

UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

PROJECT MANAGEMENT PLAN TO IMPROVE THE LEVEL OF EFFECTIVE
IMPLEMENTATION OF INTERNATIONAL CIVIL AVIATION ORGANISATION
STANDARDS AND RECOMMENDED PRACTICES IN AIR NAVIGATION
SERVICES (GUYANA)

ADRIAN EARLE BASSIER

FINAL GRADUATION PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE
MASTER IN PROJECT MANAGEMENT (MPM) DEGREE

Georgetown, Guyana

November 2017

UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

This Final Graduation Project was approved by the University as
partial fulfillment of the requirements to opt for the
Master in Project Management (MPM) Degree

Carlos Herrera Rojas
TUTOR

Carlos Castro Torres
REVIEWER No.1

Ruben Alzate
REVIEWER No.2



Adrian Earle Bassier
STUDENT

DEDICATION

Dedicated to my parents, grandparents, and Aunt Joan, who believed that a sound education was worth more than all the tea in China.

ACKNOWLEDGMENTS

I wish to express my sincere gratitude to my wife, my former Director of Air Navigation Services the late Mr. Dennis Daniel, and Ms. Paula McAdam, my former Director of Aviation Safety Regulations, who supported, encouraged, and facilitated my academic pursuits.

To Dr. Michael Scott, Ms. Amanza Walton-Desir, Mr. Sukrishnalall Pasha, Ms. Shahiba Radix, Captain Christopher Kirkcaldy, Mr. Roberto Sosa, and lastly but by no means the least, my Director General and Sponsor Mr. Egbert Field - Lt. Col. Ret'd.- many thanks for the cooperation and assistance.

Finally, thanks to the Organization of American States and the lecturers and staff of the Universidad para la Cooperacion Internacional.

AEB

INDEX OF CONTENTS

APPROVAL PAGE.....	ii
DEDICATION.....	iii
ACKNOWLEDGMENTS.....	iv
INDEX OF CONTENTS.....	v-vi
INDEX OF FIGURES.....	vii
INDEX OF CHARTS.....	vii-ix
ABBREVIATIONS AND ACRONYMS.....	x
EXECUTIVE SUMMARY (ABSTRACT).....	xi-xii
1 INTRODUCTION.....	1
1.2. Statement of the problem	2
1.3. Purpose	2-3
1.4. General objective	3
1.5. Specific objectives	3-4
2 THEORETICAL FRAMEWORK	5
2.1 Company/Enterprise framework.....	5-8
2.2 Project Management concepts	9-15
2.3 Other applicable theory/concepts related to the project theme and context	15-16
3 METHODOLOGICAL FRAMEWORK.....	17
3.1 Information sources	17-21
3.2 Research methods.....	21-26
3.3 Tools	26-28
3.4 Assumptions and constraints	29-32
3.5 Deliverables	32-34
4 RESULTS.....	35
4.1 Project Charter	35-43
4.2 Project Scope Management Plan	44-51
4.3 Project Time Management Plan	51-56
4.4 Project Cost Management Plan.....	56-60

4.5	Project Quality Management Plan	60-64
4.6	Project Human Resource Management Plan	65-68
4.7	Project Risk Management Plan	68-76
4.8	Project Procurement Management Plan	77-81
4.9	Project Communications Management Plan	81-87
4.10	Project Stakeholder Management Plan	87-94
5	CONCLUSIONS.....	95-98
6	RECOMMENDATIONS.....	99 -100
7	BIBLIOGRAPHY	101
8	APPENDICES+	103
	Appendix 1: FGP Charter.....	103-106
	Appendix 2: FGP WBS.....	107
	Appendix 3: FGP Schedule.....	108
	Appendix 4: ICAO Protocol Question List.....	109-119
	Appendix 5: Project Network Diagram	120-122
	Appendix 6: Relationship between WBS and ICAO PQs	123
	Appendix 7: Dictum and Proof of Philological Corrections	124

INDEX OF FIGURES

Figure 1 GCAA Organizational Structure (Source: GCAA).....7

Figure 2 ASRD Organizational Structure (Source: GCAA)..... 8

Figure 3 Traditional Project Management Lifecycle..... 11

Figure 4 Process groups interact in a phase or Project..... 12

Figure 5 Project Management Process Interactions..... 13

Figure 6 Project Work Breakdown Structure49

Figure 7 Project Organization Structure 66

Figure 8 RACI Matrix67

Figure 9 Risk Breakdown Structure (RBS) 70

Figure 10 Probability and Impact Matrix 76

INDEX OF CHARTS

Chart 1: Information sources (Source: The Author, December 2017)	18
Chart 2: Research Methods (Source: The Author, December 2017)	22
Chart 3: Tools (Source: The Author, December 2017)	27
Chart 4: Assumptions and Constraints (Source: The Author, December 2017).....	30
Chart 5: Deliverables (Source: The Author, December 2017)	32
Chart 6: Major Project Deliverables (Source: The Author, April 2018)	36
Chart 7: Project Stakeholders (Source: The Author, April 2018).....	41
Chart 8: Project Stakeholder Analysis Matrix (Source: The Author, April 2018)...	42
Chart 9: Analysis and Comments Regarding Stakeholders (Source: The Author, April 2018)	43
Chart 10: Scope Management Roles and Responsibilities (Source: The Author, April 2018)	46
Chart 11: WBS Dictionary (Source: The Author, April 2018)	50
Chart 12: Sequence Activities, Durations, Required Resources (Source: Compiled by Author)	54
Chart 13: Activity Cost Estimates and Aggregates (Source: The Autor, April 2018).....	59
Chart 14: Requirements for Project Activities (Source: Autor, April 2018)	63
Chart 15: Probability of Occurrence Index (Source: The Author, May 2018)	71
Chart 16: Impact of Risk Index (Source: The Author, May 2018)	72
Chart 17: Risk Register (Source: Author, May 2018).....	73
Chart 18: Probability of Occurrence and Impact of Risk Assignment	75
Chart 19: Procurement List (Source: The Author, May 2018)	78
Chart 20: Procurement Assessment Chart (Source: www.Project Management Docs.com , May 2018)	80
Chart 21: Stakeholder Identification and Means of Communication (Source: Author, May 2018)	83

Chart 22:Management of Project Communication (Source: Author, May 2018) ...85

Chart 23:Issue Log (Source: Author, May 2018)87

Chart 24: Project Stakeholder Register (Source: Author, June 2018)89

Chart 25: Project Stakeholder Analysis (Source: The Author, April 2018)90

Chart 26: Analysis and Comments Regarding Stakeholders (Source: The Author, June 2018).....91

Chart 27: Stakeholder Engagement Assessment Matrix (Source: Author -June 2018, PMBOK Guide 5th Edition, 2013).....93

ABBREVIATIONS AND ACRONYMS

AIS	-	Aeronautical Information Service
ANS	-	Air Navigation Services
ANSD	-	Air Navigation Services Directorate
ANSP	-	Air Navigation Services Provider
ASRD	-	Aviation Safety Regulations Directorate
ATM	-	Air Traffic Management
CAD	-	Civil Aviation Department
CJIA	-	Cheddi Jagan International Airport
CNS	-	Communications Navigation and Surveillance
DASR	-	Director of Aviation Safety Regulations
EFCIA	-	Eugene F Correia International Airport
EI	-	Effective Implementation
FGP	-	Final Graduation Project
FPD	-	Flight Procedures Design
GCAA	-	Guyana Civil Aviation Authority
ICAO	-	International Civil Aviation Organization
MAP	-	Aeronautical Maps and Charts
MET	-	Meteorological Services for Air Navigation
MPM	-	Master on Project Management
NCMC	-	National Continuous Monitoring Coordinator
OJT	-	On-the-job Training
OLF	-	Online Framework (ICAO)
PANS-OPS	-	Procedures for Air Navigation Services- Operations (FPD)
PMBOK	-	Project Management Body of Knowledge
PQ	-	Protocol Question
SAR	-	Search and Rescue
SARPS	-	Standards and Recommended Practices
UN	-	United Nations

EXECUTIVE SUMMARY (ABSTRACT)

Guyana gained its independence from the United Kingdom of Great Britain in 1966, and in 1967 became a Contracting State to the International Civil Aviation Organization (ICAO). This organization was a technical body of the United Nations (UN), which strives for the world wide harmonized development of civil aviation through the implementation of Standards and Recommended Practices (SARPS). Implementation of the SARPS in Guyana was executed through the Civil Aviation Department, which was succeeded by the Guyana Civil Aviation Authority (GCAA).

ICAO conducted assessments, during the period 1996 to 2014, of Guyana's ability to effectively implement the SARPS, and found the level of Effective Implementation (EI), was less than desirable. This was especially the case in Air Navigation Services (ANS). In 2015, a project was developed and executed to address this situation. The result was an overall improvement in the level of effective implementation for Guyana from 44.21% to 64.4%, and in ANS from 10.82% to 54.17%. Following this result and moving forward, it was an expressed desire to improve this percentage in the area of ANS to 80%+.

The resulting project that was developed and executed in 2015, although realizing successes, fell short of the set target of 70.49%, as established by the ICAO South America Office. This failure was due in part to the failure of the GCAA to recruit, train, and retain sufficient numbers of staff for its Regulatory arm, and failure to ensure compliance on the part of the ANS Provider (Regulatee/Service Provider).

This Final Graduation Project (FGP), was conducted for the partial fulfillment of the requirements for the Master in Project Management (MPM) Degree. The FGP entailed the development of a Project Management Plan that could be executed as a project to realize the goal of attaining an improved level of Effective Implementation of 80%+ of ICAO SARPS in the area of ANS, using the Project Management Institute's, A Guide to the Project Management Body of Knowledge, 5th Edition, 2013 as the main guide and reference.

The general objective was to create a Project Management Plan for the GCAA to execute in order to improve the level of Effective Implementation of ICAO SARPs in the area of ANS (Guyana). The implementing of ICAO SARPS is necessary since it provides the assurance, to a high level, that Guyana's ANS System is safe. The use of Project Management techniques for this Project Management Plan, provided an organized format, structure, and a clear and unambiguous path to be followed in the execution of a project to improve the level of effective implementation of ICAO SARPs in ANS (Guyana). The preparation of this Project Management Plan was essentially the first step towards the achievement of an improved level of EI in ANS to 80%+. Consequently, this could result in higher levels of safety, increased confidence in both the regulatory safety oversight and service provision aspects of the ANS on the part of the users and stakeholders, and an improvement in Guyana's country profile as it relates to civil aviation.

An investigative, analytical, and descriptive methodology was used for this FGP. Among the sources used to gather data and information were the Project Management Institute, A Guide to the Project Management Body of Knowledge, Fifth Edition, 2013, document searches, and interviews with individuals, mainly from within the Guyana Civil Aviation Authority. The data and information gathered was analysed, and this analysis informed the creation of the subsidiary plans used to develop the Project Management Plan to improve the level of EI of ICAO SARPs in ANS Guyana).

1 INTRODUCTION

1.1. Background

Guyana was once a British colony and gained independence in 1966. Nine months later, Guyana became a Contracting State of the International Civil Aviation Organization (ICAO), on 3rd February 1967. ICAO is a technical body of the United Nations (UN), and strives for the world-wide harmonisation of standards for international civil aviation. These standards, and also recommended practices (SARPS), are contained in what are called Annexes to the Convention on International Civil Aviation. There are now nineteen (19) Annexes. Having these annexes meant and still means that Guyana has an obligation to ensure certain standards are met and kept in civil aviation locally. This was done through the Department of Civil Aviation, and from 2002 to present, the Guyana Civil Aviation Authority (GCAA). The GCAA is responsible for all matters regarding civil aviation.

In 1996, ICAO conducted a Safety Oversight Assessment on the performance of the Civil Aviation Department. This assessment found several deficiencies, which had a negative impact on Guyana's ability to effectively implement and enforce ICAO SARPS. In 2007, an Audit by ICAO was conducted and again it was found that Guyana was not ensuring a high percentage of effective implementation of ICAO Standards and Recommended Practices, and in 2014 a Technical Assistance Visit found no significant change in the situation. Consequently, in 2015 a decision was made to address this situation through the initiation and execution of a project. The overall end results for Guyana saw the level of Effective Implementation (EI), of ICAO SARPS move from 44.21% to 64.4%, but falling short of the set target of 70.49%, as established by the ICAO South American Office. The end results of the project as it relates to Air Navigation Services in Guyana was an increase of effective implementation of ICAO SARPS from 10.82% to 54.17% (ICAO, 2017).

Presently as it relates to the area of ANS, the goal is to improve the level of Effective Implementation to 80%+. Hence, a Project Management Plan must be developed as a first step towards achieving this goal.

1.2. Statement of the problem

The level of Effective Implementation of ICAO SARPS in the area of Air Navigation Services (ANS), has been less than satisfactory. It was decided to execute a project to address this situation. In 2014 a Project Document was developed to address this problem. The project was executed, and at the end of 2016 there was a significant improvement in the level of effective implementation. Notwithstanding the improvement, the targeted level of EI was not achieved. This failure was due in part to the failure of the GCAA to recruit, train, and retain sufficient numbers of staff for its Regulatory arm, and failure to ensure compliance on the part of the ANS Provider (Regulatee). It is hoped that this Final Graduation Project (FGP), which is based on the PMBOK Guide, 5Th Edition 2013, could be accepted and adopted by the GCAA, and executed as it seeks to improve the level of EI of ICAO SARPS in ANS.

1.3. Purpose

This Final Graduation Project (FGP) will be conducted for the partial fulfillment of the requirements for the Master in Project Management (MPM) Degree. Within this context, a Project Management Plan that could be executed as a project to realise the goal of attaining an improved level of Effective Implementation of 80%+ of ICAO SARPS in the area of ANS would be developed. The FGP will say what must be done and how it should be done within the context of a project and the Project Management Institute, A Guide to the Project Management Body of Knowledge, 5th Edition, 2013, essentially, how the project works to attain 80%+ Effective Implementation will be presented. The Project Management Plan would contain supplementary plans for the project's scope, time, cost, quality, human resource, risk, procurement, communications, and stakeholder's management.

Should this project be implemented, there could be the realisation of an 80%+ improvement with regards to the Effective Implementation of ICAO SARPS in ANS. Consequently, this implementation could result in higher levels of safety, increased confidence in both the regulatory safety oversight and service provision aspects of the ANS on the part of the users and stakeholders, and an improvement in Guyana's country profile as it relates to civil aviation.

1.4. General objective

To create a Project Management Plan for the GCAA to execute in order to improve the level of Effective Implementation of International Civil Aviation Organization Standards and Recommended Practices in the area of Air Navigation Services (Guyana).

1.5. Specific objectives

1. To create a project charter to give formal permission to the Project Manager to use the organisation's resources to produce the Project Management Plan.
2. To create a Scope Management Plan to ensure that the project includes all the work required, and only the work required, to successfully complete the project.
3. To create a Time Management Plan to ensure that the project is completed in a timely manner.
4. To create a Cost Management Plan to ensure that the project is completed within the approved budget.
5. To create a Quality Management Plan to ensure that quality requirements are established for the project and that project and product requirements are met and validated.

6. To create a Human Resource Management Plan to ensure that the necessary human resources for the project are identified, available and are managed for the project.
7. To create a Risk Management Plan to increase the likelihood and impact of positive events, and decrease the likelihood and impact of negative events in the project.
8. To create a Procurement Management Plan to ensure that the necessary purchasing or acquisition of products, services, or results from outside the project team, is accomplished at the right time, the right quality/specifications, the right quantity, the right locations, and at the right price.
9. To create a Communications Management Plan to ensure that project information is released to the right persons in an appropriate and timely manner.
10. To create a Stakeholder Management Plan to ensure that relevant stakeholders are identified, categorized, engaged with the project, and are managed appropriately.

2 THEORETICAL FRAMEWORK

2.1 Company/Enterprise framework

2.1.1 Company/Enterprise background

The GCAA was formed in 2002 following the passage of the Civil Aviation Act 2000 in the Parliament of Guyana (A. Dorris, Personal Communication, December 1, 2017). The GCAA succeeded the Civil Aviation Department (CAD), which was a department in the Ministry of Public Works and Communications. The GCAA is responsible for all regulatory matters relating to civil aviation in Guyana. Throughout the years, this organisation has been responsible for coordinating and at times executing a number of projects, in areas such as upgrades in Air Traffic Management (ATM), and Communications, Navigation, and Surveillance Systems (CNS), the rehabilitation of the runway and runway lighting system at the Cheddi Jagan International Airport (CJIA), hinterland airstrip development projects, and quite recently, the Guyana ICAO Compliance project, to mention a few (P. McAdam, Personal Communication, November 29, 2017). With regards to compliance with ICAO, there is still work to be done in order to improve the level of compliance with SARPS. It is for this reason that a project is proposed to improve the level of compliance, and hence the need for a Project Management Plan.

2.1.2 Mission and Vision Statements

The GCAA Mission Statement:

To be a Regulator that is facilitating, adaptable, forward looking and compliant with ICAO thus ensuring a safe, secure, economically viable and environmentally sound aviation system.

The Vision Statement:

Towards a Civil Aviation Authority that is compliant with international standards to enable safe, secure and sustainable air transport (for the socio-economic benefits of all).

The “Vision” is “a picture of a desired future that supports the mission, or an image of the future we seek to create (Knell, 2007). Konrad posits that the vision is a destination that is concrete and achievable. The “Mission”, indicates the organisation’s reason for existence (Daft and Marcic, 2004).

This Final Graduation Project is for the development of a Project Management Plan to improve the level of Effective Implementation of ICAO SARPS in ANS (Guyana). This plan by itself will send a clear indication that the organization wants to be compliant with international standards; something that is clearly stated in the Vision Statement. This spirit is also contained in the Mission Statement. This FGP could impact the GCAA internally in a very positive manner and would demonstrate that the organization is serious about achieving its stated Vision and Mission. The impact would also be seen and felt at the regional level **as it could become more apparent to the emphasis to be placed on compliance (Effective Implementation) with ICAO SARPS.**

2.1.3 Organizational Structure

The GCAA is a semi-autonomous government agency. It is defined as a Body Corporate (Civil Aviation Act 2000). It comprises a Board of Directors, which is appointed by the Minister, and which is responsible for providing oversight for good governance and financial management on behalf of the Minister within the Ministry of Public Infrastructure, who has direct oversight over the GCAA. The Minister provides political and policy direction while a Director General, who is appointed by the Minister, is responsible for the daily operations and safety and security oversight of civil aviation in Guyana (Civil Aviation Act 2000).

