		Project Team
A.3.2	**Auto Scheduled**	**Design App**	**10 days**	**Thu 12/21/17**	**Wed 1/10/18**	**14**	**IT Specialist**
A.3.2.1	Auto Scheduled	Meeting with IT Specialist	1 day	Thu 12/21/17	Thu 12/21/17	11	Project Manager and Research & Evaluation Specialist
A.3.2.2	Auto Scheduled	Development of the App	4 days	Tue 12/26/17	Tue 1/2/18	19	IT Specialist
A.3.2.3	Auto Scheduled	Development of the Dashboard	4 days	Wed 1/3/18	Tue 1/9/18	20	IT Specialist
A.3.2.5	Auto Scheduled	Server setup	1 day	Wed 1/10/18	Wed 1/10/18	21	IT Specialist
A.3.3	Auto Scheduled	Purchasing equipment	1 day	Thu 12/21/17	Thu 12/21/17	14	Project Assistant
A.3.14	Auto Scheduled	Install App in the tablet	1 day	Tue 12/26/17	Tue 12/26/17	23	Communication for Development specialist, Resource &

							Evaluation Specialist
A.3.5	**Auto Scheduled**	**Testing phase**	**3 days**	**Thu 1/11/18**	**Tue 1/16/18**	**24,18**	**IT Specialist**
A.3.5.1	Auto Scheduled	Performance testing	1 day	Thu 1/11/18	Thu 1/11/18	24	IT Specialist
A.3.5.3	Auto Scheduled	UI Testing	1 day	Mon 1/15/18	Mon 1/15/18	26	IT Specialist
A.3.5.2	Auto Scheduled	Device testing	1 day	Tue 1/16/18	Tue 1/16/18	26,27	Research & Evaluation Specialist
A.3.6	**Auto Scheduled**	**Training**	**3 days**	**Wed 1/17/18**	**Mon 1/22/18**	**25,18,23,24**	
A.3.6.2	Auto Scheduled	Create support material for the training	1 day	Wed 1/17/18	Wed 1/17/18	25	Research & Evaluation Specialist
A.3.6.1	Auto Scheduled	Coordination for the training in Cox's Bazar	1 day	Wed 1/17/18	Wed 1/17/18	25	Project Assistant and Communication for Development Specialist
A.3.6.3	Auto Scheduled	Implement the training	2 days	Thu 1/18/18	Mon 1/22/18	31	Research & Evaluation Specialist
A.4	**Auto Scheduled**	**MONITORING AND CONTROL**	**8 days**	**Tue 1/23/18**	**Mon 2/5/18**	**25**	
A.4.1	**Auto Scheduled**	**Feedback loop of the user**	**8 days**	**Tue 1/23/18**	**Mon 2/5/18**	**29,32**	Communication for Development specialist
A.4.1.2	Auto Scheduled	Daily monitoring results	1 day	Tue 1/23/18	Tue 1/23/18	29	Communication for Development specialist
A.4.1.1	Auto Scheduled	Weekly report	7 days	Wed 1/24/18	Mon 2/5/18	35	Communication for

							Development specialist
A.4.2	Auto Scheduled	Risk Management	1 day	Wed 1/24/18	Wed 1/24/18	29,32,35	Project Manager
A.5	**Auto Scheduled**	**CLOSING**	**8 days**	**Thu 1/25/18**	**Wed 2/7/18**	**25**	
A.5.1	**Auto Scheduled**	**Hand-over**	**6 days**	**Thu 1/25/18**	**Mon 2/5/18**	**37**	
A.5.1.1	Auto Scheduled	Coordinated meeting with implementing partner	1 day	Thu 1/25/18	Thu 1/25/18	37	Communication for Development specialist
A.5.1.4	Auto Scheduled	Review the support documentation, contract and training	4 days	Mon 1/29/18	Thu 2/1/18	40	Project Team
A.5.1.2	Auto Scheduled	Sign the hand-over to the implementing partner	1 day	Mon 2/5/18	Mon 2/5/18	41	Project Manager
A.5.4	Auto Scheduled	Document lessons learned	2 days	Tue 2/6/18	Wed 2/7/18	42	Communication for Development specialist

4.6.3 Manage Project Team

The project change request will be managed and maintained by the project manager by using an issue log to document and monitor the issues that arise and the person responsible for solving them.

Additionally, weekly work performance reports will be implemented and sent after the face to face meeting or Skype to give updates in schedule, cost, quality control and scope validation.

Any changes that need to be addressed will be routed through the integrated change control process in collaboration with the project team; however, the project manager will approve or disapprove any change.

Some of the tools and techniques that will be implemented to manage the project team are the following:

- **Observation and Communication**

The Communication for Development Specialist will program frequent walk through to observe and stay in touch with the IFCs to monitor and evaluate the progress of the work. Within the communication methods there will be the weekly meeting in which will be reported all advances of the project. These observations will provide the opportunity to talk to the implementing partner and ISPs in the IFCs to disclose potential challenges and conflicts that may delay work, and monitor work.

- **Conflict Management**

Conflict situations are common in any project environment. The goal will be to prevent and minimize the effects of conflicts when they arise. The implementing partner is responsible for resolving interpersonal conflicts that may occur in the IFCs among the ISPs; furthermore, the project manager will be responsible for the conflicts that could arise within the project team. However, if the conflict doesn't affect the project deliverables should be resolved between the parties. In case is not resolved at this level, then the project manager will intervene adopting a "smooth/accommodate technique to emphasize the areas of agreement rather than those of difference; conceding one's position to the needs of the other to maintain harmony and good relationships." (PMI, p. 283)

- **Interpersonal Relationships**

The project manager and implementing partner will utilize leadership and effective communication skills to motivate, manage and influence the project team and ISPs.

4.7. PROJECT COMMUNICATION MANAGEMENT

The communication management plan will facilitate the communication with the stakeholders from initiation to closing of the project. The project manager will be responsible of the communication with the project team during the project.