Below the Director General, the organisation comprises Directorates, Departments, Divisions, and Sections.

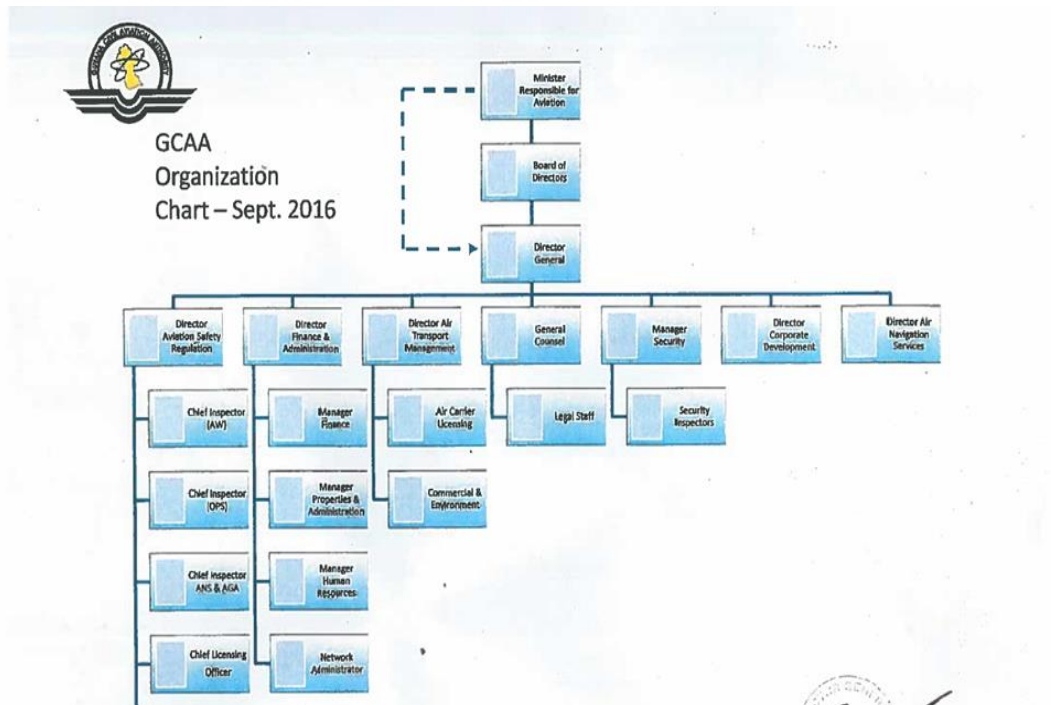


Figure 1 GCAA Organizational Structure (Source: GCAA)

For the purposes of the FGP, two Directorates will be the main focus. They are the Aviation Safety Regulation Directorate (ASRD), and the Air Navigation Services Directorate (ANSD). More specifically, it is the ANS Section of the ASRD, which is headed by the Chief Inspector Air Navigation Services-Aerodromes & Ground Aids (ANS-AGA), that will be responsible for execution of the project, and will have to ensure that, among other things, the ANS Directorate implements applicable Standards as required. Simply put, these are the two areas in the GCAA that will be impacted the most by the FGP. Other areas, such as the Legal Department, Finance and Administration Directorate, Human Resources Division, and the Office of the Director General, will also be impacted since they will be required to play supporting roles for the success of the project.

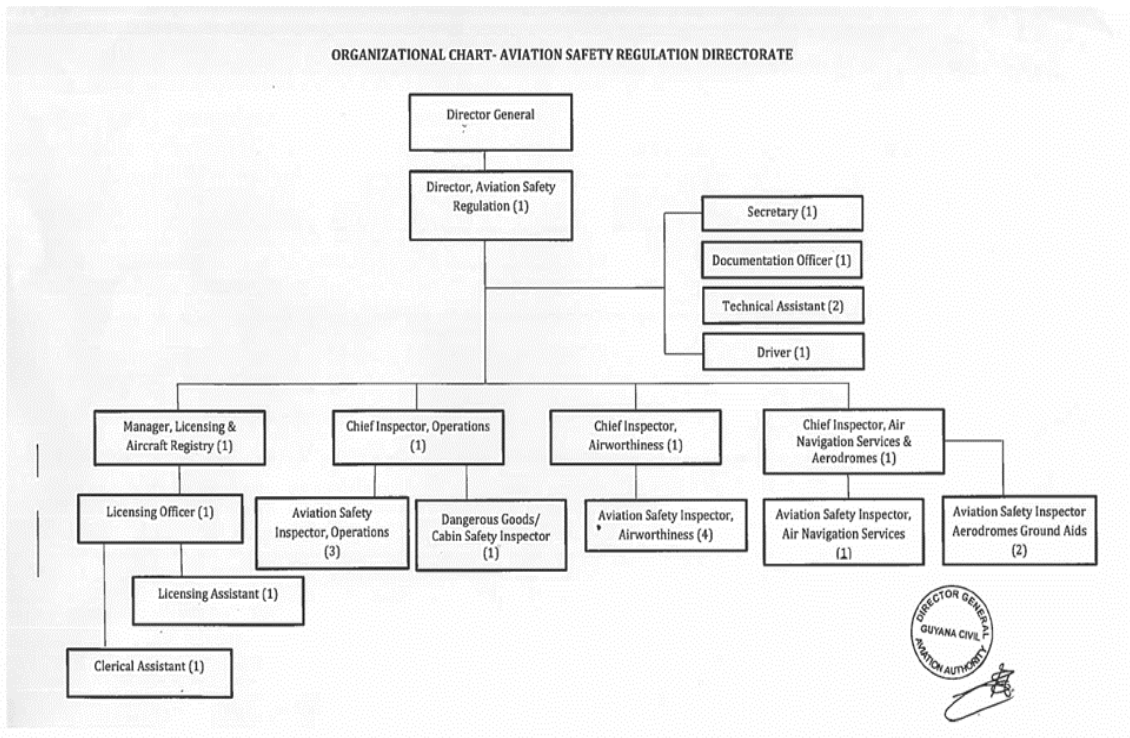


Figure 2 ASRD Organizational Structure (Source: GCAA)

2.1.4 Products offered

The GCAA provides a number of “products” in the form of services to the civil aviation industry in Guyana. Its main product is, however, the provision of safety and security oversight, assuming the role of a regulator.

The ANSD of the GCAA functions, not in a regulatory capacity, but as a service provider (ANSP), by providing services to all phases of aircraft flight. In this context, these services include Air Traffic Management (ATM), Communication, Navigation and Surveillance (CNS), Meteorological Services for Air Navigation (MET), Search and Rescue (SAR), Flight Procedures Design (FPD), Aeronautical Maps and Charts (MAP), and Aeronautical Information Services (AIS).

There is a direct relationship between the products provided by the GCAA and the FPG objectives. The FPG objectives will impact positively on the products of the GCAA should the project be a success.

2.2 Project Management concepts

2.2.1 Project

According to the Project Management Institute, A Guide to the Project Management Body of Knowledge (PMBOK Guide), Fifth Edition, 2013, a project is defined as a temporary endeavour, which is undertaken to create a unique service, product, or result. Essentially, when there is something to be done or made - something that is not a routine everyday task - but one that needs effort for a period of time, a period having a beginning and an end, this task could be organised and executed as a project.

For the purposes of this FGP, the project is to prepare a Project Management Plan to Improve the Level of EI of ICAO SARPS in ANS (Guyana). In the GCAA, although many projects have been coordinated and executed over the years, the organisation does not have a formal organisational definition for the term "Project".

2.2.2 Project Management

According to the Project Management Institute, A Guide to the Project Management Body of Knowledge (PMBOK Guide), Fifth Edition, 2013, project management is defined as "the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements" (PMI, 2013, p.5).

The literature goes on to explain that project management is realised by appropriately applying and integrating 47 Project Management processes which fall under 5 Process Groups: Initiating, Planning, Executing, Monitoring and Controlling, and Closing (PMI, 2013, p.5). For the purposes of this FGP, the information, methodologies, and other guidance espoused by the PMBOK Guide

5th Ed., 2013, and its subsidiary and supplementary documents, would be referenced and applied.

In the GCAA, there is presently no formal or documented definition for the term project management, nor are there any organisational guidelines or methodologies for project management on behalf of the GCAA. For the FGP, the term “Project Management” will not differ in meaning or connotation from the PMBOK Guide 5th Ed., 2013. The FGP entails the development of a Project Management Plan for the named project, after which the execution of the Plan would be managed as another project.

2.2.3 Project Life Cycle

Meredith and Mantel (2002), liken projects to organic entities whereby they have life cycles. Essentially, a life has stages, which in most cases run sequentially in a logical manner. They state that “most projects go through similar stages on the path from origin to completion” (Meredith and Mantel, 2002, p.13). The stages referred to, comprise the project life cycle. According to the Project Management Institute, A Guide to the Project Management Body of Knowledge (PMBOK Guide), Fifth Edition, 2013, “a project life cycle is the series of phases that a project passes through from its initiation to its closure” (PMI, 2013, p.38). Figures 3 and 4 illustrate a generic project cycle.

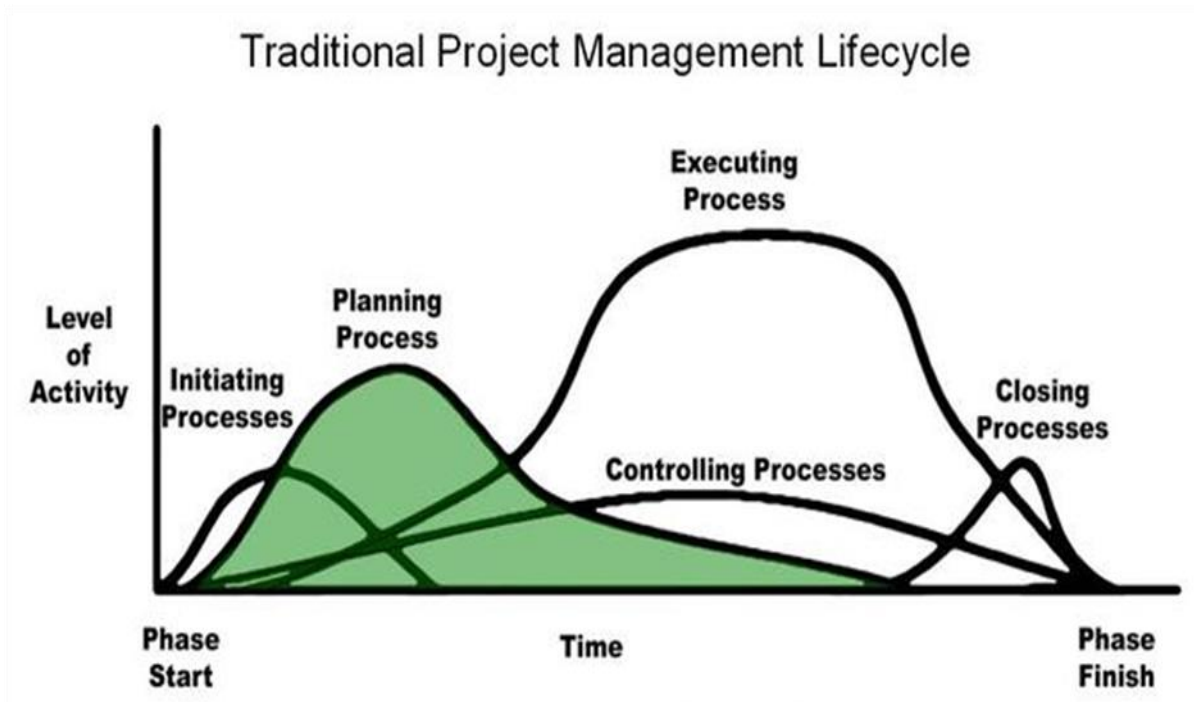


Figure 3: Traditional Project Management Lifecycle. Retrieved from:

<https://i.pinimg.com/originals/5b/91/d6/5b91d6cdd3e97da4647add8312c3e969.jpg> (2 December 2017, 1:53pm)

The GCAA does not have formal documentation reflective of what a project life cycle should be, but in general practice, GCAA projects have a life cycle and have been observed to be consistent with the PMI literature. For the FGP, the project life cycle will not differ from that contained the PMBOK Guide 5th Ed., 2013.

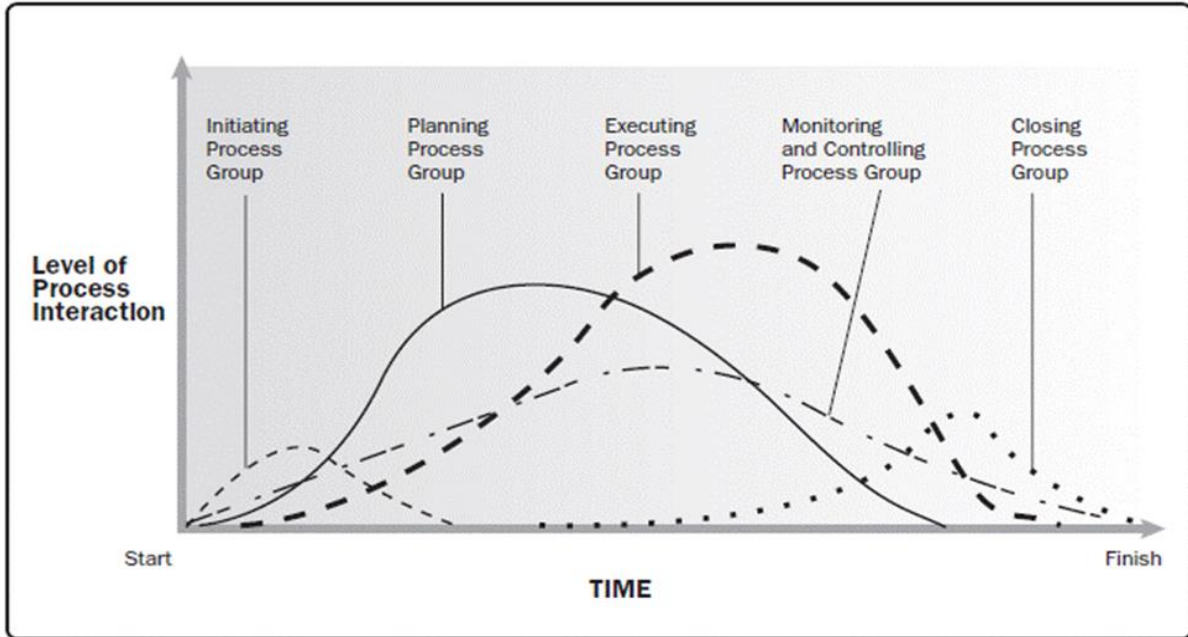


Figure 4: Process groups interact in a phase or project- Reprinted from Project Management Institute, A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) - Fifth Edition, Project Management Institute Inc., 2013 Page 51 Figure 3-2

2.2.4 Project Management Processes

Project Management Processes ensure the effective flow of a project for the duration of the project life cycle (PMI, 2013). These processes fall into 5 categories referred to as Process Groups: Initiating, Planning, Executing, Monitoring and Controlling, and Closing Process Group (PMI, 2013). For the purposes of the FGP, only the Initiating and Planning Processes would be used to develop the Project Management Plan to improve the level of EI of ICAO SARPs in ANS (Guyana). The resulting document would comprise subsidiary documents emanating from the Initiating and Planning Process activities.

Figure 5 shows the processes that would be applied during this project.

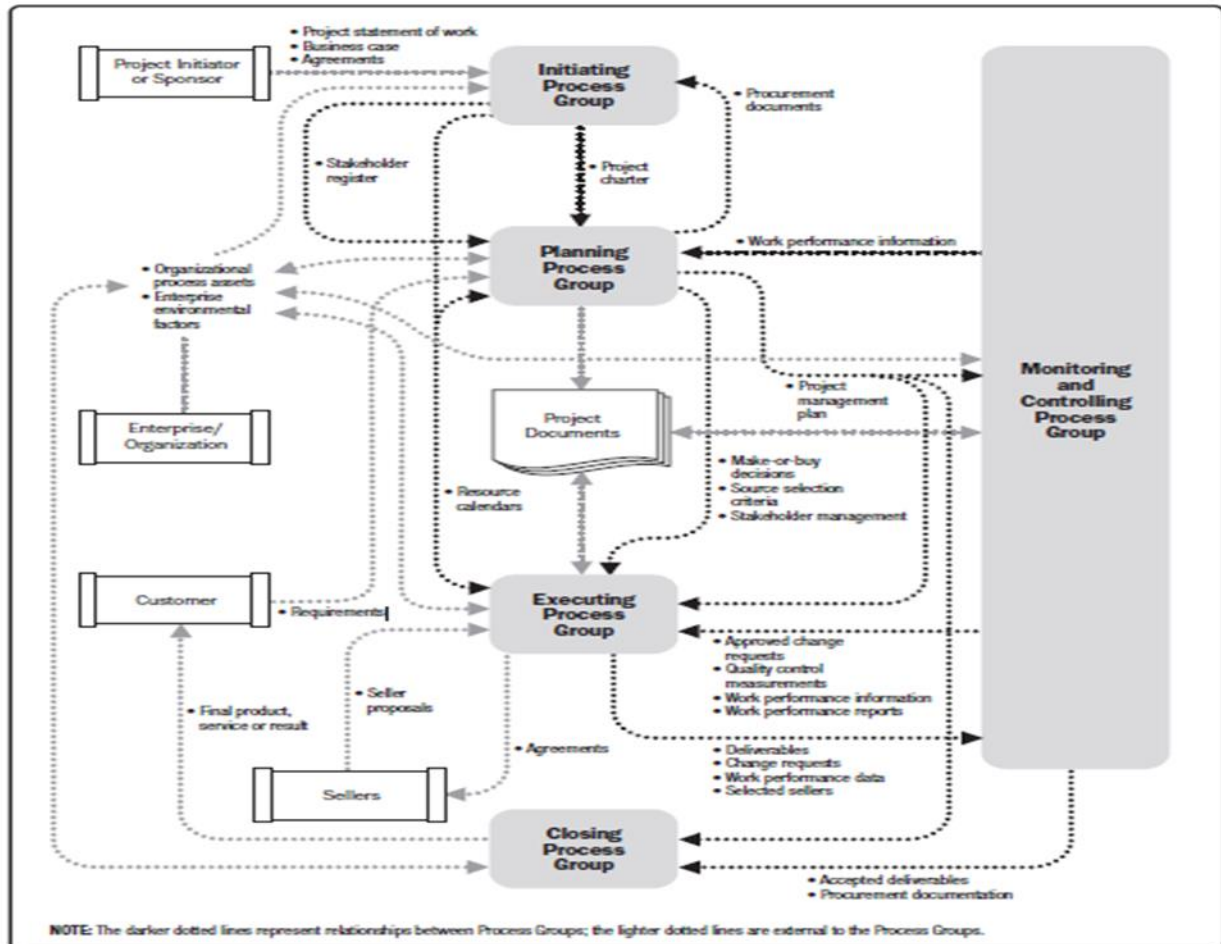


Figure 5 – Project Management Process Interactions- Reprinted from Project Management Institute, A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) - Fifth Edition, Project Management Institute Inc., 2013 Page 53 Figure 3-3

At the GCAA, while in practice there is evidence and elements of Initiating and Planning Process activities, they fall short of being consistent or parallel with those espoused in the PMBOK 5th Edition 2013. It is hoped that this FGP would be adopted as necessary and implemented to serve as a formal template for projects that may come under the responsibility of the GCAA in the future.

2.2.5 Project Management Knowledge Areas

The PMBOK 5th Edition 2013, informs us that there are 47 Management Processes that are grouped into 10 Knowledge Areas, with each Knowledge Area representing a complete set of concepts, terms, and activities that make up a

professional field, project management field, or area of specialisation, and that these Knowledge Areas are used on most projects, most of the time (PMI, 2013, p.60). The GCAA does not formally subscribe to the application of these areas in its project management activities and does not have documented procedures consistent with them, however, there have been elements from the Knowledge Areas that were manifest during past projects. It is hoped that this FGP would serve as a template that could be adopted if necessary, and implemented into the formal Project activities of the GCAA.

For the purposes of the FGP, the 10 Knowledge Areas would be utilised with the aim of ensuring that the Project objectives are met. The 10 Knowledge Areas are as follows:

1. **1.Integration Management** - This will be applied to ensure the development of the Project Charter and will continue to be applied for the duration of the development of the FGP.
2. **Scope Management-** To ensure that the project includes all the work required, and only the work required, to successfully complete the project.
3. **Time Management** - to ensure that the project is completed in a timely manner.
4. **Cost Management** - to ensure that the project is completed within the approved budget.
5. **Quality Management** - Plan to ensure that quality requirements are established for the project and that project and product requirements are met and validated.

6. **Human Resource Management-** to ensure that the necessary human resources for the project are identified, available and are managed for the project.
7. **Risk Management-** to increase the likelihood and impact of positive events, and decrease the likelihood and impact of negative events in the project.
8. **Procurement Management-** to ensure that the necessary purchasing or acquisition of products, services, or results from outside the project team, is accomplished at the right time, the right quality/specifications, the right quantity, the right locations, and at the right price.
9. **Communication Management-** to ensure that project information is released to the right persons in an appropriate and timely manner.
10. **Stakeholder Management-** to ensure that relevant stakeholders are identified, categorised, and engaged with the project, and are managed appropriately.

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

2.3.1 Air Navigation Services

AIR NAVIGATION SERVICES - Services provided to air traffic during all phases of operations, including Air Traffic Management (ATM), Communication, Navigation and Surveillance (CNS), Meteorological Services for Air Navigation (MET), Search and Rescue (SAR), Aeronautical Information Services (AIS), Aeronautical Cartography (MAP), and Procedures for Air Navigation Services/Flight Procedures Design (PANS-OPS).

2.3.2 Compliance vs. Effective Implementation

For the purposes of this FGP, the concepts of “compliance” and “effective implementation” are synonymous and may be used interchangeably. Effective Implementation refers to compliance with ICAO SARPS. When there is compliance with ICAO SARPS, there is “effective implementation of ICAO SARPS.

2.3.3 Standards and Recommended Practices (SARPS)

SARPS are technical specifications published by ICAO in 19 Annexes to the Convention on International Civil Aviation for adoption by countries to achieve the highest practicable degree of uniformity in regulations, standards, procedures, and organisation in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation.

2.3.4 Standards

Standard: Any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as necessary for the safety or regularity of international air navigation and to which Contracting States will conform in accordance with the Convention; in the event of impossibility of compliance, notification to the Council is compulsory.

2.3.5 Recommended Practice

Recommended Practice: Any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as desirable in the interest of safety, regularity or efficiency of international air navigation, and to which Contracting States will endeavor to conform in accordance with the Convention.

3 METHODOLOGICAL FRAMEWORK

3.1 Information sources

Dhiman, Anil K. & Yashoda Rani (2005), essentially indicate that an information source is anything that informs a person regarding something, or provides knowledge to that person.

3.1.1 Primary sources

Primary sources of information are things that provide the information directly. These include novels, speeches, eyewitness accounts, interviews, letters, results of original research (Lester & Lester Jr., 2012).

For the development of the FGP the primary sources of information that will be used are, official reports, memoranda, and interviews. These would all be related to the 2015 project and its aftermath.

3.1.2 Secondary sources

Simply put, a secondary source of information is one which provides information obtained from a primary source. Lester and Lester Jr., indicate that secondary sources of information are “writings about the primary sources” (Lester & Lester Jr., 2012).

For the development of the FGP, the secondary sources of information that will be used are PMBOK Guide, evaluations, interpretations and analyses of primary works, and websites. Additionally, official reports regarding the successful EI of ICAO SARPS in other countries could be used.

Chart 1 Information sources (Source: Compiled by the Author, December 2017)

Objectives	Information sources	
	Primary	Secondary
To create a project charter to give formal permission to the Project Manager to use the organisation's resources to produce the Project Management Plan.	Personal Institutional Memory, Official Reports, and experience along with Interviews.	PMBOK® Guide
To create a Scope Management Plan to ensure that the project includes all the work required, and only the work required, to successfully complete the project.	Interviews, Memoranda, Official Reports	PMBOK ®Guide
To create a Time Management Plan to ensure that the project is completed in a timely manner.	Interviews, Memoranda, Official Reports	PMBOK® Guide

To create a Cost Management Plan to ensure that the project is completed within the approved budget.	Interviews, Memoranda, Official Reports	PMBOK® Guide
To create a Quality Management Plan to ensure that quality requirements are established for the project and that project and product requirements are met and validated.	Interviews, Memoranda, Official Reports	PMBOK® Guide
To create a Human Resource Management Plan to ensure that the necessary human resources for the project are identified, available and are managed for the project.	Interviews, Memoranda, Official Reports	PMBOK® Guide
To create a Risk Management Plan to increase the likelihood and impact of positive events, and decrease the likelihood and impact of negative events in the project.	Interviews, Memoranda, Official Reports	PMBOK® Guide

<p>To create a Procurement Management Plan to ensure that the necessary purchasing or acquisition of products, services, or results from outside the project team, is accomplished at the right time, the right quality/specifications, the right quantity, the right locations, and at the right price.</p>	<p>Interviews, Memoranda, Official Reports</p>	<p>PMBOK® Guide</p>
<p>To create a Communications Management Plan to ensure that project information is released to the right persons in an appropriate and timely manner.</p>	<p>Interviews, Memoranda, Official Reports</p>	<p>PMBOK® Guide</p>
<p>To create a Stakeholder Management Plan to ensure that relevant stakeholders are identified, categorized, engaged by the project, and are managed appropriately.</p>	<p>Interviews, Memoranda, Official Reports</p>	<p>PMBOK® Guide</p>

3.2 Research Methods

In a paper titled “Research Methods”, Carrie Williams referenced Leedy and Ormrod (2001), who define research as: the process of collecting, analysing, and interpreting data in order to understand a phenomenon (Williams, 2007). When we speak of “method”, we generally speak of a way to get something done. There are quantitative, qualitative and mixed research methods (Williams, 2007). Quantitative methods are used where numerical data is required, while qualitative methods are used where textual data is required, and mixed methods are used where both text and numerical data is required (Williams, 2007).

For this FGP, information will be gathered from both primary and secondary sources. Both qualitative and quantitative method will be used; specifically information for the FGP is proposed to come from Document Searches, Interviews, and Content Analysis.

3.2.1 Document Search Method

For the purpose of developing the FGP, the term “Document Search” will mean the use of documents, whether in print or online, to obtain data, information, and or guidance.

3.2.2 Interview Method

According to the Project Management Institute, A Guide to the Project Management Body of Knowledge, Fifth Edition, 2013, the definition of “Interviews” is: “a formal or informal approach to elicit information from stakeholders by talking to them directly” (PMI, 2013, p.544). In today’s world, interviews can be conducted face to face, on the telephone, or online via email or video conferencing, among other things.

3.2.3 Content Analysis Method

According to the website <https://www.terry.uga.edu/management/contentanalysis/research/> “**Content analysis** is a **research** technique used to make replicable and valid inferences by interpreting and coding textual material. By systematically evaluating texts (e.g., documents, oral communication, and graphics), qualitative data can be converted into quantitative data”.

Chart 2 Research methods (Source A. Bassier, The Author, December 2017)

Objectives	Research methods		
	Document Search	Interview	Content Analysis
To create a project charter to give formal permission to the Project Manager to use the organisation’s resources to produce the Project Management Plan.	This method will be employed by using data/information emanating from the sources listed in Chart 1, Objective 1 above to inform the development of the Charter.	This method will be employed by using data/information emanating from the sources listed in Chart 1, Objective 1 above to inform the development of the Charter.	This method will be employed by using data/information emanating from the sources listed in Chart 1, Objective 1 above to inform the development of the Charter.
To create a Scope Management Plan to ensure that the project includes all the work required, and only the work required, to successfully complete the	This method will be employed by using data/information emanating from the sources listed in Chart 1,	This method will be employed by using data/information emanating from the sources listed in Chart 1,	This method will be employed by using data/information emanating from the sources listed in Chart 1,

project.	Objective 2 above to inform the development of the Scope Management Plan.	Objective 2 above to inform the development of the Scope Management Plan.	Objective 2 above to inform the development of the Scope Management Plan.
To create a Time Management Plan to ensure that the project is completed in a timely manner.	This method will be employed by using data/ information emanating from the sources listed in Chart 1, Objective 3 above to inform the development of the Time Management Plan.	This method will be employed by using data/ information emanating from the sources listed in Chart 1, Objective 3 above to inform the development of the Time Management Plan.	This method will be employed by using data/ information emanating from the sources listed in Chart 1, Objective 3 above to inform the development of the Time Management Plan.
To create a Cost Management Plan to ensure that the project is completed within the approved budget.	This method will be employed by using data/ information emanating from the sources listed in Chart 1, Objective 4 above to inform the development of the Cost Management	This method will be employed by using data/ information emanating from the sources listed in Chart 1, Objective 4 above to inform the development of the Cost Management	This method will be employed by using data/ information emanating from the sources listed in Chart 1, Objective 4 above to inform the development of the Cost Management

	Plan.	Plan.	Plan.
To create a Quality Management Plan to ensure that quality requirements are established for the project and that project and product requirements are met and validated.	This method will be employed by using data/information emanating from the sources listed in Chart 1, Objective 5 above to inform the development of the Quality Management Plan.	This method will be employed by using data/information emanating from the sources listed in Chart 1, Objective 5 above to inform the development of the Quality Management Plan.	This method will be employed by using data/information emanating from the sources listed in Chart 1, Objective 5 above to inform the development of the Quality Management Plan.
To create a Human Resource Management Plan to ensure that the necessary human resources for the project are identified, available and are managed for the project.	This method will be employed by using data/information emanating from the sources listed in Chart 1, Objective 6 above to inform the development of the Human Resource Management Plan.	This method will be employed by using data/information emanating from the sources listed in Chart 1, Objective 6 above to inform the development of the Human Resource Management Plan.	This method will be employed by using data/information emanating from the sources listed in Chart 1, Objective 6 above to inform the development of the Human Resource Management Plan.
To create a Risk Management Plan to increase the likelihood	This method will be employed by using data/	This method will be employed by using data/	This method will be employed by using data/

<p>and impact of positive events, and decrease the likelihood and impact of negative events in the project.</p>	<p>information emanating from the sources listed in Chart 1, Objective 7 above to inform the development of the Risk Management Plan.</p>	<p>information emanating from the sources listed in Chart 1, Objective 7 above to inform the development of the Risk Management Plan.</p>	<p>information emanating from the sources listed in Chart 1, Objective 7 above to inform the development of the Risk Management Plan.</p>
<p>To create a Procurement Management Plan to ensure that the necessary purchasing or acquisition of products, services, or results from outside the project team, is accomplished at the right time, the right quality/specifications, the right quantity, the right locations, and at the right price.</p>	<p>This method will be employed by using data/information emanating from the sources listed in Chart 1, Objective 8 above to inform the development of the Procurement Management Plan.</p>	<p>This method will be employed by using data/information emanating from the sources listed in Chart 1, Objective 8 above to inform the development of the Procurement Management Plan.</p>	<p>This method will be employed by using data/information emanating from the sources listed in Chart 1, Objective 8 above to inform the development of the Procurement Management Plan.</p>
<p>To create a Communications Management Plan to ensure that project information is released to the right persons in an appropriate and timely</p>	<p>This method will be employed by using data / information emanating from the sources listed in Chart 1,</p>	<p>This method will be employed by using data / information emanating from the sources listed in Chart 1,</p>	<p>This method will be employed by using data / information emanating from the sources listed in Chart 1,</p>

manner.	Objective 9 above to inform the development of the Communications Plan.	Objective 9 above to inform the development of the Communications Plan.	Objective 9 above to inform the development of the Communications Plan.
To create a Stakeholder Management Plan to ensure that relevant stakeholders are identified, categorized, engaged by the project, and are managed appropriately.	This method will be employed by using data/information emanating from the sources listed in Chart 1, Objective 10 above to inform the development of the Stakeholder Management Plan.	This method will be employed by using data/information emanating from the sources listed in Chart 1, Objective 10 above to inform the development of the Stakeholder Management Plan.	This method will be employed by using data/information emanating from the sources listed in Chart 1, Objective 10 above to inform the development of the Stakeholder Management Plan.

3.3 Tools

According to the Project Management Institute, A Guide to the Project Management Body of Knowledge, Fifth Edition, 2013, the definition of a “Tool” is “something tangible, such as a template or software programme, used in performing an activity to produce a product or result” (PMI, 2013, p.565).

The following Chart - Chart 3, Tools - contains the tools that will be developed on the FGP.

Chart 3 Tools (Source: A. Bassier, The Author, December 2017)

Objectives	Tools
To create a project charter to give formal permission to the Project Manager to use the organisation's resources to produce the Project Management Plan.	Expert Judgement.
To create a Scope Management Plan to ensure that the project includes all the work required, and only the work required, to successfully complete the project.	Expert Judgement and Meetings.
To create a Time Management Plan to ensure that the project is completed in a timely manner.	Expert Judgement, Meetings, Analytical Techniques.
To create a Cost Management Plan to ensure that the project is completed within the approved budget.	Expert Judgement, Meetings, Analytical Techniques.
To create a Quality Management Plan to ensure that quality requirements are established for the project and that project and product requirements are met and validated.	Meetings, Cost-benefit Analysis
To create a Human Resource Management Plan to ensure that the necessary human resources for the project are identified, available and are managed for the project.	Organisation charts and position description, Organisational Theory, Expert Judgement, Meetings, Networking.

To create a Risk Management Plan to increase the likelihood and impact of positive events, and decrease the likelihood and impact of negative events in the project.	Analytical techniques, Expert Judgement, Meetings.
To create a Procurement Management Plan to ensure that the necessary purchasing or acquisition of products, services, or results from outside the project team, is accomplished at the right time, the right quality/specifications, the right quantity, the right locations, and at the right price.	Expert Judgement, Meetings, Make-or-buy Analysis.
To create a Communications Management Plan to ensure that project information is released to the right persons in an appropriate and timely manner.	Communication Requirements Analysis, Communication Technology, Communication Models, Communication Methods, Meetings.
To create a Stakeholder Management Plan to ensure that relevant stakeholders are identified, categorised, engaged by the project, and are managed appropriately.	Stakeholder Analysis, Expert Judgement, Meetings.

3.4 Assumptions and Constraints

According to the Project Management Institute, A Guide to the Project Management Body of Knowledge, Fifth Edition, 2013, the definition of an “Assumption” is “A factor in the planning process that is considered to be true, real, or certain, without proof or demonstration” (PMI, 2013, p.529). On the other hand, it

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

Assumptions for the FGP are listed below:

- The needed support would be received from the GCAA;
- The information needed for the development of the FGP is available;
- The persons needed to be interviewed will cooperate fully;
- The scope nor the time for completion of the FGP would be modified.

Constraints for the FGP are as follows:

- Resources: Needed resources, while available, may not be readily accessible;
- Scope: the scope of the FGP is limited by the time allotted for the completion of same, hence the desired depth and details may not always be reflected in the FGP;
- Time: balancing time with job, family, and FGP demands could be a challenge.

Chart 4 Assumptions and Constraints (Source: A. Bassier, The Author, December 2017)

Objectives	Assumptions	Constraints
To create a project charter to give formal permission to the Project Manager to use the organisation’s resources to produce the Project Management Plan.	GCAA Supportive of FGP, Needed information available, Receive full cooperation when needed, FGP scope nor time modified.	Resources Scope Time
To create a Scope Management Plan to ensure that the project includes all the work required, and only the work required, to successfully complete the project.	GCAA Supportive of FGP, Needed information available, Receive full cooperation when	Resources Scope Time

Objectives	Assumptions	Constraints
	needed, FGP scope nor time modified.	
To create a Time Management Plan to ensure that the project is completed in a timely manner.	GCAA Supportive of FGP, Needed information available, Receive full cooperation when needed, FGP scope nor time modified.	Resources Scope Time
To create a Cost Management Plan to ensure that the project is completed within the approved budget.	GCAA Supportive of FGP, Needed information available, Receive full cooperation when needed, FGP scope nor time modified.	Resources Scope Time
To create a Quality Management Plan to ensure that quality requirements are established for the project and that project and product requirements are met and validated.	GCAA Supportive of FGP, Needed information available, Receive full cooperation when needed, FGP scope nor time modified.	Resources Scope Time
To create a Human Resource Management Plan to ensure that the necessary human resources for the project are identified, available and are managed for the project.	GCAA Supportive of FGP, Needed information available, Receive full cooperation when needed, FGP scope nor time modified.	Resources Scope Time

Objectives	Assumptions	Constraints
<p>To create a Risk Management Plan to increase the likelihood and impact of positive events, and decrease the likelihood and impact of negative events in the project.</p>	<p>GCAA Supportive of FGP, Needed information available, Receive full cooperation when needed, FGP scope nor time modified.</p>	<p>Resources Scope Time</p>
<p>To create a Procurement Management Plan to ensure that the necessary purchasing or acquisition of products, services, or results from outside the project team, is accomplished at the right time, the right quality/specifications, the right quantity, the right locations, and at the right price.</p>	<p>GCAA Supportive of FGP, Needed information available, Receive full cooperation when needed, FGP scope nor time modified.</p>	<p>Resources Scope Time</p>
<p>To create a Communications Management Plan to ensure that project information is released to the right persons in an appropriate and timely manner.</p>	<p>GCAA Supportive of FGP, Needed information available, Receive full cooperation when needed, FGP scope nor time modified.</p>	<p>Resources Scope Time</p>
<p>To create a Stakeholder Management Plan to ensure that relevant stakeholders are identified, categorised, engaged by the project, and are managed appropriately.</p>	<p>GCAA Supportive of FGP, Needed information available, Receive full cooperation when needed, FGP scope nor time modified.</p>	<p>Resources Scope Time</p>

3.5 Deliverables

According to the Project Management Institute, A Guide to the Project Management Body of Knowledge, Fifth Edition, 2013, a “deliverable” is “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 following Chart - Chart 5, Deliverables- contains the deliverables that will be developed on the Final Graduation Project.