Communication Matrix

The Communications Matrix is used to specify detailed information regarding the communication activities that are utilized during the development of the project. The communication matrix is developed and maintained by the Assistant of the Project. The project team will work together to develop a matrix of communication for every activity of the project. This matrix would include the following:

- Person responsible for communicating with the designated audience
- Description of the purpose of the communication
- Communication methods used and frequency
- Communication technologies
- Processes for vetting communication messages

Table 18. Communication Matrix (Source: Own Elaboration)

Communication Type	Objective of Communication	Medium	Frequency	Responsible	Audience	Deliverable	For-mat
Kick-off meeting	Introduce the project team and stakeholder involved in the project.	Face to face	Once	Project Manager	Project manager, project team and implementing partner	Agenda and Meeting minutes	Soft copy archived and email
Project Team meetings	Weekly progress report	Face to Face or via skype	Weekly	Project Manager	Project Team	Agenda, meeting minutes, project schedule, costs and	Soft copy archived and email

						implementation.	
Monthly meeting	Report status of the project to sponsor	Skype	One time per month	Project Manager	Project Manager, research and evaluation specialist and sponsor	Updates of the project. Review project schedule, cost, trouble shooting.	Soft copy archived and email
Project status report	Report the status of the project	Email	One time per month	Resource & Evaluation specialist	Project Team and Sponsor	Project schedule	Soft copy archived and email

Control Communication

Issue Log

An issue log will be maintained by the project team and all issues that arise in the execution of the project will be documented here below (table 16). Qualified staff will be assigned according to their expertise and competence to ensure continuation of the project in the event of a disruption:

Table 19. Issue Log (Source: Own Elaboration)

#	Description	Report by	Date	Responsible Officer	Priority	Actions or progress notes	Status	Date Resolved
1	The website is not working	Assistant of the project	10/05/17	IT Specialist	High	Called the IT Specialist for immediate action	In process	

2	Training delayed due to availability of the specialist	Communication for development specialist	05/06/18	Research and Evaluation Specialist	High	Training scheduled in 2 days	Completed	07/06/18

4.8. PROJECT RISK MANAGEMENT

Risk Identification

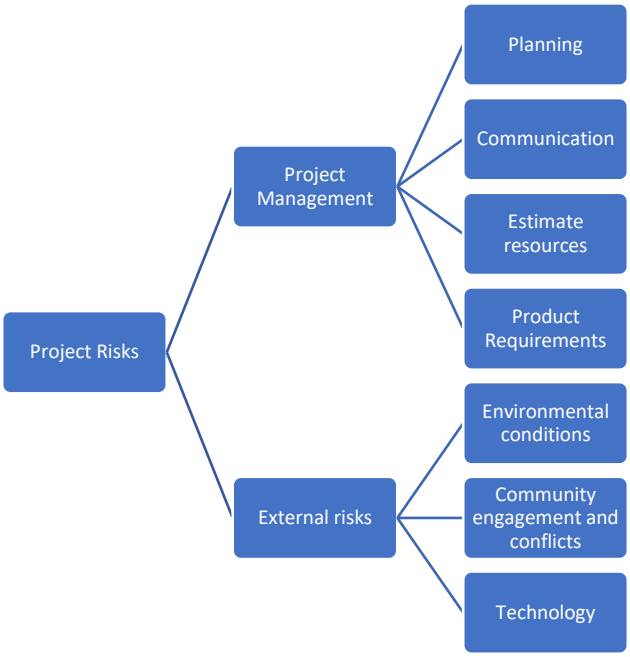


Figure 21. RBS. (Source: Own Elaboration)

4.8.1 Risk Analysis

Probability & Impact Scales

To obtain ideal benefit from the risk analysis, it is necessary to define the levels of probability and impact of the project risks. Based on the basic information provided,

the project indicates a total budget of $42,271.85 thousand dollars and the estimated execution time of 45 days. With the help of these data and the estimates collected from the PMBOK, the following values have been calculated:

Table 20. Probability and Impact Scale (Source: Own Elaboration)

Scale/Project Objectives	Very Low (0.05)	Low (0.10)	Moderate (0.20)	High (0.40)	Very high (0.80)
Cost	Insignificant cost increase	$ 46,499.03	$ 50,726.22	$ 59,180.59	> 76,089.33
Schedule	Insignificant time increase	< 15 days to 1 month	1 – 2 months	2 - 4 months	> 4 months
Scope	Insignificant scope reduction	Small areas of scope affected		Complete areas of scope affected	
Quality	Unnoticeable quality reduction	Minor quality reduction	Notable Quality reduction	Quality reduction	Quality reduction unacceptable

Risk Score in Pxl Scale is used to rank a risk's priority comparative to the other identified risks. The risk with the highest score is ranked first in importance; the risk with the next highest score is ranked second in importance and so on. The closer the risk score is to one, the higher the priority; the closer a risk score is to zero, the lesser the priority.

Table 21. Probability & Impact Scale (Source: Own Elaboration)

	PXI SCALE				
WBS	**Risks**	**Probability**	**Impact**	**Risk Score**	**Risk rank with the project**
1.1	Planning				
	Possibility of late delivery of equipment	0.30	0.40	0.12	

	Possible delays due to financial approvals and processes to release funds	0.30	0.40	0.12	
	Possibility of late training due to availability of the specialist	0.30	0.20	0.06	
	Possibility of electronic tablets get stolen or misplaced.	0.10	0.80	0.08	
1.2	Communication				
	Possibility of stakeholders having inaccurate expectations because of poor communications.	0.30	0.40	0.12	
	Possibility of misunderstanding due to language barriers				
1.3	Estimating Resources				
	Inaccurate cost estimates	0.50	0.20	0.10	
1.4	Product requirements				
	Possibility of mismanaged database putting in risk confidential information of the refugees	0.50	0.40	0.12	
2.1	Environmental conditions				
	Possibility of not been able to access the app due to lack of electricity	0.50	0.80	0.40	2
	Possibility of flooding, tropical cyclone and land slide in the rainy season	0.70	0.80	0.56	1
	Possibility of no internet connection	0.50	0.80	0.40	3
	Possibility of Tablets getting damaged due to weather conditions or bad infrastructure of the IFCs	0.30	0.80	0.24	6

2.2	Community engagement and conflict				
	Possibility of conflict arising between project stakeholders	0.50	0.40	0.12	
	Possibility of stakeholders becoming disengaged.	0.50	0.80	0.40	4
	High rotation of social workers in the IFCs	0.50	0.40	0.20	
2.3	Technology				
	Possibility of app malfunction	0.50	0.40	0.20	
	Learning curve of the technology	0.30	0.80	0.24	5
	Total Risk Score				

Probability and Impact Matrix

The probability and impact matrix will be utilized to evaluate the importance of each risk and classify them according to their priority, as well as, to carry out their corresponding quantitative analysis.

This matrix consists of two axes: a vertical axis where the probability ranges from 0 (impossible) to 1 (always) are established; and a horizontal axis where the risk impact values are established about the objectives of our project, where 0 implies that the risk would not affect and 1 that would greatly complicate the fulfilment of the project objectives.