Chart 5 Deliverables (Source A. Bassier, The Author, December 2017)

Objectives	Deliverables
To create a project charter to give formal permission to the Project Manager to use the organisation’s resources to produce the Project Management Plan.	Project Charter
To create a Scope Management Plan to ensure that the project includes all the work required, and only the work required, to successfully complete the project.	Scope Management Plan
To create a Time Management Plan to ensure that the project is completed in a timely manner	Time Management Plan
To create a Cost Management Plan to ensure that the project is completed within the approved budget.	Cost Management Plan

<p>To create a Quality Management Plan to ensure that quality requirements are established for the project and that project and product requirements are met and validated.</p>	<p>Quality Management Plan</p>
<p>To create a Human Resource Management Plan to ensure that the necessary human resources for the project are identified, available and are managed for the project.</p>	<p>Human Resource Management Plan</p>
<p>To create a Risk Management Plan to increase the likelihood and impact of positive events, and decrease the likelihood and impact of negative events in the project.</p>	<p>Risk Management Plan</p>
<p>To create a Procurement Management Plan to ensure that the necessary purchasing or acquisition of products, services, or results from outside the project team, is accomplished at the right time, the right quality/specifications, the right quantity, the right locations, and at the right price.</p>	<p>Procurement Management Plan</p>
<p>To create a Communications Management Plan to ensure that project information is released to the right persons in an appropriate and timely manner.</p>	<p>Communications Plan</p>
<p>To create a Stakeholder Management Plan to ensure that relevant stakeholders are identified, categorized,</p>	<p>Stakeholder Register and Management Plan</p>

engaged by the project, and are managed appropriately.	
--	--

4 RESULTS

4.1. Project Charter

Introduction

The level of EI of the ICAO SARPS in the area of Air Navigation Services (ANS), in Guyana has been less than satisfactory; as a result, the execution of a project to address this situation. In 2014, a Project Document was developed to address this problem. The project was executed, and at the end of 2016 there was a significant improvement in the level of EI. Notwithstanding the improvement, the targeted level of EI was not achieved. This lack of achievement was due in part to the failure of the GCAA to recruit, train, and retain sufficient numbers of staff for its regulatory arm, and failure to ensure compliance on the part of the ANS Provider (Regulatee).

A project that could be executed to realise the goal of attaining an improved level of EI of 80%+ of ICAO SARPS in the area of ANS would be good for Guyana and the region. It would result in higher levels of safety, increased confidence in both the regulatory safety oversight and service provision aspects of the ANS on the part of the users and stakeholders, and an improvement in Guyana's country profile as it relates to civil aviation.

Purpose

This project charter of the project to Improve the level of EI of ICAO SARPs in ANS (Guyana) is developed to provide stakeholders with relevant information that could be used in making a decision to give approval to the project. The information contained herein will assist in deciding whether to fund the project. This project charter provides the reader with information regarding the scope, pre-assigned resources, and business case. This charter also indicates the relevant project stakeholders, their roles, and their responsibilities. This project charter will serve as the document that formally authorises the existence of the project and would

provide the project manager with the authority to apply organisational resources to project activities, once approved.

Scope

The scope of the project to improve the level of EI of ICAO SARPs in ANS (Guyana) to 80%+ will entail all activities required to attain this goal. The project scope covers the recruitment, training, and retention of sufficient numbers of staff for the Regulatory arm of the GCAA; ensuring compliance on the part of the ANS Provider (Regulatee) through safety oversight inspections and audits; compiling documentary evidence of all activities conducted as part of this project; and inviting the ICAO to return to Guyana to conduct an onsite validation to ascertain whether Guyana has improved its level of EI to 80% or more. The project has a timeline of 8 months for completion.

The following Chart represents the major deliverables of this project:

Chart 6: Major Project Deliverables (Source: A. Bassier, The Author, April 2018)

No.	Major Deliverables
1	The recruitment and retention of sufficient numbers of staff.
2	The training of staff (Initial, On-the-job, Specialised, and where applicable, Recurrent training).
3	Inspector Training Records and Records Maintenance System
4	Effective regulatory oversight of the ANS Provider through Inspections and Audits.
5	Documentary evidence of all activities.
6	ICAO Mission visit to Guyana to conduct on-site validation.

Intended Audience

The intended audience of the project to improve the level of EI of ICAO SARPs in ANS (Guyana) to 80%+ is the sponsor and senior representatives of the sponsor. For this project the sponsor is the Director General of the GCAA.

Overview

Project Title and Description

Project Title: Project to improve the level of EI of ICAO SARPs in ANS (Guyana) to 80%+.

Description: The project entails all activities that are necessary to improve the level of Effective Implementation of ICAO SARPs in ANS (Guyana). It will involve training and retaining relevant personnel, as well as the conduct of safety audits and inspections of the ANS Provider, as well as documenting the entire process and inviting ICAO to conduct a validation mission to ascertain whether the level of EI has improved after completion of the activities.

Business Case

This project to improve the level of EI of ICAO SARPs in ANS (Guyana) to 80%+ is considered necessary and essential. Should this project be implemented, there could be the realization of an 80%+ improvement with regards to the EI of ICAO SARPS in ANS (Guyana). Consequently, this implementation could result in higher levels of safety, increased confidence in both the regulatory safety oversight and service provision aspects of the ANS on the part of the users and stakeholders, and an improvement in Guyana's country profile as it relates to civil aviation. As a consequence, the results could in turn help in attracting more airlines, air operators, more business, more jobs, and more growth and development for Guyana.

Pre-assigned Resources

Human Resources: This will comprise the Project Manager, National Continuous Monitoring Coordinator (NCCMC), ANS Regulatory personnel (Inspectors), Personnel from the GCAA Legal Department, and other support staff.

Materials and Services: This area will comprise manuals files and general office stationary, along with scanning and printing equipment and accessories. With regard to services, this will comprise training for the relevant personnel, both overseas and locally.

Financial Resources: This area will comprise all costs associated with the project and will be provided by the GCAA.

Project Objectives and Constraints

Objectives

To have the GCAA plan, execute, monitor and control, and close a successful project which would see the level of EI of ICAO SARPs in ANS (Guyana) improve to 80%+.

Risks and Constraints

Risks

The following is a listing of threats that must be considered to ensure that this project is successful:

Expected Risks

1. Other extra duties required to be performed by the personnel involved in the project could cause a project delay.
2. Emergencies external to the project requiring the immediate attention of personnel involved in the project, could cause a project delay.
3. Resistance or non-cooperation on the part of the ANS Provider could cause a project delay or failure.

Unexpected Risks

1. Not recruiting enough persons could cause the failure of the project.

2. Not giving priority to the required training and not approving the required funds could cause the project to be delayed or fail.
3. Downsizing or cancelling the project due to perceived high costs could cause the failure of the project.

Constraints

This section lists the known limitations that must be considered for the project.

1. The project is constrained by time - it must be completed within a time period of eight (8) months.
2. The project will be constrained by cost - while funds will come from the GCAA accounts, it will not be a blank cheque.
3. The project is constrained by the paucity of personnel with prior experience in a project of this nature in Guyana, especially in the area of ANS.

Chart 7: Project Stakeholders (Source: The Author, April 2018)

Name	Organisation	Job Title	Responsibility and Authority
Director General- GCAA	GCAA	Project Sponsor	Ensure the realisation of the project.
NCMC	GCAA	National Coordinator	Monitor level of EI and ensure projects and sub-projects are implemented
Director- Aviation Safety Regulations	GCAA	DASR	Responsible for regulatory safety oversight of ANS et al
Minister for Civil Aviation	The Government	Responsible Minister	To provide political support to project.
GCAA Board of Directors	GCAA	Board Members	Ensure Government policy is executed.
Project Team Members	GCAA	Project Implementer	Ensures the project is implemented and succeeds.
ANS Provider	GCAA	Provision of ANS	To implement the relevant ICAO SARPs
ICAO Regional Officer ANS & Safety -Roberto Sosa	ICAO	Regional Officer ANS & Safety	Monitor project progress and validate level of EI
Aircraft Owners & Operators & Airlines	Various	Air Transport to passengers	Provide movement of people and products
Airport Operators	CJIA, EFCIA	Airport Management	
Air Passengers	None	Airline patrons	None
Remote Area Medical Services	Ministry of Public Health et al	Residents/patients	None
Communities dependent on air services	Remote communities	Residents/patients	None

Chart 8: Project Stakeholder Analysis Matrix (Source: The Author, April 2018)

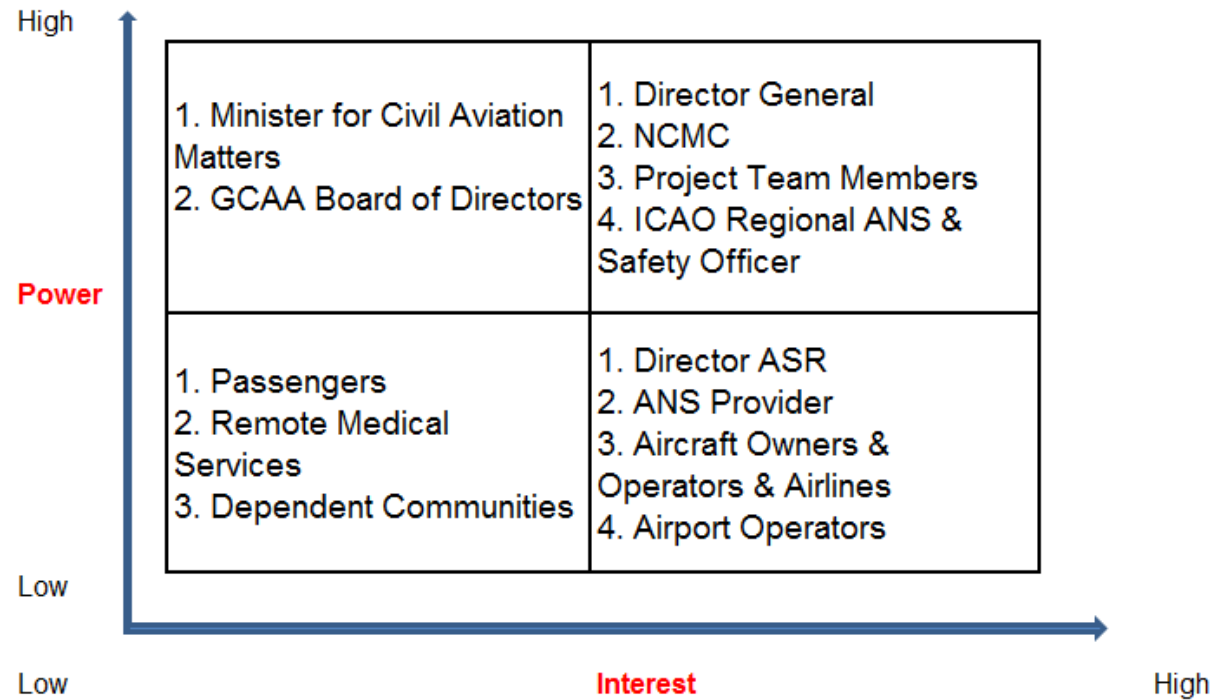


Chart 9: Analysis and Comments Regarding Stakeholders (Source: The Author, April 2018)

Analysis and Comments Regarding Stakeholders:

1	<p>High Power/Low Interest – These are the stakeholders that must be "kept satisfied". The Minister and the GCAA Board of Directors must be kept satisfied, but she is not necessarily interested in all the details of the project. They essentially need to know that the GCAA's investment is well spent and that the project will achieve the desired success. The Minister and the Board have high power essentially because she can have high influence on what happens with the project.</p>
2	<p>High Power/High Interest – These are the stakeholders that must be "managed closely". Director General, NCMC, ICAO Officer & Project Team are the stakeholders who are intimately involved in executing, so they have high power. Their decisions will affect the success of the project and therefore they must be monitored closely and communicated with frequently</p>
3	<p>Low Power/Low Interest – These are the stakeholders that must be "monitored". Passengers, Communities dependent on air services, Remote Medical Services are essentially interested in limited aspects of the project. For example, passengers are only interested in being able to fly safely and quickly. There is no need for detailed or excessive communications.</p>
4	<p>Low Power/High Interest – These are the stakeholders that must be "kept informed". The Director Aviation Safety Regulations (DASR), ANS Provider, and Aircraft Owners & Operators, and Airlines are all the stakeholders that will end up using and benefitting from the services and performance of an ANS System that is in compliance with international standards (ICAO SARPs). They may be helpful in providing recommendations that could enable the success of the project and they must be communicated with to ensure no major problems arise after the project is completed.</p>

4.2. Scope Management Plan

Introduction

The Scope Management Plan is a subsidiary plan of the Project Management Plan. This plan includes all the processes required to ensure that all the work required to be done, and only the work required in the project, is stated and included, and the work that is not required is excluded. This Scope Management Plan will indicate how, among other things, the scope for the project is defined, validated and controlled. This plan provides the Work Breakdown Structure (WBS), of the project, the Scope Management Approach to be used, and the pertinent Roles and Responsibilities.

The project's Scope Management will follow the processes listed below to ensure that the project includes all the work required and only the work required to realise success.

The processes are as follows:

- Plan Scope Management: The creation of this Scope Management Plan documenting how the scope is defined, how it will be validated, and how it will be controlled;
- Collect Requirements: This entails determining, documenting and managing stakeholder needs and requirements to meet the project objectives;
- Define Scope: This entails the development of a detailed description of the project and product;
- Create WBS: This entails breaking down of project deliverables into progressively smaller and more manageable components, which, at the lowest level, are called work packages. This hierarchical structure allows for more simplicity in scheduling, costing, monitoring, and controlling the project;
- Validate Scope: This entails a process whereby the project team receives formal acceptance of all deliverables;
- Control Scope: This entails monitoring/controlling the project/product scope as well as managing any changes to the scope baseline.

Scope Management Approach

The six (6) Scope Management processes as stated above would be applied at various points in the project. The first four (4) processes are essentially for the “planning” component of the project while the last two processes are essentially for monitoring and controlling.

The scope of the project to improve the level of EI of ICAO SARPs in ANS (Guyana) to 80%+, will entail all activities required to attain this goal. The project scope covers the recruitment, training, and retention of sufficient numbers of staff for the Regulatory arm of the GCAA; ensuring compliance on the part of the ANS Provider (Regulatee) through safety oversight inspections and audits; compiling documentary evidence of all activities conducted as part of this project; and inviting the ICAO to return to Guyana to conduct an onsite validation to ascertain whether Guyana has improved its level of Effective Implementation to 80% or more. The project has a timeline of 8 months for completion.

The scope of this project is informed by what is required as a final product/output and outcome. It is detailed in the content of the Work Breakdown Structure (WBS), WBS Dictionary, and Scope Statement. The approved version of these elements will be considered the scope baseline. This scope baseline could be changed only through formal change control procedures. The scope baseline is to be used for making comparisons when performing Validate Scope and Control Scope processes, among other controlling processes.

The Director General (DG), of the GCAA - the Sponsor, the National Continuous Monitoring Coordinator (NCMC), The Project Manager and Project Team, and the Director, Aviation Safety Regulations (DASR), will be responsible for Scope Management. It is desirable to have full agreement on all matters. However, if this is not possible, the final decision will be made by the DG.

The Project Scope may be changed following receipt of a request initiated by the DG, NCMC, DASR, Project Manager, a member of the Project Team, or changes in ICAO requirements, and favourable consideration by the Project Manager and Sponsor, following input from affected stakeholders. The final decision will be made by the DG

(Sponsor). This decision by the DG will be considered his acceptance of the final project.

Roles and Responsibilities

To have a high level of assurance of a successful project, among other things, the proper management of the project scope is imperative. Scope Creep must be guarded against. In view of the foregoing, the roles and responsibilities for scope management must be clearly defined. The following chart defines the relevant roles and responsibilities.

Chart 10 Scope Management Roles and Responsibilities (Source: The Author, April 2018)

Name	Role	Responsibilities
Egbert Field	Project Sponsor	<ul style="list-style-type: none"> • Overall responsibility for the project. • Provides financial and material resources for the project. • Evaluate Scope Change requests. • Accept or reject Scope Change requests. • Accept Project Deliverables.
Adrian Bassier	Project Manager	<ul style="list-style-type: none"> • Manage the project until completion. • Assigns applicable resources to project activities. • Manage and verify project scope. • Initiate/facilitate scope change requests. • Keep relevant project documents updated. • Obtains acceptance/approval of deliverables.
Colin Johashen Anthony Thom	Project Team Members	<ul style="list-style-type: none"> • Carry out tasks assigned by the Project manager.

Michelle December		<ul style="list-style-type: none"> • Assist in the management and verification of project scope. • Assess the opportunities /needs/requests for scope change and communicate same to Project Manager.
Chris Kirkcaldy	DASR	<ul style="list-style-type: none"> • Assess the opportunities /needs/requests for scope change and communicate same to Project Manager.
Cargill Kyte	NCMC	<ul style="list-style-type: none"> • Assess the opportunities /needs/requests for scope change and communicate same to Project Manager.

Scope Definition and Requirements

The scope of this project is defined by what is required. The requirements emanate from ICAO SARPs. ICAO provided a checklist, which contains Protocol Questions (PQs). Each PQ is related to an ICAO requirement and contains ICAO references, and detailed guidance regarding what is required to satisfy the PQ. Guyana must address satisfactorily at least 46 PQs to achieve an EI of 80% or more. Expert Judgement, through the use of Subject Matter Experts on this project, has helped conformity to the scope definition and will continue to be critical throughout all project activities.

Project Scope Statement

The scope of the project to improve the level of effective implementation of International Civil Aviation Organization standards and recommended practices in Air Navigation Services (Guyana) to 80%+, will entail all activities required to attain this goal. Guyana must address satisfactorily at least 46 PQs to achieve an EI of 80% or more.

Each PQ has its specific requirements and guidance references. The applicable PQs require, among other things, the recruitment, training, and retention of sufficient numbers of staff for the regulatory arm of the GCAA; ensuring compliance on the part of the ANS Provider (Regulatee) through safety oversight inspections and audits; compiling documentary evidence of all activities conducted as part of this project. ICAO will be invited to return to Guyana to conduct an onsite validation to ascertain whether Guyana has improved its level of EI to 80% or more.

Determination of the improved level of EI will be made by ICAO after checking the requirements of each PQ against the activities of this project, and associated documentation and other evidence. Once ICAO is satisfied that all requirements are met, then the PQ is considered satisfactory. In the area of ANS, Guyana needs at least 46 satisfactory PQs to attain an EI level of 80%+. Specific PQs from the ICAO Checklist will be identified to be addressed in order to achieve this. The last report from ICAO indicated that Guyana in the area of ANS had 80 unsatisfactory PQs.

This project will only address the PQs considered possible to be satisfactorily addressed. Those PQs that cannot be satisfactorily addressed presently due to circumstances beyond the control of the Project Team or the GCAA or are presently outside the sphere of influence of the Project Team or the GCAA, will not be considered for this project. The list of PQs are found in Appendix 4.

Work Breakdown Structure

According to the PMBOK Guide 5th Edition, 2013, the Work Breakdown Structure (WBS), is a hierarchical decomposition of the total scope of work to be carried out by the project team to accomplish the project objectives and create the required deliverables. The following WBS serves the same function.

Note: Each PQ has a unique identification number which begins with 7 followed by a decimal point then 3 digits. For example: 7.045.

Appendix 6 shows the relationship between the WBS activities and the PQs.

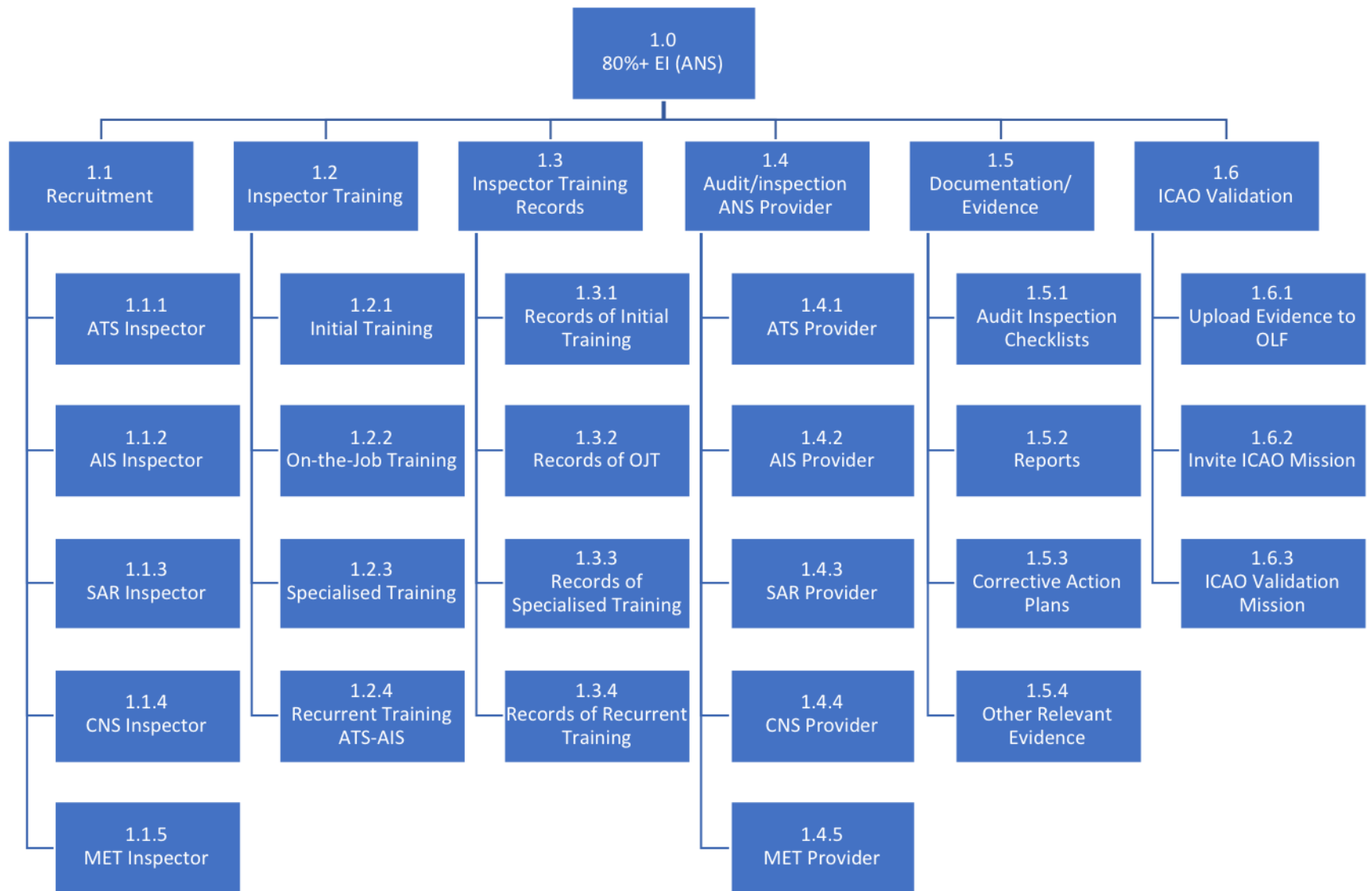


Figure 6: Project Work Breakdown Structure (Source: The Author, April 2018)

Work Breakdown Structure Dictionary

To more clearly define/detail the work that is required for project completion and success, a WBS Dictionary will be used. The WBS Dictionary will provide details on deliverables, activities, and scheduling information about each component of the WBS. The following WBS Dictionary will be completed by the Project Team.

Chart 11: WBS Dictionary (Source: The Author, April 2018)

Level	WBS Code	Element Name	Description of Work	Deliverables	Schedule

Validate Scope

This is the process where there is formal acceptance of each respective completed project deliverable by the project sponsor. The reason for this approach is that it will increase the likelihood of the final product/outcome being accepted. Each project deliverable would be formally accepted and signed off by the sponsor throughout the duration of the project and not held back to be considered a single deliverable at the close of the project. Upon the completion of each deliverable, the Project Manager along with the NCMC will check for correctness and then report to the Sponsor. The sponsor will then issue formal acceptance.

Scope Control

This is the process of monitoring the status of the project scope and managing changes to the scope baseline. The Project Scope or scope baseline may be changed following receipt of a request initiated by the DG, NCMC, DASR, Project Manager, a member of the Project Team, or changes in ICAO requirements, and favourable consideration by the Project Manager and Sponsor, following input from affected stakeholders. The final decision will be made by the Director General (Sponsor). This will be considered his acceptance of the final project.

SPONSOR ACCEPTANCE

Approved by the Project Sponsor:

 Lt. Col. Ret'd Egbert Field
 Director General, Guyana Civil Aviation Authority

Date: _____

4.3. Project Time Management Plan**Introduction**

Project Time Management is critical in all projects. In Project Time Management, under the first associated process- Plan Schedule Management- the output is a Schedule Management Plan. For the purposes of this paper, the terms "Time Management Plan" and "Schedule Management Plan" will be considered one and the same.

The project to improve the level of EI of ICAO SARPs in ANS (Guyana) to 80%+, will have a planned duration of eight (8) months for all the work required to improve ANS in Guyana from its present position of 54.17% EI.

Time Management Approach

The following Project Time Management Processes will be used for the duration of the project:

- Plan Schedule Management: This entails establishing the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule. For this, Expert Judgement and Meetings will be used.
- Define Activities: This entails identifying and documenting specific actions to be performed to produce the project deliverables. For this, Expert Judgement and Decomposition will be used.

- Sequence Activities: This entails identifying and documenting relationships among the project activities. For this the Precedence Diagramming Method will be used. Specifically, the method which is termed Finish to Start.
- Estimate Activity Resources: This entails estimating the type and quantities of material, human resources, equipment, or supplies required to perform each activity. For this, Expert Judgement will be used.
- Estimate Activity Durations: This entails estimating the number of work periods needed to complete individual activities with estimated resources. For this Expert Judgement will be used.
- Develop Schedule: This entails analysing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule model. For this the Critical Path Method will be used.
- Control Schedule: This entails monitoring the status of project activities to update project progress and manage changes to the schedule baseline to achieve the plan. For this, Performance Reviews will be done. Specifically, the reviews will entail comparing the progress along the critical path to determine schedule status.

Plan Schedule Management

The sponsor had stated that the allotted time for this project should be 8 months. During this time, all work required to push ANS Guyana to 80%+ EI of ICAO SARPs must be accomplished and also an invitation must be extended to ICAO to send a mission to validate the work completed in order to determine whether the project objective was achieved. Setting the target and establishing general policy for this project will be done by agreement at Meetings and using Expert Judgement. The Sponsor, NCMC, DASR, PM and Project Team, although small in number, have a fair amount of experience to enable the project to be executed. The Sponsor, PM, and DASR have prior experience in a project of similar nature.

Define and Sequence Activities; Estimate Activity Resources and Durations

The activities are derived from the project Work Breakdown Structure (WBS). The WBS provides a decomposition, which presents a clear path for the Sponsor and Project Team to follow. From the defined activities on the WBS, the process of sequencing the activities will be done. Additionally, the estimating of the resources needed for each activity as well as the durations for each activity will be determined. Each activity is assigned a unique identification code. This code is derived from the WBS.

For the purposes of this project, one week will be considered to have 5 working days. Therefore, each month will have 20 working days, and for the duration of the project which is just a little over 8 months, the total number of working days will be 161.

Chart 12 Sequence Activities, Durations, Required Resources (Source: Compiled by Author)

No.	WBS ID	Activity Description	Predecessor	Duration	Resources
1	1.1.1	Recruitment of ATS Inspector	0	20	
2	1.1.2	Recruitment of AIS Inspector	0	20	
3	1.1.3	Recruitment of SAR Inspector	0	20	
4	1.1.4	Recruitment of CNS Inspector	0	20	
5	1.1.5	Recruitment of MET Inspector	0	20	
6	1.2.1	Initial Training for each Inspector	1,2,3,4,5	5	Tuition & other costs
7	1.2.2	On-the-Job Training for each Inspector	6	60	Senior Inspector for OJT
8	1.2.3	Specialised Training for each Inspector	7	5	Tuition & other costs
9	1.2.4	Recurrent Training for ATS and AIS Inspectors	8	10	Tuition & other costs
10	1.3.1	Compile, File, Maintain Initial Training Records for all Inspectors	6	1	Office Stationery
11	1.3.2	Compile, File, Maintain OJT Records for all Inspectors	7	1	Office Stationery
12	1.3.3	Compile, File, Maintain Specialised Training Records for all Inspectors	8	1	Office Stationery
13	1.3.4	Compile, File, Maintain Recurrent Training Records for ATS and AIS Inspectors	9	1	Office Stationery
14	1.4.1	Audit/Inspection of ATS Provider	9	1	Office Stationery, Laptops, Smart phones.

15	1.4.2	Audit/Inspection of AIS Provider	9	1	ditto
16	1.4.3	Audit/Inspection of SAR Provider	8	1	ditto
17	1.4.4	Audit/Inspection of CNS Provider	8	1	ditto
18	1.4.5	Audit/Inspection of MET Provider	8	1	ditto
19	1.5.1	Complete Audit/Inspection Checklists	14,15, 16, 17, 18	1	Office Stationery
20	1.5.2	Prepare and Submit Audit/Inspection Reports	19	4	ditto
21	1.5.3	Request, Obtain, Approve Corrective Action Plans from ANS Providers	20	5	ditto
22	1.5.4	Compile and File all Documentation	6,7,8,9,10, 11, 12, 13,21	5	Office Stationery, Computer, Printer, Scanner
23	1.6.1	Upload all Filed Documentation (Evidence) to the ICAO Online Framework (OLF)	22	35	Ditto
24	1.6.2	Invite ICAO Mission to Validate	23	5	ditto
25	1.6.3	ICAO Mission validation	24	5	ditto

Develop Schedule

The project schedule is developed from the information on the Project Work Breakdown Structure (WBS), the sequencing of the activities therein, and the estimated durations for each activity. Of importance in the development of the project schedule is the relationships between the activities and the resulting list of predecessors for each activity. Putting all these elements together results in the generation of a Network Diagram and the illustration of the Critical Path. This path shows the longest time (duration) for the completion of the project, given the estimates and sequences used. The Network Diagram is in Appendix 5

Control Schedule

The Project Manager and the NCMC will monitor the status of project activities to update project progress and manage changes to the schedule baseline. The Project Sponsor will be promptly informed of any changes or variations. Planned, foreseeable, or requested changes could be recommended by anyone knowledgeable of the project. The PM, NCMC and the Sponsor will give due consideration to any recommendation. Ultimately, it will be the project sponsor who approves these changes.

For unforeseen or unplanned changes or variations, these will be brought by the PM and NCMC to the attention of the sponsor and necessary adjustments will be proposed by the PM, after consultation with the NCMC, and approval by the sponsor.

4.4 Project Cost Management Plan

Introduction

This Project Cost Management Plan is developed so as to ensure that the resources needed to complete all the applicable activities associated with this project is estimated and budgeted for. The GCAA, of which the Sponsor is the

head (Director General), is committed to ensuring the success of the project and all stakeholders are cognisant of the fact that significant financial resources would be required towards this outcome.

Cost Management Approach

For this project, a basic cost management approach will be used. Project Cost Management will be planned, costs will be estimated and budgeted for and then costs will be controlled using an appropriate mechanism.

The following Project Cost Management Processes will be used for the duration of the project:

- Plan Cost Management: This entails establishing the policies, procedures, and documentation for planning, managing, expending, and controlling project costs. For this, Expert Judgement and Meetings will be used.
- Estimate Costs and Determine Budget: These two processes will be combined and not treated separately. This essentially entails the estimation in monetary terms of the resources needed to complete applicable project activities and aggregating these costs to establish an authorised cost baseline. For this, bottom-up Estimating, cost aggregation, reserve analysis, and expert judgement will be used.
- Control Costs: This entails monitoring the status of the project to update the project costs and managing changes to the cost baseline. For this, Reserve Analysis will be done.

Plan Cost Management

The Cost Management Plan is a product of the Project Manager (PM), and team following meaningful consultations and discussions at project meetings with the sponsor, the NCMC, DASR, and the responsible Minister if necessary. These

meetings along with the expert judgement on the part of these individuals provides a solid foundation for the management of costs for the project.

In this plan, not all the activities from the Project WBS are included for costing. For many, the costs are not measurable since the activities fall under the routine work of employees of the GCAA. Also, these and some other activities from the Project WBS would be covered under Current Expenditure of the GCAA. These include recruitment costs and salaries for Inspectors, among others. Only activities on the Project WBS considered Capital Expenditure are included for consideration. These include some aspects of the Inspector Training, Office Stationery, Lap Top Computers, Inspector Smart Phones, and the facilitation of the ICAO validation mission.

There will be a Contingency Reserve of 15% and a Management Reserve of 10%. This and the other costs considered in the plan will be met by the GCAA. The cost estimates and budget will be based on the full costs to realise the associated activity. However, with regard to some aspects of Inspector Training, relevant Fellowships will be sought and applied for from appropriate training institutions. With regard to the ICAO Validation Mission, it may be possible to benefit from an ICAO Programme which would entail ICAO standing all costs for the mission. These costs cutting avenues would be explored and pursued. However, until such time as they materialise, this plan would contain the full costs for the relevant activities.

In this plan, activity costs will be rounded up to the next \$1,000.00 Guyana Dollars, and the estimates will be within a range of $\pm 10\%$. Should it be realised that the actual cost for any activity exceeds the estimated and budgeted cost, then the project sponsor must be formally notified by the PM and authorisation obtained before revising the estimate/budget and spending additional funds.

The PM will prepare and provide the sponsor with periodic reports regarding the planned and actual expenditure. This will be illustrated in a simple format using both a narrative and tabular format.

Estimate Costs and Determine Budget

For this aspect of the project estimation in monetary terms of the resources needed to complete applicable project activities and aggregating these costs to establish an authorised cost baseline will be done. Bottom-up Estimating, cost aggregation, reserve analysis, and expert judgement will be used.

As was stated earlier, there will be a Contingency Reserve of 15% and a Management Reserve of 10%. During the project, if opportunities to cut costs present themselves, these will be utilised as far as is possible. The possible opportunities for cutting costs were referenced earlier.

Chart 13: Activity Cost Estimates and Aggregates (Source: The Autor, April 2018)

Item	Qty.	Days	Unit Cost	Total
Initial Inspector Training				
Tuition	5		\$569,750.00	\$2,848,750.00
Airfare	5		\$550,000.00	\$2,750,000.00
Stipend (daily)	5	5	\$21,500.00	\$537,500.00
Accommodation (daily)	5	5	\$32,250.00	\$806,250.00
Total:				\$6,942,500.00
Specialized Inspector Training				
Tuition	5		\$569,750.00	\$2,848,750.00
Airfare	5		\$550,000.00	\$2,750,000.00
Stipend (daily)	5	5	\$21,500.00	\$537,500.00
Accommodation (daily)	5	5	\$32,250.00	\$806,250.00
Total:				\$6,942,500.00
Recurrent Inspector Training				
Tuition	2		\$650,000.00	\$1,300,000.00
Airfare	2		\$412,800.00	\$825,600.00
Stipend	2	10	\$21,500.00	\$430,000.00
Accommodation	2	10	\$32,250.00	\$645,000.00
Total:				\$3,200,600.00

ICAO Validation Mission				
Airfare	1		\$623,500.00	\$623,500.00
Stipend	1	5	\$21,500.00	\$107,500.00
Accommodation	1	5	\$32,250.00	\$161,250.00
Total:				\$892,250.00
Equipment and Office Supplies				
Computers for Project Team	4		\$80,000.00	\$320,000.00
Laptops for Inspectors	5		\$150,000.00	\$750,000.00
Smart Phones for Inspectors	5		\$90,000.00	\$450,000.00
Office Stationary			\$500,000.00	\$500,000.00
Total:				\$2,020,000.00
Aggregate Total:				\$19,997,850.00
Contingency Reserve (15%)				\$2,999,677.50
Total Cost Baseline				\$22,997,527.50

Control Costs

Periodic reviews of the project performance will be conducted by the Project Manager and reported to the Sponsor. Reserve Analysis will also be used to monitor the status of the contingency and management reserves. Should it be realised that the actual cost for any activity exceeds the estimated and budgeted cost, then the project sponsor must be formally notified by the PM and authorisation obtained before revising the estimate/budget and spending additional funds.