The matrix is divided into two parts, on the left, the threats are represented and on the right side, the opportunities. On both sides the cells have been coloured according to their values, which are the result of multiplying the probability by the impact of the risk, thus obtaining values between 0 and 1, where the highest values

correspond to the most critical risks and appear in red and the lowest with the least relevant and they appear in green colour. Due to the characteristics of the project and the urgency to improve the quality life of the refugees in the camps, it has been decided to classify the values of the risks according to the following ranges:

- < 0.05: LOW
- 0.05 - 0.15: MEDIUM
- > 0.15: HIGH

In this way, the risks that the project incurs to all stakeholders can be put on the table so that each one assumes its own responsibilities and likewise avoid or minimize possible contingencies that may occur. The matrix obtained is as follows:

Table 22. Probability and Impact Matrix (Source: Own Elaboration)

Probability	**Threats**					**Opportunities**				
FREQUENT (0,90)	0.05	0.09	0.18	0.36	0.72	0.72	0.36	0.18	0.09	0.05
LIKELY (0.70)	0.04	0.07	0.14	0.28	0.56	0.56	0.28	0.14	0.07	0.04
POSSIBLE (0.50)	0.03	0.05	0.1	0.2	0.4	0.4	0.2	0.1	0.05	0.03
UNLIKELY (0.30)	0.02	0.03	0.06	0.12	0.24	0.24	0.12	0.06	0.03	0.02
RARE (0.10)	0.01	0.01	0.02	0.04	0.08	0.08	0.04	0.02	0.01	0.01
	VERY LOW (0,05)	**LOW (0,10)**	**MODERATE (0.20)**	**HIGH (0.40)**	**VERY HIGH (0.80)**	**VERY HIGH (0.80)**	**HIGH (0.40)**	**MODERATE (0.20)**	**LOW (0.10)**	**VERY LOW (0.05)**

Table 23. Risk Register (Source: Own Elaboration)

RBS Code	Cause	Risk	Consequence	Probability	Impact	PXI	Trigger	Owner	Strategy
2.1	Monsoon season	Possibility of flooding, tropical cyclone and land slide in the rainy season	Refugee won't be able to access the IFCs	0.70	0.80	0.56	Monsoon season from June to September	Implementing partner and project manager	Backup plan. Government allocation of new location for refugee camps in the rainy season
2.1	Rainy season in rural area	Possibility of not been able to access the app due to lack of electricity	ISPs won't be able to update the app with the new cases	0.50	0.80	0.40	Monsoon season from June to September	Implementing partner and project manager	Backup plan, supply with diesel generators in the IFCs
2.1	No electricity	Possibility of no internet connection	ISPs won't be able to update the app with the new cases	0.50	0.80	0.40	Monsoon season from June to September	Implementing partner and project manager	Backup plan, supply with generators in the IFCs
2.2	Implementing partner and social workers engaged in major problems	Possibility of stakeholders becoming disengaged.	ISPs not registering the daily cases in the IFCs	0.50	0.80	0.40	Number of cases registered	Implementing partner	Training, communication to inform the social workers the importance of the project

2.3	Virus in the website application	Possibility of app malfunction	Information non-precise	0.50	0.40	0.20		Resource and Evaluation Specialist	Run antivirus scan every week
2.3	Low level of education	Learning curve of the technology	Not using the tablets	0.30	0.80	0.24	Arise of new information centres	Implementing partner	Continued monitoring and training the new social workers
2.1	Bad infrastructure	Possibility of Tablets getting damaged due to weather conditions or bad infrastructure of the IFCs	Damage the equipment	0.30	0.80	024	Leaks in the ceiling	Project Manager	Improve the conditions of IFCs.

4.9. PROJECT PROCUREMENT MANAGEMENT

Plan Procurement Management

Plan Procurement Management is the process of documenting project procurement decisions, specifying the approach, and identifying potential sellers. (PMI 2013, p. 358)

Procurement Management Approach

The project manager will provide oversight and management for all procurement activities under this project. The Resource and Evaluation Specialist will work on the project design, questionnaire and will lead the training and testing of the final product. The Communication for Development Specialist will be working directly with the UNICEF implementing partner in the refugee camps; he will oversee the communication between project team and implementing partner and will monitor the IFCs. The project Assistant will support project team and project manager by identifying and solicitating the quotation for the purchasing of required equipment, make flights reservation and schedule meetings as need for the project. The project manager will then review the procurement list prior to purchasing, determine whether it is beneficial to make or buy the items, and begin the vendor selection, purchasing and the contracting process.

Procurement definition

The following items, listed below in table 21, represent the equipment that needs to be procured for the project completion.

Table 24. Purchasing Plan (Source: Own Elaboration)

Item / Service	Justification	Needed by	Amount	Cost per unit	Approx. Cost
Electronic Tablets	The electronic tablets are necessary to register online the daily cases in the IFCs	January 2, 2018	9	$500	$5,500

Power Banks	The power bank batteries are essential to guarantee usage of the tablets to the entire day.	January 2, 2018	9	$42	$378
SIM Cards	3G Sim Cards provide internet connection to the tablets.	January 2, 2018	9	$2	$22
It Specialist	Design and develop the ODK	January 8, 2018	1	$2,500	$2,500

The project manager will be the person that will approve the purchase.

Table 25. Make or buy Analysis (Source: Own Elaboration)

Make	Buy
Design	9 Electronic Tablets
Charter	9 Power bank batteries
Questionnaire	9 Sim Cards
Testing	Outsource IT Specialist
Training	

Type of Contract

For the service of the IT Specialist it will be settled a firm fixed price contract (FFP). UNICEF SPEAR quoted services with different IT companies and, giving that the threshold was under or equal to $2,500 dollars, it was not necessary to advertise widely or make a public bid. Depending on the experience and reputation of the IT company the specialist was hired.

For the purchasing of the tablets and power bank batteries, UNICEF project assistant contacted several companies in Bangladesh that sell electronics to quote products

available in the market. As well, online quotation was done to compare local prices with the ones abroad. For the purchase of this equipment, the selection was made evaluating warranty of the product, price and time of delivery. In both cases, the project manager was responsible for the authorization to hiring and purchasing of equipment.

For the purchasing of the PC Tablets they should have the following specifications:

- Microsoft Windows 10
- SD Card
- Bluetooth
- USB port

Accessories required:

- Spare battery
- Vehicle charger
- Protective case
- Screen protector
- Spare stylus

For the Power Bank batteries was requested to quote long lasting life ones. Online quotations were made using the Amazon USA website in which the most reliable brand was Anker and the prices were the following:

- # 20100 mah - 42$
- # 13000 mah - 30$
- # 10000 mah - 27$
- # 5000 mah - 16$

For the purchase of Sim cards, the project assistant purchases them in Grameenphone offices, which is the telecommunication company of the country.

In the case of the implementing partner, UNICEF previously signed a PCA (Partnership Cooperation Agreement) with an NGO that provides the services in the nine refugee camps in Cox's Bazar.

Source Selection Criteria

The criteria for the selection and award of procurement contracts under this project will be based on the following decision criteria:

- Cost
- Quality
- Availability of the vendor to provide all items on time
- Past performance

These criteria will be measured by the Project Manager and Research and Evaluation Specialist.

Procurement Risks

All the services and items procurement have some potential risks that should be managed to achieve the goals. The risks are the following:

- Potential delays in the delivery of the equipment
- Potential delays in the delivery of the application
- Conflicts with the contract

4.9.1 Conduct Procurement

"Is the process of obtaining sellers responses, selecting a seller, and awarding a contract." (PMI, p. 371).