4.5 Project Quality Management Plan

Introduction

This Project Quality Management Plan is developed to ensure that all the project deliverables for this project meet the quality, requirements, and standards expected, required, and acceptable to the Project Stakeholders. According to the

PMBOK Guide 5th Edition 2013, Project Quality Management addresses the management of the project and the deliverables of the project and is applicable to all projects.

For this project, quality will have a cost in both time and money. This must be communicated to the stakeholders and they must be fully cognisant of the Cost of Quality. The lack or absence of the required quality will result in the ultimate failure of what this project aims to achieve.

Quality Management Approach

For this project a simple but tailored quality management approach will be used. Project Quality Management will be planned, Quality Assurance will be performed and then quality will be controlled using an appropriate mechanism.

For the purposes of this project, the following Project Quality Management Processes will be used:

- Plan Quality Management: This entails identifying quality requirements and standards for this project and the deliverables and documenting how the project will demonstrate compliance with quality requirements and standards. For this Meetings will be held.
- Perform Quality Assurance: This entails auditing the quality requirements and the results from quality control measurements to ensure that appropriate quality standards and operational definitions are used. For this Quality Audits will be used.
- Control Quality: This entails monitoring and recording results of executing quality activities to assess performance and recommend necessary changes. For this Inspections and Approved Change Requests Review will be used.

Plan Quality Management

The Quality Management Plan is a product of the Project Manager (PM) and team following meaningful consultations and discussions at project meetings with the sponsor, the NCMC, DASR. These meetings will provide a solid foundation for the management of quality for the project.

The ultimate desired result of this project is for ANS in Guyana to achieve an improvement to eighty percent or better (80%+), in Effective Implementation (EI), of ICAO SARPs. To measure this, and ICAO mission will need to validate the work done by the GCAA. ICAO will use a checklist of Protocol Questions (PQs). Each PQ asks a question and the answer determines whether there is effective implementation or not: If satisfactory there is implementation, if unsatisfactory, there is not.

Each PQ has its associated guidance material and requirements. All the requirements must be met in order for a PQ to be considered satisfactorily addressed. Guyana needs at least forty-two (42) additional PQs to be satisfactorily addressed in order to achieve 80%+ EI in ANS.

For this project quality activities begin at the recruitment process for the Inspectors, then their training, developing the inspector training records and record maintenance system, the conduct of audit/inspections of the ANS Provider, documenting all the evidence from all the activities to ensure that they meet all the ICAO PQ requirements. Once a PQ has all its respective requirements met and there is evidence to show to the ICAO validation mission and uploaded to the ICAO OLF, then such a PQ would be considered satisfactorily addressed.

The following Chart 14 shows the requirements for the various activities of this project, which if completed satisfactorily, would lead to project success:

Chart 14 Requirements for Project Activities (Source: Autor, April 2018)

No.	WBS ID.	WBS Activity Name	Requirements
1	1.1	Recruitment (Inspectors)	All inspectors must meet the experience and academic requirements stated in the respective Job Specifications.
2	1.2.1, 1.2.3, 1.2.4	Initial Training (Inspectors) Specialized Training Recurrent Training	All inspectors must be trained at an Approved Training Organization (ATO), and one that is recognized by Trainair.
3	1.2.2	Inspector OJT	All inspectors must undergo On-the-Job Training under a suitably qualified and experienced senior Inspector.
4	1.3	Inspector Training Records	All inspector training certificates, reports, and forms, as applicable, will be filed and maintained in appropriate files and a system for input established and documented. Must clearly record Initial, Specialised, and Recurrent Training, along with OJT.
5	1.4	Audit/inspection of ANS Provider	Inspections must be conducted by fully trained inspectors; the approved Inspector handbook and checklists must be used. All applicable procedures must be followed.
	1.5	Documentation/ Evidence	All documentation/evidence from the various activities must be compiled in both hard and soft copy. And must meet all the respective PQ requirements.
	1.6.1	Upload Evidence to OLF	Only documentation that fully meets the respective PQ requirements will be uploaded to the OLF.

Perform Quality Assurance

The guiding philosophy for this project is that if all the “ingredients” or activities of this project are done correctly at every stage, then the end result will be what is desired by all stakeholders. To realise success at the end of the project, the progress of and within each activity must be examined/assessed with a view to determine if the activities are complying with the requirements, and if not, why, and recommend corrective actions.

The Project Manager along with an officer experienced in Quality Management/Quality Assurance will conduct examinations/assessments at planned intervals during the life of the project. This other officer will not be a project team member but a “borrowed staff” from within the GCAA in another department. This approach would essentially bring an unbiased and independent eye to look at the activities of the project.

Reports will be prepared by the QA Officer and forwarded to the PM who would then send same to the NCMC, DASR, and Sponsor.

Control Quality

Periodic inspections/reviews of the project activities and Quality Assurance reports will be conducted by the Project manager and reported to the Sponsor. These inspections/reviews are intended to determine whether there is conformity to the documented requirements. Should there be anything undesirable, the PM must formally notify the Sponsor of the issue and inform him of the recommended remedial actions, and the preferred action to address the particular issue. Once there is accord, the PM proceeds with the agreed course of action.

4.6 Project Human Resource Management Plan

Introduction

This Project Human Resource Management Plan is developed to provide clear guidance regarding the mode of operation for the personnel involved in the operational work of the project. The human element is the most critical in any project, for without it no project can succeed. The four (4) processes which will be used for the human resource management of this project are as follows: Plan Human Resource Management; Acquire Project team; Develop Project team; Manage Project team.

This plan is informed by the activities of the Project Work Breakdown Structure among other things.

Plan Human Resource Management

Planning of human resource management entails identifying and documenting project roles, responsibilities, required skills, reporting relationships, and creating a staffing management plan.

This project will be headed by a Project Manager (PM), with a Project Team of three (3) persons, and the NCMC and the Director Aviation Safety Regulations (DASR), who will work along with the project team and support the Project Manager. The Project manager reports to the Sponsor who in this case is the Director General of the Guyana Civil Aviation Authority (GCAA).

Figure 7 shows the project organisational structure and relationships in a graphical top-down format. This is expected to remain unchanged for the duration of the project.

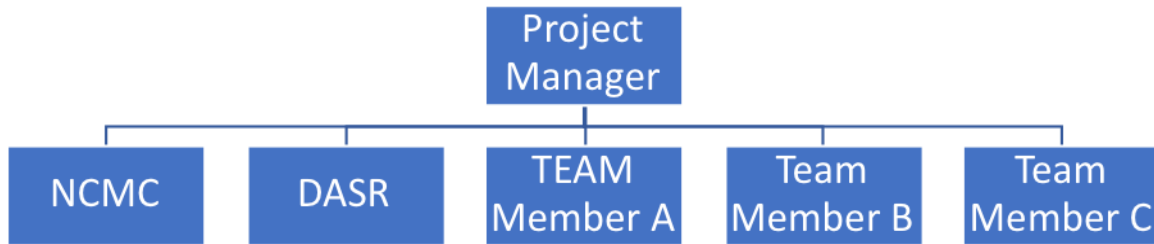


Figure 7: Project Organisation Structure (Source: The Author, May 2018)

Roles and Responsibilities

Clearly outlining the roles and responsibilities of the persons working on this project is essential for project success. For this project the following roles and responsibilities will be established:

Project Manager- Is responsible for the daily operations within the context of the project; for staffing; ensuring success; and making the necessary arrangements to obtain the resources needed at each stage and be the principal liaison between the project and stakeholders.

DASR- Will assist the PM in any matter/activity when and where needed. He will ensure that the needed training is arranged and provided to inspectors and project team members. Will make all necessary administrative arrangements for project team members to be allotted the needed time to dedicate themselves to the project.

NCMC- Is responsible for being the main point of contact between the project and ICAO. He will maintain and manage the ICAO Online Framework and oversees what is uploaded. Works along with and can advise the Project Manager on any matter within the context of the project and meeting ICAO requirements and making the project a success.

Team Members- These are to support and execute the work of the project as assigned or delegated to them by the Project Manager. Each will work, complete the tasks or activities or parts thereof, and report to the Project Manager.

The following RACI Chart shows the relationship between various persons associated with the project and project activities. RACI is an acronym meaning the following: **R**- Responsible, **A**- Accountable, **C**- Consult, and **I**- Inform.

	Project Manager	NCMC	DASR	Team Member 1	Team Member 2	Team Member 3
Recruit Inspectors	A	I	R	I	I	I
Train Inspectors	A	I	R	I	I	I
Compile Inspector Training Records	A	C	R	I	I	I
Audit/Inspect ANS Provider	A	I	R	I	I	I
Compile Documentation/evidence	A	I	C	R	R	R
Upload evidence to OLF	A	R	I	I	I	I
Invite ICAO Mission	A	R	I	I	I	I

Figure 8: RACI Matrix (Source: The Author, May 2018)

Project Human Resource Management could be a dynamic activity and could have iterations. For this reason, Meetings and the use of Expert Judgement will be utilised for this plan. For optimum results it is advisable to have consensus among the PM and other Project Team members.

Team Acquisition and Resource Calendar

The team for this project will comprise persons working within the Aviation Safety Regulations Directorate of the Guyana Civil Aviation Authority (GCAA). Once established, this team will be considered the core or nucleus of all activities, and will remain unchanged as far as is practicable, and will be constant for the duration of the project. Although each person's level and depth of involvement in the different project activities would vary throughout the project, he/she is expected to remain active and involved until the end.

Project Team Development

All project team members must have a good working knowledge of the applicable ICAO Documents and Annexes, along with the Civil Aviation (Air Navigation Services) Regulations 2016. They must all be computer literate and will be provided formal training in the ICAO Universal Safety Oversight Programme and the Continuous Monitoring Approach. They will also receive formal training in the use of the Online Framework (OLF).

Project Performance Appraisals

The standard GCAA Performance Appraisal will apply to all team members during the project.

Conflict Management

The normal conflict management techniques of the GCAA will be applied as needed. Being professionals, persons are expected to act as same and not bring their profession or the GCAA into disrepute.

In the best interest of the project, the Project Manager can at any time with proper justification, formally inform the sponsor, and discontinue the participation of any team member on the project.

4.7 Project Risk Management Plan

Introduction

The purpose of risk management in this project is primarily to address uncertain events or conditions that could occur and if so, would result in a positive or negative effect on one or more project objectives. These uncertainties are called risks. For this project, risk management entails identifying, assessing, and mitigating the risks where possible and to continually monitor risks for the duration of the project.

Risk Management Approach

The GCAA has prior to this project made efforts to improve the level of EI of ICAO SARPs in ANS Guyana and has made progress in 2016 but not the level of progress desired. The efforts and past experiences have taught lessons and for this reason planning for uncertainties or, in other words, risk management becomes an imperative. It must be done if project success is to be realised. In view of the foregoing, the following will be done:

- Creation of a Risk Register;
- Risks will be Identified;
- Determine Likelihood (Probability);
- Determine Impact;
- Determine Risk Response;
- Assign Owners;
- Regularly Review Risks;
- Report on Risks.

Risk Management Planning

In planning for Project Risk Management, Expert Judgement and Meetings will be utilised as the preferred options. All project team members, the sponsor, the DASR, and the NCMC will be involved. As a rule of thumb, known risks will be identified and analysed and then the appropriate responses planned. Known risks that cannot be managed proactively would be assigned a contingency reserve. Unknown risks would be assigned a management reserve.

Risk Breakdown Structure

Risks will be categorised, listed, and put in a Risk Breakdown Structure (RBS). The RBS will create a hierarchical structure to examine the sources from which project risks may arise. This RBS will be reviewed and updated periodically in order to keep the Project Team cognisant of the areas where risks may exist.

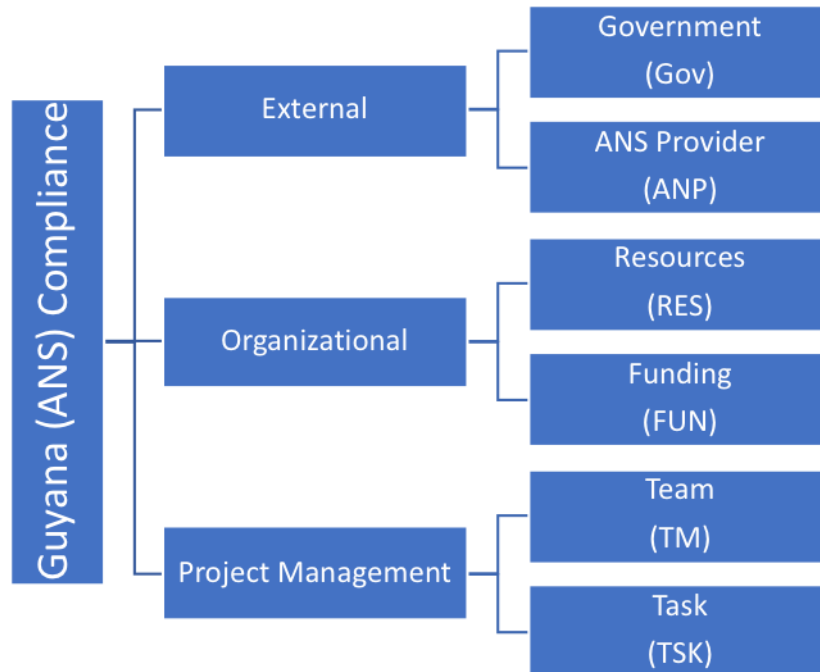


Figure 9: Project Risk Breakdown Structure (RBS) (Source: Author, May 2018)

Risk Identification

Identifying risks for the project is an iterative process. It will last for the entire duration of the project. This project may begin with a list of risks but with the passage of time, these risks may evolve, or new risks may become known.

A list of identified risks are compiled initially when developing the Project Charter and placed in a risk register. With the development of the subsidiary project plans, a more comprehensive risk register materialises. The risk register will be reviewed periodically to either include new risks or remove risks that are no longer applicable to the project.

For this project, the Project Manager and team, along with subject matter experts, even from outside the team, may be used in risk identification activities. The Project Manager will create and maintain the Project Risk Register and be responsible for its upkeep.

Risk Analysis

For this project, qualitative risk analysis will be employed to assess the probability or likelihood of occurrence, and the impact on project objectives.

A risk is an uncertainty, something that may or may not happen. The probability or likelihood of it happening, and the impact it would have on the project, will be analysed. Each risk which is identified is given a numerical value. This value will be derived from an index.

With regard to the probability of something happening, a value which falls between 0 percent and 100 percent is derived. Values of 0 percent- meaning there is certainty that nothing will happen- and 100 percent- meaning that the thing will happen- are not included since these are certainties and not uncertainties (risks).

Risks that have a very high probability of happening are given a value of 0.90 (90%). Risks that have a high or moderate probability of occurring are given a value of 0.70 and 0.50 (70% and 50% respectively). Risks that have a low or very low probability of occurring are given a value of 0.30 and 0.10 (30% and 10% respectively). The numerical scaling system for the Probability of Occurrence is outlined in the following Chart 15:

Chart 15: Probability of Occurrence Index (Source: The Author, May 2018)

Probability of Occurrence	Numerical Scale
Very High	0.90
High	0.70
Moderate	0.50
Low	0.30
Very Low	0.10

With regard to impact of the risk, an impact of risk index number is given to each risk based on the impact of the risk on the progress and overall success of the

project. The size of the index, and hence the severity of the impact varies in terms of costs, delays, impact on health and human life or some other important factor or factors.

Risks that have a very high impact on the project are given a value of 0.80 (80%) and are most likely to cause the project to fail. Risks that have a high or moderate impact are given a value of 0.40 and 0.20 (40% and 20% respectively), and can cause major delays in schedule, increase in costs and/or reduction of scope. Risks that have a low or very low impact are given a value of 0.10 and 0.05 (10% and 5% respectively) and can be absorbed easily without affecting the project in a major way. The numerical scaling system for the Impact of Risk is outlined in the following Chart 16:

Chart 16: Impact of Risk Index (Source: The Author, May 2018)

Impact of Risk	Numerical Scale
Very High	0.80
High	0.40
Moderate	0.20
Low	0.10
Very Low	0.05

Chart 17: Risk Register (Source: Author, May 2018)

Risk ID	RBS Code	RISK	CAUSE	CONSEQUENCE	Probability	IMPACT	P * I	OWNER
01	RES	Project work conflicts with other duties	Issues and other demands of the organisation	Delay in project completion	Very High	Moderate	0.18	Project Manager
02	RES	Emergencies/urgencies given priority over project work	Internal and external issues of urgency	Delay in project completion	Moderate	Moderate	0.10	Project Manager
03	ANP	ANSP resistant to inspections/audits	Lack of knowledge / feel threatened	Delay in project completion & failure to meet project objective	High	Very High	0.56	DASR
04	ANP	ANSP fail to implement ICAO SARPS	Lack of knowledge / refusal to cooperate	Failure to meet project objective	High	Very High	0.56	DASR
05	RES	GCAA fails to recruit enough persons	Management fails to appreciate the need for recruitment	Failure to meet project objective	Moderate	High	0.20	DASR
06	FUN	GCAA does not give	Competition for	Delay in project	Moderate	Very High	0.40	Project

		priority and funds for training	funds by other sections in GCAA	completion / fail to meet project objective				Sponsor
07	FUN	Project downsized or cancelled due to cost	Insufficient funds available / unwillingness to spend funds for project activities	Failure to meet project objective	Very Low	Very High	0.08	Project Sponsor
08	GOV	Government has change in policy/ priorities	Change in political / economic Climate	Cancel or downsize the project	Low	Very High	0.24	Project Sponsor
09	TM	Project team composition changes	Resignations, transfers, withdrawal of project personnel	Decline in standard/ level of project work and delay in project completion	Low	High	0.12	Project Manager
10	TSK	Project tasks, evidence collection, documentation negatively affected	Paucity of suitably trained & experienced persons in ANS Compliance matters	Failure to address enough ICAO PQs and failure to meet project objective	Moderate	Very High	0.40	Project Manager

The values are derived from expert judgement and knowledge of the political, economic, and organisational climate and peculiarities. The results are tabulated in the following Chart 18 Probability of Occurrence and Impact of Risk Assignment.

Chart 18: Probability of Occurrence and Impact of Risk Assignment

Risk ID	Risk	Probability of Occurrence	Impact of Risk	P * I
03	ANSP resistant to inspections/audits	0.70	0.80	0.56
04	ANSP fail to implement ICAO SARPS	0.70	0.80	0.56
06	GCAA does not give priority and funds for training	0.50	0.80	0.40
10	Project tasks, evidence collection, documentation negatively affected	0.50	0.80	0.40
08	Government has change in policy/priorities	0.30	0.80	0.24
05	GCAA fails to recruit enough persons	0.50	0.80	0.20
01	Project work conflicts with other duties	0.90	0.20	0.18
09	GCAA does not give priority and funds for training	0.30	0.40	0.12
02	Emergencies/ urgencies given priority over project work	0.50	0.20	0.10
07	Project downsized or cancelled due to cost	0.10	0.80	0.08

The following matrix - Probability and Impact Matrix- positions all of the identified project risks into four (4) quadrants. The quadrants are categorised as follows:

- Red Quadrant: High Priority
- Yellow and Green Quadrants: Moderate Priority
- Blue Quadrant: Low Priority

Probability	Risks				
0.90			01		
0.80					
0.70					03, 04
0.60					
0.50			02		06, 10, 05
0.40					
0.30				09	08
0.20					
0.10					07
	0.05/very low	0.10/low	0.20 moderate	0.40/high	0.80/very high
	Impact				

Figure 10: Probability and Impact Matrix (Source: The Author, May 2018)

Planning Risk Responses

The project team, including the PM, the DASR, and NCMC, will employ their expert judgement to develop appropriate responses to each identified risk. If and when required or necessary, depending on the situation or magnitude of the risk, the sponsor may be asked to participate in planning risk responses. It would be important to have the sponsor involved since it aids in developing an appreciation of the given situation. For the purpose of this project the optimum risk response will be selected from a set of options.

Risk responses will be identified and, each risk will be assigned to a person who will be referred to as the “owner”. The “owner” will be responsible for their agreed-to and assigned risk response.

Control Risks

The Project Manager will be responsible for monitoring the project work and risk register for new, changing, and outdated risks. This is an ongoing process and the desired outcome in this area will be achieved through Risk Reassessments and Meetings. The Project Manager will update the Risk Register accordingly and update the Sponsor and project team accordingly. All other relevant project documents will be updated accordingly.

4.8 Project Procurement Management Plan

Introduction

According to the Procurement Act, which was enacted in 2003 in Guyana, “procurement” is defined as “the acquisition of goods by any means including purchase, rental, lease or hire-purchase, and the acquisition of construction, consulting, and other services”. This project procurement plan is intended to aid in the identification of project needs that can be best met or should be met from sources outside that GCAA versus the project needs that can be met by the project team. This procurement management plan includes the processes necessary to purchase or acquire products and services from outside the project team.

Procurement Management Approach

The Project Manager will collaborate with the Sponsor and the GCAA Director of Finance and Administration (DF&A), regarding all procurement activities falling under the umbrella of this project. The Project Manager and Team will be responsible for the identification of all things that need to be procured in order to make the project a success. The use of Expert Judgement, Market Research, and Meetings will ensure that the project receives the best value for any money spent.

Make-or-Buy Analysis is not used for this project since it is clear that all of the products and services which are required to be procured must be procured from outside of the project team and the GCAA.

The Project Manager and Team will be involved in the procurement process but will not make any actual contract activities, purchases or payments. These activities will be handled by the DF&A. The Project Team will receive the products or services purchased for the work of the project.

Products/Services to Procure

In Chart 19, can be found the list of products and services to be procured for this project. These are deemed essential to realise the successful completion of the project. Chart 19 also contains the justification regarding the need for the product/service, and a narrative regarding when each should be acquired.

Chart 19 Procurement List (Source: The Author, May 2018)

No.	Product/Service	Justification	Needed By
1	Office Stationery	Needed to prepare hard copy documentation and evidence.	At the beginning of the project and incrementally for the duration of the project
2	Computers	Needed to do project work.	Needed at the beginning of the project.
3	Initial Inspector Training	Needed to equip the inspectors to function generally.	Following recruitment and before specialised training.
4	Specialised Inspector Training	Needed to equip the inspectors to function in specialised areas of ANS	Following initial training
5	Recurrent Inspector Training	Needed to refresh and update Inspector knowledge and skills in his/her respective area of expertise.	Following specialised training.
6	Laptops	Needed to aid the inspectors in the execution of their duties.	Needed before Inspector OJT begins
7	Smart Phones	Needed to aid the inspectors in the execution of their duties.	Needed following successful completion of Inspector OJT.

Type of Contract to be Used

It is anticipated that only in the case of the procurement of smart phones and the associated service for the inspector, would a contract be required. In this case, a fixed price contract would be used. For all other things, following selection, a cash payment would be made to close the procurement process for that particular product or service.

Procurement Risk Management

There is the possibility that project procurement activities could have some risk, which may impact the project. These risks when identified must be managed to ensure project success. All risks will be managed in accordance with this project's Risk Management Plan.

Cost Determination and Decision Criteria

For this project, a Request for Quote (RFQ), will be issued in order to obtain proposals from vendors/agencies/institutions for the provision of products/services which are required for project success. It is a requirement for at least three (3) quotes to be obtained by the GCAA from at least three (3), different vendors/agencies/institutions, for each procurement. In some cases, it is recognized that it may not be possible to obtain 3 or more quotes because of the specific requirements of the product or service needed by the project. In these instances, "sole sourcing" would apply.

For instances where three or more quotes are received, the lowest bid that meets all product/service requirements and the other decision criteria, will be selected as the preferred option.

The criteria for selection of the preferred option of product/service will be based on the following:

- Ability of the vendor/agency/institution to provide the specific product/service within the applicable timeframe;
- Quality;

- Cost;
- Past performance.

Procurement Assumptions and Constraints

It is the general assumption that the project will benefit from the established GCAA procurement processes and that these processes and the persons that operationalise them will be effective and efficient.

Procurement activities would be constrained by time (schedule) and scope of the project. There are also constraints of cost and limited suitable human resources.

Control Procurements and Closure

The Project Manager will be the person responsible for ensuring that the product or service obtained by the project following the execution of the procurement process, is consistent with the stated requirements. The following chart may be completed by the project team and provided to the sponsor and Director and Finance and Administration for ease of reference and immediate use or future reference:

Chart 20: Procurement Assessment Chart (Source: www.ProjectManagementDocs.com, May 2018)

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

Note: Each metric will be rated using a scale of 1 to 3 as follows:

- 1 – Unsatisfactory
- 2 – Acceptable
- 3 – Exceptional

In addition to rating each vendor, actual values will be noted in order to build a past-performance database for selecting vendors/agencies/institutions for future procurement activities.

The procurement process will be considered closed when the product/service has been completely provided and satisfactorily meets all stated requirements in the view of the Project Manager and Team.

4.9 Project Communications Management Plan

Introduction

For the purposes of this project this communications management plan is developed. It is recognised that communications could make or break a project. In view of this, this Project Communications Management Plan seeks to contribute to the success of this project by meeting the information needs of project stakeholders. According to the PMBOK Guide 5th Edition, 2013, “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”. Communication forms a significant part of the work of a Project Manager.

Plan Communications Management

Plan communications management entails the development of an appropriate approach and plan for project communications based on the information needs and requirements of stakeholders and available organisational assets. This plan for project communications management will be reviewed regularly and revised as needed to ensure continued applicability.

A number of communications methods will be used to provide relevant information to relevant stakeholders. These methods will be Interactive Communication:

meetings, phone calls and instant messaging; Push communication: letters, memos, reports, and e-mails; Pull communication: the ICAO Online Framework.

Interactive communication refers to communication between two or more parties performing a multidirectional exchange of information (PMBOK Guide 5th Ed, 2013, p. 295). Pull communication refers to communication used for very large volumes of information or for very large audiences and requires the recipients to access the communication content at their own discretion PMBOK Guide 5th Ed, 2013, p. 295).

The following Chart 21 provides the stakeholder identification and means of communication in the context of project communications. It shows stakeholder information, and how communications with each would be accomplished during the project.

Chart 21 Stakeholder Identification and Means of Communication (Source: Author, May 2018)

Name	Role	Contact	Communication	Means
Director General- GCAA	Project Sponsor	director-general@gcaa-gy.org	Progress reports, change requests, costs incurred, final report	e-mail, print, meetings, telephone
NCCMC	National Coordinator	ckyte@gcaa-gy.org	Progress reports	e-mail, print, meetings, telephone, face to face discussions
Director- Aviation Safety Regulations	DASR	dasr@gcaa-gy.org	Progress reports	e-mail, print, meetings, telephone, face to face discussions
Minister for Civil Aviation Matters	Responsible Minister	Minister.within@moipa.gov.gy	Progress reports, costs incurred, final report	Print, meetings
GCAA Board of Directors	Ensure Govt Policy Implemented	aedwards@gcaa-gy.org	Progress reports	Print, meetings.
Project Team Members	Project Implementer	cjohashen@gcaa-gy.org mdecember@gcaa-gy.org athom@gcaa-gy.org	Progress reports, change requests,	e-mail, print, meetings, face to face discussions, telephone
ANS Provider	Provision of ANS	dans@gcaa-gy.org	Advisory Circulars, Directives, Notices, Requests for information	e-mail, print, meetings, telephone
ICAO Regional Officer ANS & Safety -Roberto Sosa	Regional Officer ANS & Safety	rsosa@icao.int	Progress reports, final report.	e-mail, conference calls, web meetings

Aircraft Owners & Operators & Airlines	Air Transport to passengers	npersaud@ogleairportguyana.com	General Project Information and status of implementation.	Web site, meetings
Airport Operators	Service users	akellman@cairport-gy.com kbissessar@ogleairportguyana.com	General Project Information and status of implementation	Meetings, Website
Air Passengers	Airline patrons	Nil	General Project Information and status of implementation.	Web site, print media
Remote Area Medical Services	Residents/patients	micola@bountyfarmgy.com	General Project Information and status of implementation.	Meetings
Communities dependent of Air Services	Residents/patients	High Frequency Radios in Villages	General Project Information and status of implementation.	Meetings, print media

Manage Project Communications

There is the need to have an effective and efficient flow of communications between project stakeholders. The management of project communications enables this through processes which create, collect, distribute, store, retrieve, and ultimately dispose of project information. It is essential to communicate project information to stakeholders since this contributes significantly to the maintenance of stakeholder support.

The PM will be responsible for ensuring that any project information which will be communicated to project stakeholders is appropriately generated, received, and understood. The Project Manager will also ensure that there are opportunities for stakeholders to make requests for further information, clarification, and discussion. All this will be achieved through the use of appropriate tools and techniques.

Chart 22 indicates how communication management will be implemented for this project.

Chart 22: Management of Project Communication (Source: Author, May 2018)

Communication	Frequency	Stakeholders	Form of Recording	Distribution
Meetings (Scheduled)	Bi-weekly	Project Sponsor, Project Manager, Project Team, NCMC, DASR.	Minutes	Electronic and / or printed form
Meetings (Unscheduled)	As necessary			
Meetings 2	As required	The Minister, GCAA Board of Directors, Residents of Hinterland Communities, Remote Area Medical Services, Aircraft Owners, Airport Operators, Airlines. ANSP		
Reporting	Weekly	Project Sponsor,	Progress	Electronic and /

		Project Team, NCMC, DASR	Report	or printed form
E-mail	As required	ICAO Officer, ANSP, Team Members, NCMC, DASR, Sponsor	Server storage	Print hard copy for filing
Telephone calls	As required	As required	Note taking	Electronic and / or printed form
Conference calls, web meets	As required	As required	Note taking	Electronic and / or printed form

The Project Manager will be responsible for archiving all records of project communications for future reference and for developing lessons learned.

Control Project Communications

The control of project communications essentially entails monitoring and controlling communications for the duration of the project to ensure that the information needs of project stakeholders are met. It ensures optimal information flow among all relevant parties. It is important to always be cognizant of the impact - positive or negative - of project communications. In view of this impact, communications will be evaluated and controlled to ensure that the right message is delivered to the right people at the right time. The Project Manager will be responsible for outgoing project communications and its control with the exception that the Sponsor reserves the right to communicate to the Minister on any related matter following consultation and coordination with the Project Manager.

The use of Expert Judgement and Meetings with the project team, will assist the PM in determining the most appropriate way to update and communicate project progress, and to respond to requests from stakeholders for information.

Issue Log

Within the duration of this project, there will be issues, requests, change requests, among other things. In the context of project communications, an Issue Log will be developed and maintained. This document will be used to document and monitor the resolution of issues. It will be used to facilitate communication and ensure a common understanding of issues (PMBOK Guide 5th Edition 2013, p.305). The information contained in the Issue Log could serve both as a repository for what has already occurred in the project and a platform for subsequent communication to be delivered.

Chart 23: Issue Log (Source: Author, May 2018)

No.	Issue	Description	Reported by	Assigned to	Status	Priority	Date Reported	Date Resolved	Comments	Resolution
1.										
2.										
3.										

Any request for changes to this project communication management plan will be directed to the PM, who will then formally bring it to the Project Sponsor with a recommendation. The Project Sponsor will have the final decision following discussion with the Project Manager.

4.10 Project Stakeholder Management Plan

Introduction

Project stakeholders are considered to be any individual, group, or organisation that may affect, be affected by, or perceive themselves to be affected by a decision, activity, or outcome of the project (PMBOK Guide 5th Edition 2013, p.394). They could be affected by this project in either positive or negative ways.

They could also have a negative or positive impact or influence on the success of this project. In view of this, this Stakeholder Management Plan has been developed to ensure that these stakeholders are identified, managed and engaged at the right level, with the ultimate aim to achieve project success.

Identify Stakeholders

The relevant stakeholders for this project will be identified as early as is practicably possible so as to be able to analyse their respective levels of interest, their individual expectations, and their respective importance and influence.

Stakeholders for this project will be identified by using information contained in the Charter for this project along with information from subsidiary plans contained in the project management plan, and expert judgement, meetings, and stakeholder analysis, all combined to produce a refined stakeholder register for this plan.

The “Power/Interest grid” will be used for the stakeholder analysis. This groups stakeholders based on their level of authority (“power”) and their level of concern (“interest”) regarding the project outcomes (PMBOK Guide 5th Edition 2013, p. 396).

The result of the Identify Stakeholder process is the Stakeholder Register, which is found in Chart 24. The “Power/Interest grid” used for the stakeholder analysis is found in Chart 25. The stakeholder analysis narrative can be found in Chart 26.

Chart 24: Project Stakeholder Register (Source: Author, June 2018)

STAKEHOLDERS	ORGANIZATION	ROLE	MAIN EXPECTATIONS	MAJOR REQUIREMENTS	INFLUENCE / IMPACT
Director General- GCAA	GCAA	Project Sponsor	Completion of project within timeframe and budget while meeting objectives	All objectives to be met	high
NCMC	GCAA	National Coordinator	Improved level of ICAO Effective Implementation	Provision of tangible evidence of Effective Implementation	medium
Director- Aviation Safety Regulations	GCAA	DASR	Increased technical personnel	Compliance and Implementation by Regulators and ANSP	high
Minister for Civil Aviation Matters	The Government	Responsible Minister	Increased country profile	To obtain positive outcomes for Guyana	high
GCAA Board of Directors	GCAA	Board Members	Increased Organisation profile	To obtain positive outcomes for the GCAA	medium
Project Team Members (Includes the PM)	GCAA	Project Implementer	To realize project success	Adequate support and resources	high
ANS Provider	GCAA	Provision of ANS	Improved safety oversight (Audits / inspections)	Fair and just approach to safety oversight	medium
ICAO Regional Officer ANS & Safety -Roberto Sosa	ICAO	Regional Officer ANS & Safety	Improved regional level of Effective Implementation	Genuine effort to make overall improvement	high
Aircraft Owners & Operators & Airlines	Various	Air Transport to passengers	Improved service and safety from ANSP	Safety and efficiency for flight in the airspace	low
Airport Operators	CJIA, EFCIA	Airport Management	Improved service and safety from ANSP	Safety and efficiency for flight operations	low
Air Passengers	None	Airline patrons	Efficient Flight Movements	Minimum delays	low
Remote Area Medical Services	Ministry of Public Health et al	Beneficiaries /patients	Improved flight safety in remote airspace	A dependable Search and Rescue	low
Communities dependent of Air Services	Remote communities	Beneficiaries /patients	Improved flight safety in remote airspace	Facilitation of more flights	low