During this process we examined curriculums of different IT Specialist that had the capacity and technical expertise to design the platform and due to the contract price was on the range of 2,500 it wasn't necessary to enter in a bidding process.

Close Procurement

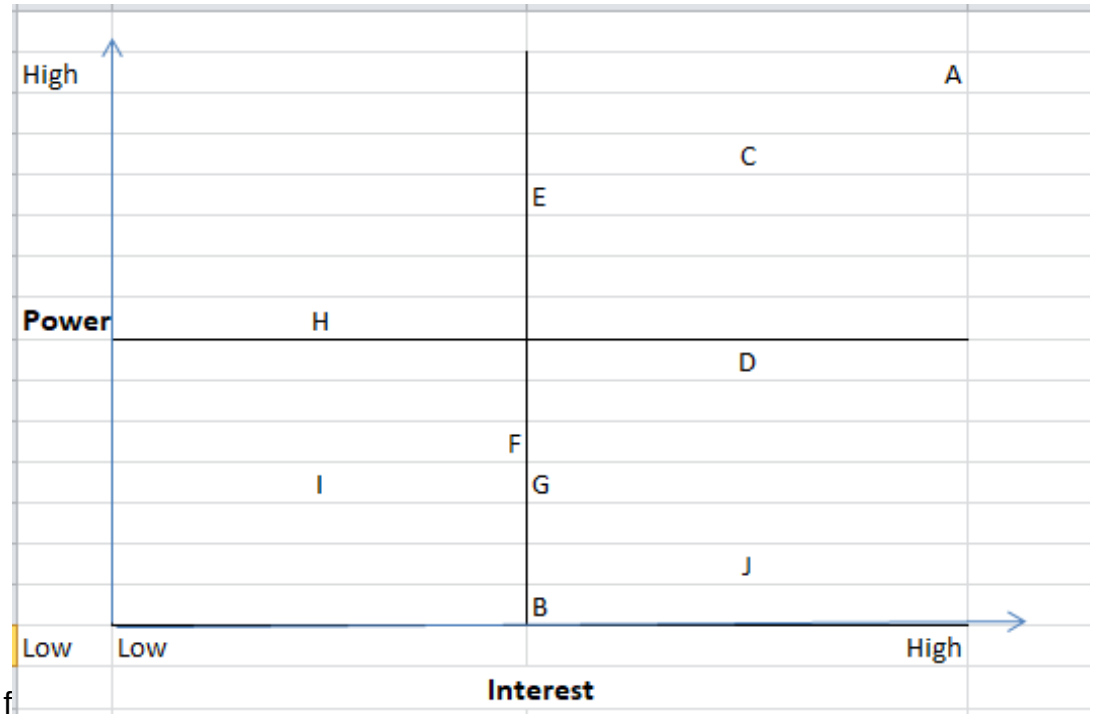
PMBOK describes Close Procurement "is the process of completing each procurement." (PMI 2013, p. 386)

In the closing of procurement the project team will be in charge of documenting the lessons learned.

4.10. PROJECT STAKEHOLDER MANAGEMENT

4.10.1. Identify Stakeholders

Chart 1. Power/Interest Grid with Stakeholders (Source: Own Elaboration)



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Project Manager	A
Social Workers	B
Project Team	C
Development Partners	D
Sponsor	E
Refugees	F
IT specialist	G
Government	H
Host Community	I
Other NGO's	J

4.10.2 Plan Stakeholders Management

Table 26. Stakeholder Register (Source: Own Elaboration)

Stakeholders	Role	Influence	Impact	Internal/ External
Project Manager	Develop the project	High	High	Internal
Social Workers	Employees in the IFCs	Low	Medium	Internal
Project Team	Training of the ISPs. Conduct workshops focus groups and interviews with stakeholders	High	High	Internal
Development Partners	Run the application	Medium	High	External
Sponsor	Revise and support the project	Medium	Medium	Internal
Refugees	Beneficiaries	Medium		
IT specialist	Design and development of the app	High		External
Government	Regulator	Low	Low	External

Host Community	Beneficiaries	Low	Low	External
Other NGO's	Support	Low	Low	External

Table 27. Stakeholders Engagement Assessment Matrix (Source: Own Elaboration)

Stakeholder	Unaware	Resistant	Neutral	Supportive	Leading
Project Manager					C
Social Workers			C	D	
Project Team				C	
Development Partners				C	
Sponsor				C	
Refugees	C			D	
IT specialist			C		
Government		C		D	
Host Community	C			D	
Other NGO's			C	D	

The project's stakeholders are listed in the Stakeholder Engagement Assessment Matrix where it is placed a "C" for the current level of engagement of selected stakeholders and "D" for the desired level of engagement that we would like them to have.

4.10.3 Manage Stakeholders Engagement

“Manage Stakeholders Engagement is the process of communicating and working with stakeholders to meet their needs/ expectations, address issues as they occur, and foster appropriate stakeholder engagement in project activities throughout the project life cycle” (PMI, p. 404).

To successfully engage and manage the stakeholders for the IFCs, we will use the communication management plan to maximize support and have major probability of success.

As tools and technique, the project will utilize the issue log and change request to register issues that can occur and the procedures that could also be correcting or preventing actions in the change request.

4.10.4 Control Stakeholders Engagement

In the process of monitoring stakeholders, we will utilize the expert judgement and meetings to confirm the existing stakeholders, exchange and analyse information to review the stakeholders’ engagement. Additionally, we will use these techniques to identify new stakeholders.

5. CONCLUSIONS

1. The PMP was created using the analytical research method and the PMBOK to develop a framework for establishing a better communication with all stakeholders and assure a better possibility of achieving project goals.
2. The scope management plan defined the scope meticulously and was used as a baseline in all the project lifecycle.
3. The time management plan was planned accordingly as expected to insure the project was completed on time.
4. The cost management plan was made wisely assuring good estimation in cost to complete the project.
5. The quality management plan was well planned and reviewed to ensure beneficiaries satisfaction in all the services provided in the IFCs.
6. The stakeholder management plan listed all the stakeholders that can contribute positively or negatively the project.
7. The human resources management plan identified and documented responsibilities of the project team, ISPs, and all the personal involved in this project.
8. The communication management plan was made in detail with all the channels of communication to be able to reach major stakeholders.
9. The risk management plan identified all the possible risks that could occur in this project and contingency plan in case the risks happen.
10. The procurement management plan was made in detail following UNICEF regulations for contracts and purchases.

6. RECOMMENDATIONS

1. UNICEF should consider using the Project Management tools and techniques to update and review the way projects have been managed and increase the possibilities of success in their project.

- Developing a well-structured project charter, including a cost management process and time management plan during the planning phase will maximize the results from funds allocated to this project.
- During the execution phase they could use the risk management plan to prevent possible risks that could be avoided.

2. UNICEF should disseminate the dashboard platform to ensure information reaches all stakeholders.

- By reaching and communicating the existence of this platform, UNICEF could increase their exposure and good image of the organization.
- UNICEF could reach more donors.
- UNICEF could help other countries to sensitize with the emergency.

3. UNICEF should expand the platform to other information points managed by other organizations in the refugee camps.

- This initiative could benefit the refugees.
- Create a good will between the organizations to share information relevant to the emergency.

4. UNICEF could package the dashboard, including the software and procedures, to facilitate the replication in another humanitarian response.

- The organization could benefit from this by having a start point for other emergencies.
- UNICEF should enhance efforts in the planning phase, including a brainstorming session with team to analyse current situation and explore solutions
- Field visit to understand the emergency
- Interview all stakeholders
- The organization could be benefitted by utilizing the templates and implementing the methodology in similar projects for the organization.

5. UNICEF should review the questionnaire used in the Information and Feedback Centres to avoid sensitive information that could compromise the exposure and safety of the refugees.

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- www.pmi.org
- http://www.sdgsforchildren.org/
- https://www.UNICEF.org/bangladesh/
- https://www.UNICEF.org/publicpartnerships/files/UNICEF_Mission(1).pdf

8. APPENDICES

Appendix 1: FGP Charter

<table>
<tr><th colspan="2">PROJECT CHARTER</th></tr>
<tr><td>Date</td><td>Project Name:</td></tr>
<tr><td>November 13, 2017</td><td>PMP for Real Time System for Community Information and Feedback Centres for Rohingya Refugee Camps</td></tr>
<tr><td>Knowledge Areas / Processes</td><td>Application Area (Sector / Activity)</td></tr>
<tr><td>Knowledge areas: Integration, Scope, Time, Cost, Quality, Human Resources, Communications, Risk, procurement and Stakeholders

Process groups: Initiation, Planning, Executing, Monitoring and control, closing.</td><td>Communication and information technology</td></tr>
<tr><td>Start date</td><td>Finish date</td></tr>
<tr><td>November 13, 2017</td><td>July 13, 2018</td></tr>
<tr><td colspan="2">Project Objectives (general and specific)</td></tr>
<tr><td colspan="2">General objective:
To develop a PMP for the establishment of a real time system following PMBOK framework for establishing a better communication with all stakeholders and assure a better possibility of achieving project goals.
Specific objectives:
1. To create a scope management plan that includes how the project scope will be defined, developed and verified during the project lifecycle.
2. To create a wisely time management plan to insure the project is completed on time.
3. To develop a cost management plan to estimate cost, control cost and make use of the resources wisely.
4. To formulate a quality management plan to assure beneficiaries satisfaction for the services we will be providing.
5. To create a stakeholder management plan that list all the stakeholders that can affect positively or negatively the project, to insure an effective communication to ensure we meet their needs or expectations.
6. To create a human resources management plan to identify and document responsibilities of the social workers and project team to provide all the necessary help for the refugees.
7. To create a communication management plan that can reach the adequate information for all refugees.</td></tr>
</table>

8. To create a risk management plan that identifies all the risk of the project, implements all the necessary strategies and contingency plan in case the risk occurs.
9. To create a procurement management plan to insure all the purchasing and contract need in the project have been meticulously reviewed and executed.

Project purpose or justification (merit and expected results)

In UNICEF Bangladesh there are no standardized PM practices used for any project. I propose to develop a PMP to have a clear road map from initiation to closing to insure the results meets the objectives of the project, to improve a better communication with all stakeholders; and to maximize the use of resources in the project.

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

The scope of the project includes developing a mobile application to monitor the necessities of the refugees, as well as to train the community workers that will be administrating or providing guidance to refugees.
The time of the project will start for November 2017 to February 2018.
The cost of the project will include the development of the App and questionnaire, the training material, the cost of travelling of a research and evaluation specialist, and the cost of communication for development specialist.

Assumptions

1. It is assumed that the University will give all the relevant information, rules and guidelines to complete the FGP successfully.
2. It is assumed that the project will be completed on time.
3. It is assumed that the resources required will be available.
4. It is assumed that the tutor assigned by the university will guide and give all the feedback necessary during the 3 months tutoring process.
5. It is assumed that the reviewers of the project will use their time wisely.

Constraints

1. The limited time to accomplish the project.
2. The different time zone, Bangladesh – Costa Rica.
3. The difficulty in communication emails versus face to face meeting.

Preliminary risks

1. If the project is delayed due to misinterpretation of the instructions, this could affect my final grades.
2. If the assigned tutor has to many students to help on projects, this might affect the time helping individual students and could impact our final deliverable.

Budget

Not established at this moment.

Milestones and dates

Milestone	Start date	End date
Final Graduation Project	November 13, 2017	July 13, 2018
1. Graduation Seminar	November 13, 2017	December 17, 2017
1.1 FGP Deliverables		
1.1.1 Charter and WBS	November 13, 2017	November 19, 2017
1.1.2 Introduction and Schedule	November 20, 2017	November 26, 2017
1.1.3 Theoretical Framework	November 27, 2017	December 3, 2017
1.1.4 Methodological Framework	December 4, 2017	December 10, 2017
1.1.5 Corrections, Executive Summary, Bibliography, Indexes and signed charter1.	December 11, 2017	December 17, 2017
2. Tutoring process	February 19, 2018	May 16, 2018
3. Reading by Reviewers	May 21, 2018	June 10, 2018
4. Adjustments	June 11, 2018	July 8, 2018
5. Presentation to the Board of Examiners	July 9, 2018	July 13, 2018

Relevant historical information

UNICEF is an organization that is working in 190 countries and territories to protect the rights of every child. Defending these rights requires their global presence, to produce desired results and understanding their effects.

UNICEF has been working in unaccountable emergencies around the world supporting unfortunately causes as natural disasters, hurricanes, violation of human rights, war, refugees, migration and severe virus diseases as HIV, Zika, etc.

Stakeholders

Direct stakeholders:

- Universidad para la Cooperacion Internacional
- Tutor assigned by the University
- Professor Carlos Brenes
- Reviewers
- Board of Directors

Indirect stakeholders:

- Classmates

Project Manager: Carolina Ferro de Acosta	**Signature:**
Authorized by:	**Signature:**

1.1.2 Introduction and Schedule	November 20, 2017	November 26, 2017
1.1.3 Theoretical Framework	November 27, 2017	December 3, 2017
1.1.4 Methodological Framework	December 4, 2017	December 10, 2017
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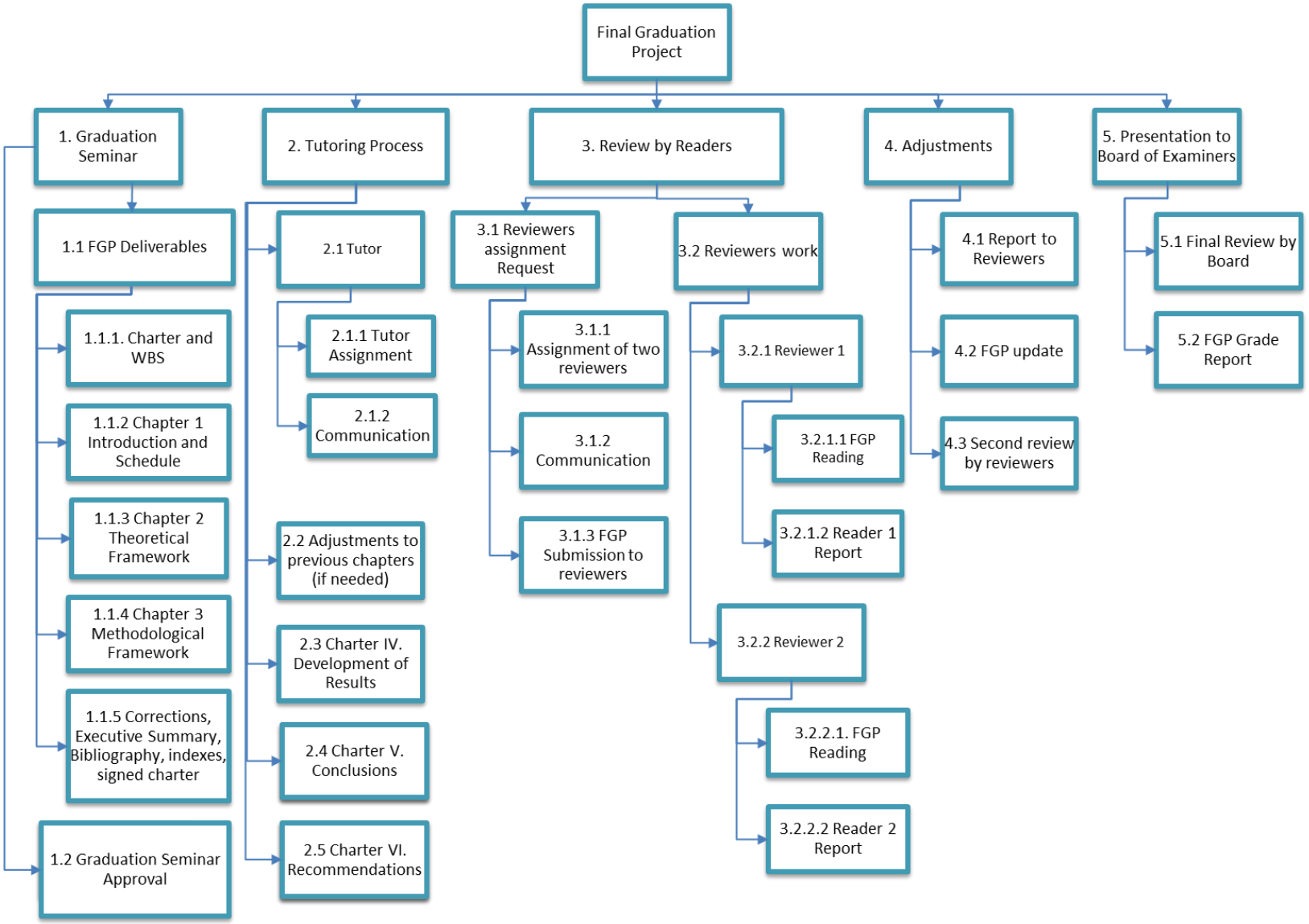
- Reviewers
- Board of Directors

Indirect stakeholders:

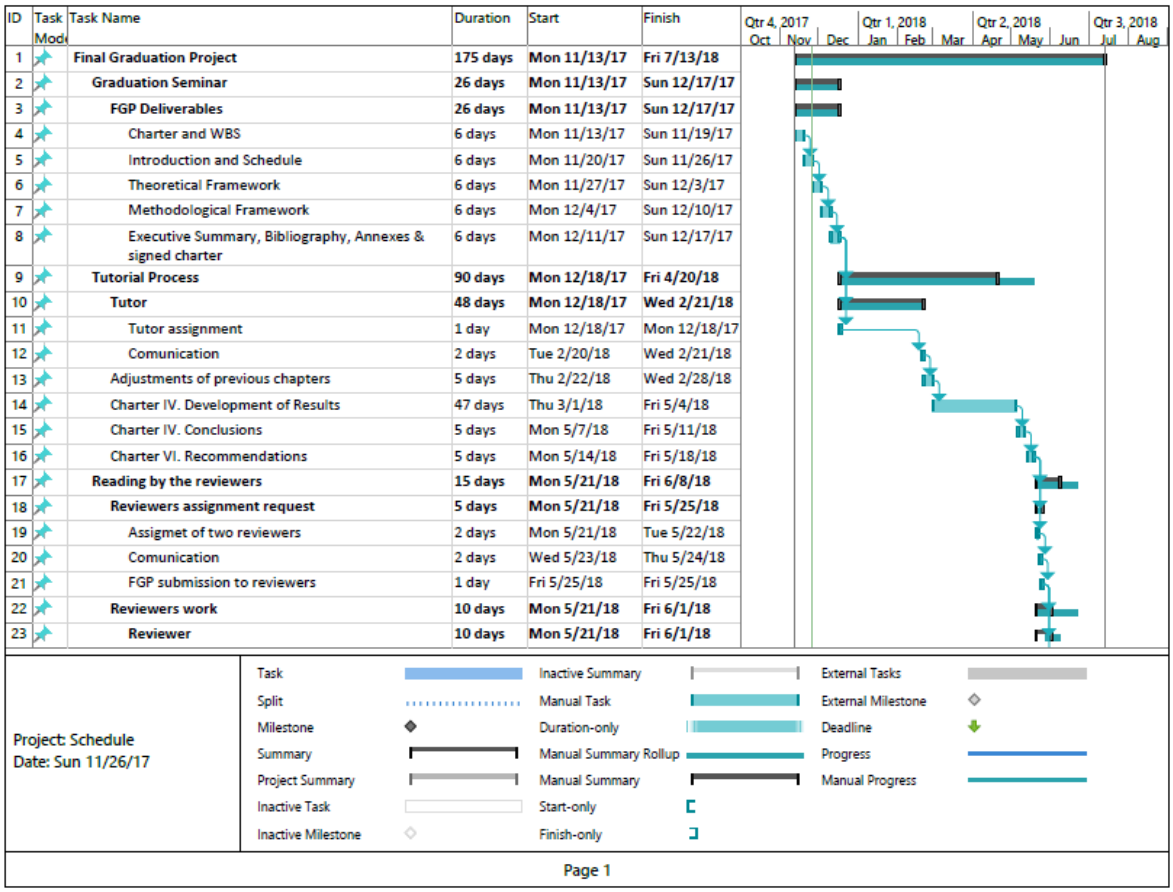
- Classmates

Project Manager: Carolina Ferro de Acosta	**Signature:**
Authorized by:	**Signature:**

Appendix 2: FGP WBS



Appendix 3: FGP Schedule



ID	Task Mode	Task Name	Duration	Start	Finish
1		**Final Graduation Project**	**175 days**	**Mon 11/13/17**	**Fri 7/13/18**
2		**Graduation Seminar**	**26 days**	**Mon 11/13/17**	**Sun 12/17/17**
3		**FGP Deliverables**	**26 days**	**Mon 11/13/17**	**Sun 12/17/17**
4		Charter and WBS	6 days	Mon 11/13/17	Sun 11/19/17
5		Introduction and Schedule	6 days	Mon 11/20/17	Sun 11/26/17
6		Theoretical Framework	6 days	Mon 11/27/17	Sun 12/3/17
7		Methodological Framework	6 days	Mon 12/4/17	Sun 12/10/17
8		Executive Summary, Bibliography, Annexes & signed charter	6 days	Mon 12/11/17	Sun 12/17/17
9		**Tutorial Process**	**90 days**	**Mon 12/18/17**	**Fri 4/20/18**
10		**Tutor**	**48 days**	**Mon 12/18/17**	**Wed 2/21/18**
11		Tutor assignment	1 day	Mon 12/18/17	Mon 12/18/17
12		Comunication	2 days	Tue 2/20/18	Wed 2/21/18
13		Adjustments of previous chapters	5 days	Thu 2/22/18	Wed 2/28/18
14		Charter IV. Development of Results	47 days	Thu 3/1/18	Fri 5/4/18
15		Charter IV. Conclusions	5 days	Mon 5/7/18	Fri 5/11/18
16		Charter VI. Recommendations	5 days	Mon 5/14/18	Fri 5/18/18
17		**Reading by the reviewers**	**15 days**	**Mon 5/21/18**	**Fri 6/8/18**
18		**Reviewers assignment request**	**5 days**	**Mon 5/21/18**	**Fri 5/25/18**
19		Assigmet of two reviewers	2 days	Mon 5/21/18	Tue 5/22/18
20		Comunication	2 days	Wed 5/23/18	Thu 5/24/18
21		FGP submission to reviewers	1 day	Fri 5/25/18	Fri 5/25/18
22		**Reviewers work**	**10 days**	**Mon 5/21/18**	**Fri 6/1/18**
23		**Reviewer**	**10 days**	**Mon 5/21/18**	**Fri 6/1/18**

Appendix 4. Requirement Traceability Matrix

Requirements Traceability Matrix								
Project Name:		PMP for Real Time System for Community Information and Feedback Centre for Rohingya Refugee Camps						
ID	Associate ID	Requirements Description	Business	Project Objectives	WBS Deliverables	Product Design	Product Development	Test Cases
A.1 Initiation	A.1.1	Ensure a user-friendly platform		Develop a real time system	Design			
A.3 Execution	A.3.1	Eliminate personal questions that can compromise the refugees.		Review questionnaire	Develop questionnaire			
	A.3.2	Eliminate unnecessary fields, as per example, time of complaint		Testing phase	Design App			
	A.3.3	Ensure that the hardware complies with the institutional standards		Procurement management plan	Purchasing equipment			

Appendix 5: Template for Change Request (Source: Own elaboration)

Change Request Form	
Date	
Description of Change	
Rationale	
Impact of not doing the Change	
Person who Requests	
Decision of Project Manager	

Appendix 6: Simplified Programme Document and reporting format, especially for use in emergencies/ humanitarian crises

1. Partner Profile
Name of NGO and contact information

2. Core values and programmatic and financial management capacity assessments
Check boxes for assessments which have been completed; circle the assessed level of risk; in absence of assessments, select date(s) when they are to be completed. Attach relevant documentation such as audit or micro assessment reports or programmatic assessments.

Type of Assessment	Level of Risk (circle one)	Date for Assessment
Integrity and values	H, S, M, L (mandatory)	**Mandatory**
Programmatic capacity	H, S, M, L, not assessed	/__/__/____NB: May include procurement assess
Financial management capacity	H, S, M, L, not assessed	/__/__/____

3. Project Information (UNICEF reference information only)
Current Start and End Date
If this is an amendment to an existing PCA, provide relevant Reference number (from local PCA Review Committee):
Fund Reservation #(s):
(List relevant Programme Component Result(s) (PCR) and,
Intermediate Result(s))

Output Result:

Output 3.1.2

4. Expected Result(s) of the Partnership
The result(s) may be situated at the output level, especially for short-term interventions but should be at the outcome level where possible. Each result must be SMART, use change language, be human-rights based with an equity focus. Where practical and possible, rights-holders should be part of the formulation process and identified in the result statement.

Results:

5. Coordination and Management
Indicate if part of Cluster Coordination mechanism; if not, specify arrangements. Indicate frequency of management meetings

6. Monitoring and Evaluation

Each result should have 2-3 high priority output/coverage indicators (refer to **Humanitarian Performance Monitoring Toolkit**) aligned with the CCCs and the humanitarian component of the country plan, to facilitate monitoring and aggregating overall programme results. Identify appropriate, additional monitoring indicators as necessary, BL, Targets, MoV and frequency. Indicate planned evaluations by topic and planned date.

7. Implementation strategy

Circle all those that apply: Service Delivery, Advocacy, Strategic Partnerships, Capacity Development, Knowledge Management, C4D. Refer to Chapter 2. Core Programming Strategies of the PPPM

8. Budget (*example*)

- Programme costs (PCs) :
- Direct prog. support costs (DPSCs) :
- Indirect prog. costs (IPCs) :

UNICEF Contribution (cash) :
UNICEF Contribution (supply) :
Partner Contribution (cash and other) :
Total Project Budget (UNICEF + CSO) :

Activities (Include all programme, assurance, capacity development and M&E activities)	**Implementation Period**				**Resources**			**Total Resources**
	Q1	**Q2**	**Q3**	**Q4**	**Cash**	**Supply by Item**	**Supply by Value**	

_____

_____

Signature of Head of NGO of Office or Delegate
Name (print):
Date:

Signature of UNICEF Head
Name (print):
Date:

Appendix 7: PCA Template

Programme Cooperation Agreement with (name of partner)

Format of Programme Document (including Joint Work plan and Budget)
This Programme Cooperation Agreement (PCA) Programme Document, which includes the Joint Work plan and Budget, enables UNICEF and its CSO partner to jointly draft a harmonized, results focused plan with a minimum of documentation. The document should include the following sections:

1. Cover Page - one page
2. Executive summary – one page
3. Situation analysis – one page
4. Strategies including lessons learned and the proposed project– one page
5. Results framework – one page
6. Management and coordination arrangements –one page
7. Fund management arrangements – one page
8. Monitoring, evaluation and reporting plans –one page
9. Work plans and budgets (as annexes) - two to three pages

A brief description of the expected content for each of these sections is provided below.

1. Cover Page (One page)

The cover page contains the expected result(s) of the cooperation, total estimated budget, funded and unfunded components, expected sources of funding, duration of the agreement and signatures of the NGO/CBO authorities(s).

2. **Executive Summary (One page)**

The executive summary contains a comprehensive summary of all sections focusing on the significance and relevance of the cooperation, its contribution to UNICEF's priorities and national plans, the results expected to be achieved, intended beneficiaries, and information about relevant donors and other partners.

3. Situation Analysis (One page)

This section provides a brief evidence-based causal analysis which may be obtained from the Situation Analysis of Children and Women, the national development framework or the relevant humanitarian action plan. It outlines the economic, social, political, environmental and institutional context of the collaboration. It identifies the development or human rights challenges to be addressed; provides specific, current and disaggregated data on these challenges, key causal factors, and the interventions that are necessary and sufficient for the achievement of the planned results. This is to be supplemented with references to identified baselines (to be

noted in the Project Monitoring Framework in Section 8), relevant recent research reports and/or reports and recommendations of field missions, assessments, evaluations, etc.

4. **Strategies, including lessons learned and the proposed project (One page)**

The subsections to be covered include:
Lessons Learned: *This sub-section provides a summary of relevant lessons learned from experiences, opportunities and challenges which may support or constrain achievement of results. Statements of agreed lessons are particularly important where there is a significant departure from previous programmes or strategies. If relevant, this sub-section may also indicate how recommendations and observations of Human Rights treaty bodies to the respective State Party have been considered and used in the design of the CA.*
Proposed Collaboration: *This sub-section outlines the specific strategies adopted to achieve the expected results, taking into consideration the lessons learned. It focuses on how the strategies address the key causes of the problems which have been identified, and the role of the partner(s) involved in each phase. It includes details on the intended manner in which the cooperation should unfold in its various phases. It provides a brief description of the division of labour between the NGO/CBO and UNICEF, the added value of each to the expected results, and the NGO's/CBO's capacity to deliver agreed outputs. The proposed project strategy should confirm that the capacities necessary for the implementation were carefully considered and that the selected partner has the capacity to achieve the intended results (refer to the various assessments).*
This section should also refer to prior assessments of key cross-cutting concerns such as: human rights; gender equality; the environmental issues that are relevant in this case and how the cooperation will address them; assessment of capacity gaps of key institutions and collaborating partners and the capacity development strategies that will be adopted. Depending on the subject covered, this section may also include other types of ex-ante analyses, for example themes such as education, health, water and sanitation.
Sustainability of results: *State how the results will be sustained including relevant capacities being developed among duty bearers and rights holders and government institutions and communities.*
Visibility Plan: *(As per UNICEF and USAIDS guidelines)*

5. **Results Framework (One page)**

This section will contain a brief narrative and the results framework. The narrative should briefly outline the logic of the results chain. The outputs of the cooperation should directly contribute to the relevant programme results (i.e. outcomes, outputs, and programme component results (PCR) or intermediate result as appropriate). Proper justification should be provided, when any element of the cooperation falls outside the Country Programme's results framework.

6. Management and Coordination Arrangements (One page)

This section elaborates the project planning and management responsibilities and commitments of NGO / CBO. Arrangements for monitoring, review, and coordination should be documented. Linkages to existing coordination mechanisms should also be specified.

7. Fund Management Arrangements (One page)

This section should specify the details of the agreed arrangement for transfer of cash to the NGO / CBO. Cash transfer modalities (e.g. direct cash transfers, reimbursement or direct payment), the size and frequency of disbursements (generally on a quarterly basis). The scope and frequency of monitoring, reporting, assurance and audit activities will be agreed prior to programme implementation, taking into consideration the capacity of the NGO / CBO, which should be adjusted as a function of the results of the assessments, the related degrees of risk and corresponding mitigation measures including support for capacity development.

8. Monitoring, Evaluation and Reporting plans (One page)

Monitoring: *Describe the monitoring activities that the NGO / CBO will undertake (such as baseline collection, reviews or studies if necessary to measure effect/impact, field visits, evaluation etc.), the timing of such activities and their respective responsibilities.*
Annual/regular reviews: *State the arrangements and clear responsibilities for conducting regular reviews, including annual reviews where applicable. NB: Review of the collaboration may also form part of Annual Review process.*
Evaluation: *State the arrangements for, responsibility and timing of evaluation(s) of the collaboration. It should also state how the results of the evaluation(s) will be used by relevant stakeholders.*
It should further state how the risks and assumptions will be managed to achieve the agreed results. These should at a minimum be reviewed at the annual/regular reviews and revised as appropriate.
Reporting: *A reporting format should be agreed upon by both parties.*

9. Work plans and budgets (Two or more pages)

Joint Work Plans (JWP) will detail the activities to be carried out within the PCA by each partner and include the inputs, timeframes and budget. The basis for all resource transfers to an NGO / CBO should be detailed in the work plans and agreed upon between UNICEF and the NGO / CBO. The first JWP should be attached to the programme document.

In this Section, please also note non-financial, in-kind contributions, including supplies and technical assistance that UNICEF will provide.

Appendix 8: Revision Letter

Dhaka, 13th of May of 2018.

Academic Advisor
Master Degree in Project Management
Universidad de la Cooperacion Internacional

Dear Sir,

I have read over Mrs. Carolina Ferro de Acosta's Final Graduation Project making grammatical and typological corrections. Additionally, I gave some suggestions in order to improve overall readability and layout of the thesis, including sentence construction, improvement in the way quotations, references and sources are presented according to the APA 6th edition.
In general, the project covers all the project management principles indicated by the Academic Supervisor.

Kind regards.

Stefania Chiapello

Stefania Chiapello

Appendix 9: Linguistic Credentials

Repubblica Italiana

UNIVERSITÀ DEGLI STUDI DI GENOVA

N. 10209

In Nome della Legge

Noi Prof. Sandro Pontremoli

Rettore dell'Università degli Studi di Genova

Veduti gli attestati degli studi compiuti da

Chiapello Stefania

nata ad Alghero (Sassari) il 18 Dicembre 1967

Veduto il risultato dell'esame di laurea da Lei superato in questa Università il giorno 14 Febbraio 1992 le conferiamo la

Laurea di Dottore in Lingue e Letterature Straniere Moderne

Il presente diploma di Laurea viene rilasciato a tutti gli effetti di legge.

Dal Palazzo dell'Università di Genova, 14 Febbraio 1992

Il Rettore
(Sandro Pontremoli)

Il Direttore Amministrativo
(Domenico [illegible])

Il Preside della Facoltà
(Ferruccio Rettini)