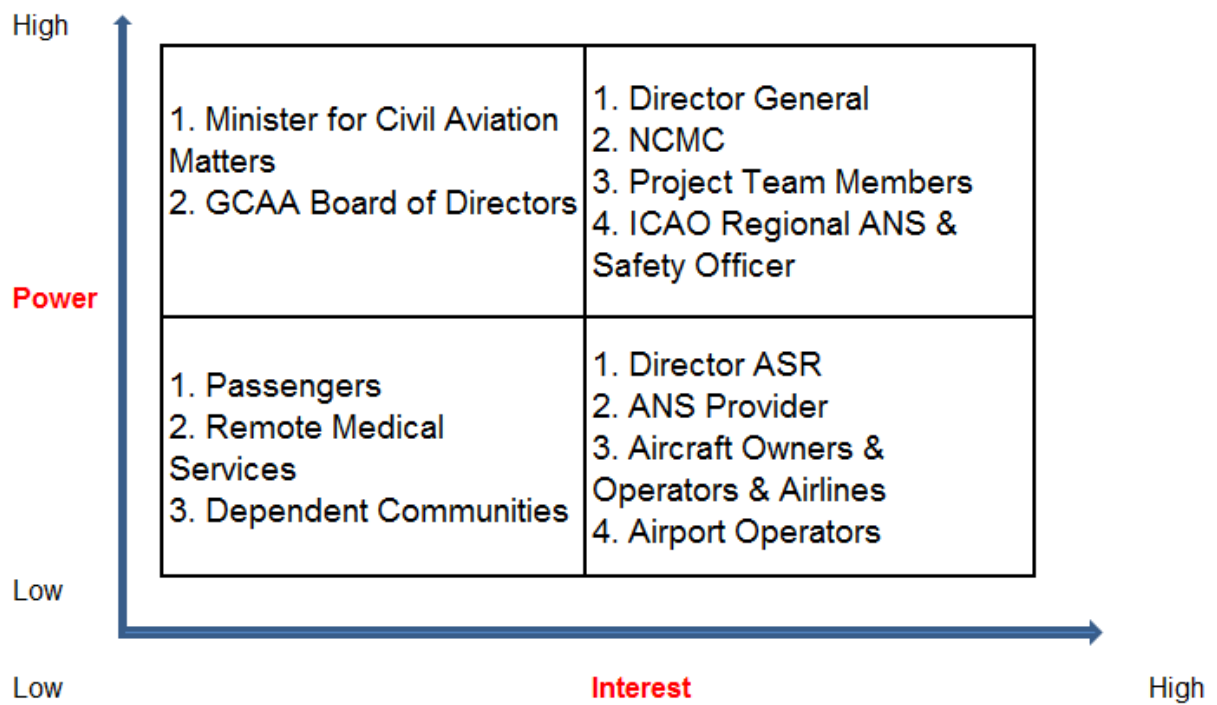
Chart 25: Project Stakeholder Analysis (Source: The Author, April 2018)

Chart 26: Analysis and Comments Regarding Stakeholders (Source: The Author, June 2018)

Analysis and Comments Regarding Stakeholders:

1	<p>High Power/Low Interest – These are the stakeholders that must be "kept satisfied". The Minister and the GCAA Board of Directors must be kept satisfied, but they are not necessarily interested in all the details of the project. They essentially need to know that the GCAA's investment is well spent and that the project will achieve the desired success. The Minister and the Board have high power essentially because they can have high influence on what happens with the project.</p>
2	<p>High Power/High Interest – These are the stakeholders that must be "managed closely". Director General, NCMC, ICAO Officer & Project Team are the stakeholders who are intimately involved in executing, so they have high power. Their decisions will affect the success of the project and therefore they must be monitored closely and communicated with frequently</p>
3	<p>Low Power/Low Interest – These are the stakeholders that must be "monitored". Passengers, Dependent Communities on air services, Remote Medical Services are essentially interested in limited aspects of the project. For example, passengers are only interested in being able to fly safely and quickly. There is no need for detailed or excessive communications.</p>
4	<p>Low Power/High Interest – These are the stakeholders that must be "kept informed". The Director Aviation Safety Regulations (DASR), ANS Provider, and Aircraft Owners & Operators, Airport Operators, and Airlines are all the stakeholders that will end up using and benefitting from the services and performance of an ANS System that is in compliance with international standards (ICAO SARPs). They may be helpful in providing recommendations that could enable the success of the project and they must be communicated with to ensure no major problems arise after the project is completed.</p>

Plan Stakeholder Management

In order to effectively engage project stakeholders throughout the duration of this project, appropriate strategies will be developed. These will be based on needs, interests, and potential impact they could have on the success of this project. Planning for stakeholder management provides a clear, actionable plan to interact with project stakeholders to support the interests of the project (PMBOK Guide 5th Edition 2013, p.399).

Stakeholder management is not just about improving communications. It is about the creation and maintenance of relationships between the project team and stakeholders in order to keep them satisfied regarding their respective needs and requirements within the project boundaries (PMBOK Guide 5th Edition 2013, p.400). Put differently, project stakeholders must be engaged at the right levels to the benefit of the project.

To assist in the determination of the level of engagement with each stakeholder required at each level of the project, expert judgement, meetings with Subject Matter Experts (SMEs), and the project team, and the Stakeholders Engagement Assessment Matrix will be used. This process will be iterative and will be reviewed periodically by the Project Manager.

Stakeholder Engagement Assessment

The Stakeholder Engagement Assessment Matrix will be used as an aid to determine the current and desired levels of engagement of each stakeholder. According to the PMBOK Guide 5th Edition, 2013, the gaps between the current and desired engagement levels can be identified through this analytical process. From this process, the actions and communications required to close these gaps will be identified by the project team using expert judgement.

Chart 27 shows the stakeholder engagement assessment.

Chart 27: Stakeholder Engagement Assessment Matrix (Source: Author -June 2018, PMBOK Guide 5th Edition, 2013)

Stakeholder	Unaware	Resistant	Neutral	Supportive	Leading
Director General- GCAA					C,D
NCMC				C,D	
Director- Aviation Safety Regulations					C,D
Minister for Civil Aviation Matters			C	D	
GCAA Board of Directors			C	D	
Project Team Members (Includes the PM)					C,D
ANS Provider		C		D	
ICAO Regional Officer ANS & Safety -Roberto Sosa					C,D
Aircraft Owners & Operators & Airlines	C			D	
Airport Operators			C	D	
Air Passengers	C			D	
Remote Area Medical Services	C			D	
Communities dependent of Air Services	C			D	

Key (Taken from PMBOK Guide, 5th Edition, 2013):

Unaware- Unaware of project and potential impacts.

Resistant- Aware of project and potential impacts and resistant to change.

Neutral- Aware of project yet neither supportive nor resistant.

Supportive- Aware of project and potential impacts and supportive of change.

Leading- Aware of project and potential impacts and actively engaged in ensuring the project is a success.

Manage Stakeholder Engagement

Managing stakeholder engagement essentially entails communicating and working with stakeholders to meet their respective needs and or expectations, and addressing issues as they may occur. Moreover, this engagement necessitates the fostering of appropriate stakeholder engagement in the activities of this project for its duration. This approach should allow the Project Manager to increase support for the project and minimise resistance from stakeholders. The response to this approach could lead to project success (PMBOK Guide 5th Edition, 2013, p.404).

The project communication plan will form the foundation for communication with stakeholders. In addition to the communication methods therein, the project manager must apply interpersonal skills to manage stakeholders' expectations. Among other things, the project manager must build trust, resolve conflicts, be an active listener, and find an approach to overcome resistance to change when required. If there are issues, these should be added to the Issue Log accordingly. Requests for changes must follow the applicable change request procedure while this project management plan and associated documents must be updated accordingly by the Project Manager.

Control Stakeholder Engagement

For this project, stakeholder engagement will be continuously controlled. The stakeholder relationships will be monitored, and engagement strategies and plans will be adjusted accordingly. The project manager will be responsible for the monitoring of the relationships but will be assisted by the other members of the project team. Periodic meetings of the project team will be used to exchange and analyse information about stakeholder engagement.

5 CONCLUSIONS

- 5.1 The general objective of this FGP was to create a Project Management Plan for the GCAA to execute so as to improve the level of effective implementation of ICAO SARPs in the area of ANS in Guyana. This project management plan that has been created consists of a Project Charter and nine (9) subsidiary plans. The project charter and the nine subsidiary plans, if adhered to by the GCAA, would lead to the realisation of project success.
- 5.2 To achieve the first specific objective of this FGP, a Project Charter was created. Such a document is used to give formal permission to a project manager to use organisational resources to produce a project management plan. The project charter created herein contained the information needed to give the project sponsor the level of confidence and assurance needed for him to support the creation of the project management plan. With the approval of the project charter, organisational resources, only thereafter, could be applied towards the production of the project management plan.
- 5.3 To achieve the second specific objective of this FGP, a Scope Management Plan was created. It speaks to all the processes needed to ensure that all the work needed and only the work needed to achieve the general objective is included in the plan. The WBS, scope definition, requirements, validation and control of scope are captured in this plan along with the respective roles of key persons. Following this plan would prevent scope creep and provides reasonable assurance that the project would achieve the general objective within the boundaries and requirements desired.
- 5.4 To achieve the third specific objective of this FGP, a Time Management Plan was created. This plan guarantees that the project would be completed in a timely manner, which, in this case is 8 months. The required activities to successfully complete this project, along with their respective durations, and

sequences are included. Time is critical to every organisation and the GCAA is no exception. In view of this, the time management plan is important and will ensure timely completion of the project and will contribute to the success of the project.

- 5.5 To achieve the fourth specific objective of this FGP, a Cost Management Plan was created. This plan ensures that the project is completed within budget. To realise this specific objective, the resources' cost needed to complete all the applicable activities for this project was estimated and budgeted for using expert judgement and analytical techniques. During the actual execution of the project these tools along with meetings would continue to be used to update this plan and control costs for the Project.
- 5.6 To achieve the fifth specific objective of this FGP, a Quality Management Plan was created. This plan ensures that the quality requirements for the project are established, met and validated. Defining and specifying the standards and requirements for the project were and are simple since ICAO is very specific in its SARPs. For this plan, it was simply to ensure that all project deliverables meet the applicable standards and requirements. In order to ensure that the project is a success, a number of ICAO ANS Protocol Questions (PQs) must be addressed satisfactorily. To be considered satisfactory, all the activities related to each respective PQ must meet all applicable standards and requirements. The project's adherence to the requirements must be checked and verified.
- 5.7 To achieve the sixth specific objective of this FGP, a Human Resource Management Plan was created. This plan ensures that the necessary human resources are identified, available, and are managed for the project. This plan spoke to acquiring, developing, and managing the team for the project. The project will be executed by personnel from within the GCAA and the team, once established, is expected to remain unchanged although their

level of involvement with different activities and at different stages will vary. Conflict management and performance appraisal will be employed. Organisational chart and position description, organisational theory, and expert judgement contributed to this plan and will continue to be applied and used. These strategies along with meetings and networking will provide a level of assurance of project success when the project commences.

- 5.8 To achieve the seventh specific objective for this FGP, a Risk Management Plan was created. This plan ensures that the likelihood and impact of positive events on the project is increased, while the likelihood and impact of negative events are decreased. In this plan, applicable processes were described, risks identified, a risk register created, the risks therein analysed, and assigned owners, among other things. The risk management plan is not a static document and is therefore live and therefore will be reviewed and updated periodically to ensure relevance and capture new risks with the aim of contributing to the achievement of the general objective of the project and project success.
- 5.9 To achieve the eight specific objective for this FGP, a Procurement Management Plan was created. This plan ensures that the necessary purchasing or acquisition of products, services, or results from outside the project team, is accomplished at the right time, the right quality/specifications, the right quantity, the right locations, and at the right price. The use of Expert Judgement, Market Research, and Meetings will ensure that the project supplies the best value for any money spent. Additionally, working with the Sponsor and Director of Finance and Administration, and using the existing organisational procedures, will allow for the successful execution of the procurement management plan, and in turn contribute to the overall project success. Without proper procurement, this project will suffer.

- 5.10 To achieve the ninth specific objective for this FGP, a Communications Plan was created. This plan ensures that project information is released to the right persons in an appropriate and timely manner. Adherence to this plan provides opportunities to keep stakeholders informed and supportive of the project. Stakeholder support is always crucial to the success of the project.
- 5.11 To achieve the tenth specific objective for this FGP, a Stakeholder Management Plan was created. This plan ensures that relevant stakeholders are identified, categorised, engaged with the project, and are managed appropriately. Stakeholders could affect the project in positive or negative ways and ultimately influence or impact the success of the project. Stakeholders must be identified, analysed, and engaged appropriately. It is imperative that stakeholder support be maintained or increased where needed, while at the same time stakeholder resistance to the project must be minimised.

6 RECOMMENDATIONS

- 6.1 The Director General of the GCAA, who acts as the Sponsor for the project, should review and approve the Project Charter.
- 6.2 The Director General and project team members should take all practicable steps to adhere to the scope management plan herein and ensure that all steps are taken to avoid scope creep.
- 6.3 The time management plan herein caters for the project having a duration of 8 months. The Director General must be apprised fully by the Project Manager of all that is required to successfully complete the project on schedule.
- 6.4 The Project Manager should take all practicable steps to ensure adherence to the cost management plan herein and minimise the occurrences of cost overruns. The Project Manager should also, with regards to inspector training, seek to obtain Fellowships in order to reduce costs.
- 6.5 For the project to be successful, all quality requirements must be met or surpassed. The Project Manager must impress this point to the Director General and all major stakeholders and inform them against sub-par or non-standard products or services.
- 6.6 Once the project team is established, the composition should remain unchanged for the duration of the project. This would essentially ensure familiarity and continuity. The Project Manager should liaise with the relevant persons as may be required to achieve this.
- 6.7 The Director General and the Board of Directors should support the project team and assist as far as is practicably possible to manage, mitigate, or eliminate risks which could have a negative impact of the project.

- 6.8 The Director of Finance and Administration should ensure that the GCAA procurement processes function efficiently with minimum or no delays on the part of the GCAA since this would impact the project negatively.
- 6.9 The Director General, the Project Manager and team must communicate and keep the relevant persons informed in a timely and appropriate manner of the progress of the project.
- 6.10 The Project Manager and team must continuously engage relevant stakeholders appropriately to ensure that their support for the project is maintained or increased, and where and when applicable, ensure that resistance to the project is reduced.

7 BIBLIOGRAPHY

Civil Aviation Act. (2000). *Guyana Act No. 10 of 2000*. Georgetown, Guyana: National Printers Ltd.

Daft, R. L. & Marcic, D. (2004). *Understanding Management- Fourth Edition*. Manson, Ohio: South-Western

Dhiman, Anil K. & Yashoda Rani. (2005). *Learn Information and Reference Sources and Services*. New Delhi: Ess Publication.

Google Images (n.d.). *Traditional Project Management Lifecycle*. (n.d.) Retrieved from <https://i.pinimg.com/originals/5b/91/d6/5b91d6cdd3e97da4647add8312c3e969.jpg>

International Civil Aviation Organization. (2017). *Final Report of the ICAO Coordinated Validation Mission in the Republic of Guyana – 21 to 29 November 2016*. Lima: ICAO

Knell, K. (2007). The 7 C's of a Powerful Vision. Retrieved from <http://bluesummitstrategy.com/strategy/mission-vs-vision/2007/>

Lester, J.D. & Lester J. D. Jr. (2012). *Writing Research Papers: A Complete Guide- Fourteenth Edition*. U.S.A: Pearson Education Inc

Meredith, J. R. & Mantel, S. J. Jr. (2002). *Project Management: A Managerial Approach- Fifth Edition*. U.S.A: John Wiley & Sons, Inc.

Project Management Institute. (2013). *A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) - Fifth Edition*, Project Management Institute, Inc., 2013.

Williams. C. (2007). Research Methods. *The Journal of Business & Economic*

Research- Vol. 5, No. 3. Retrieved from <https://www.cluteinstitute.com/ojs/index.php/JBER/article/download/2532/2578>

8 APPENDICES

Appendix 1: FGP Charter

PROJECT CHARTER

Process inputs: business case, statement of work, agreements, enterprise environmental factors, organizational project assets.

Tools and techniques: expert judgment, facilitation techniques.

Outputs: Charter

PROJECT CHARTER	
Formalizes the project start and confers the project manager with the authority to assign company resources to the project activities. Benefits: it provides a clear start and well defined project boundaries.	
Date	Project Name:
13 November 2017	Project Management Plan to improve the level of Effective Implementation of International Civil Aviation Organisation Standards and Recommended Practices in Air Navigation Services (Guyana).
Knowledge Areas / Processes	Applicacion Area (Sector / Activity)
<p>Knowledge areas: Project Intregation Management, Project Scope Management, Project Time Management, Project Cost Management, Project Quality Management, Project Human Resource Management, Project Risk Management, Project Procurement Management, Project Communications Management, Project Stakeholder Management</p> <p>Process groups: Initiating, Planning, Executing, Monitoring and Controlling, Closing.</p>	Civil Aviation/Institutional Strenghting
Start date	Finish date
13 November 2017	15 July 2018
Project Objectives (general and specific)	
<p>General objective:</p> <p>To create a Project Management Plan for the Guyana Civil Aviation Authority to execute in order to improve the level of Effective Implementation of International Civil Aviation Organisation Standards and Recommended Practices in the area of Air Navigation Services (Guyana).</p> <p>Specific objectives:</p> <ol style="list-style-type: none"> 1 To create a project charter to give formal permission to the Project Manager to use the organization's resources to produce the Project Management Plan. 2 To create a Scope Management Plan to ensure that the project includes all the work required, and only the work required, to successfully complete the project. 3 To create a Time Management Plan to ensure that the project is completed in a timely manner. 4 To create a Cost Management Plan to ensure that the project is completed withing the approved budget. 	

- 5 To create a Quality Management Plan to ensure that quality requirements are established for the project and that project and product requirements are met and validated.
- 6 To create a Human Resource Management Plan to ensure that the necessary human resources for the project are identified available and are managed for the project.
- 7 To create a Risk Management Plan to increase the likelihood and impact of positive events, and decrease the likelihood and impact of negative events in the project.
- 8 To create a Procurement Management Plan to ensure that the necessary purchasing or acquisition of products, services, or results from outside the project team, is accomplished at the right time, the right quality/specifications, the right quantity, the right locations, and at the right price.
- 9 To create a Communications Management Plan to ensure that project information is released to the right persons in an appropriate and timely manner.
- 10 To create a Stakeholder Management Plan to ensure that relevant stakeholders are identified, categorized, engaged with the project, and are managed appropriately.

Project purpose or justification (merit and expected results)

In 1996 the International Civil Aviation Organisation (ICAO), conducted an assessment of Guyana and found a high level of deficiencies which had a negative impact on Guyana's ability to effectively implement applicable standards and recommended practices. This was especially the case with regards to the area of Air Navigation Services (ANS). In 2007, ICAO conducted an audit and found that ANS had only 10.82% Effective Implementation. In 2014, ICAO returned to ascertain what progress was made, however there was no progress made since the 2007 audit. Again in 2016, ICAO conducted another assessment, and this time found that in the area of ANS, the level of effective implementation had risen to 54.17%.

A subsequent decision was taken within the Guyana Civil Aviation Authority to work towards attaining at least an 80% level of effective implementation in the area of ANS. To meet this goal, the necessary work had to be done, and would be treated as a distinct project. In view of this, it is necessary to develop an appropriate Project Management Plan.

The Project Management Plan, if developed and subsequently implemented could see the level of effective implementation in ANS rise to 80%+, and a consequent increased indication to the aviation community, both locally and internationally, that there is an increased level of safety.

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

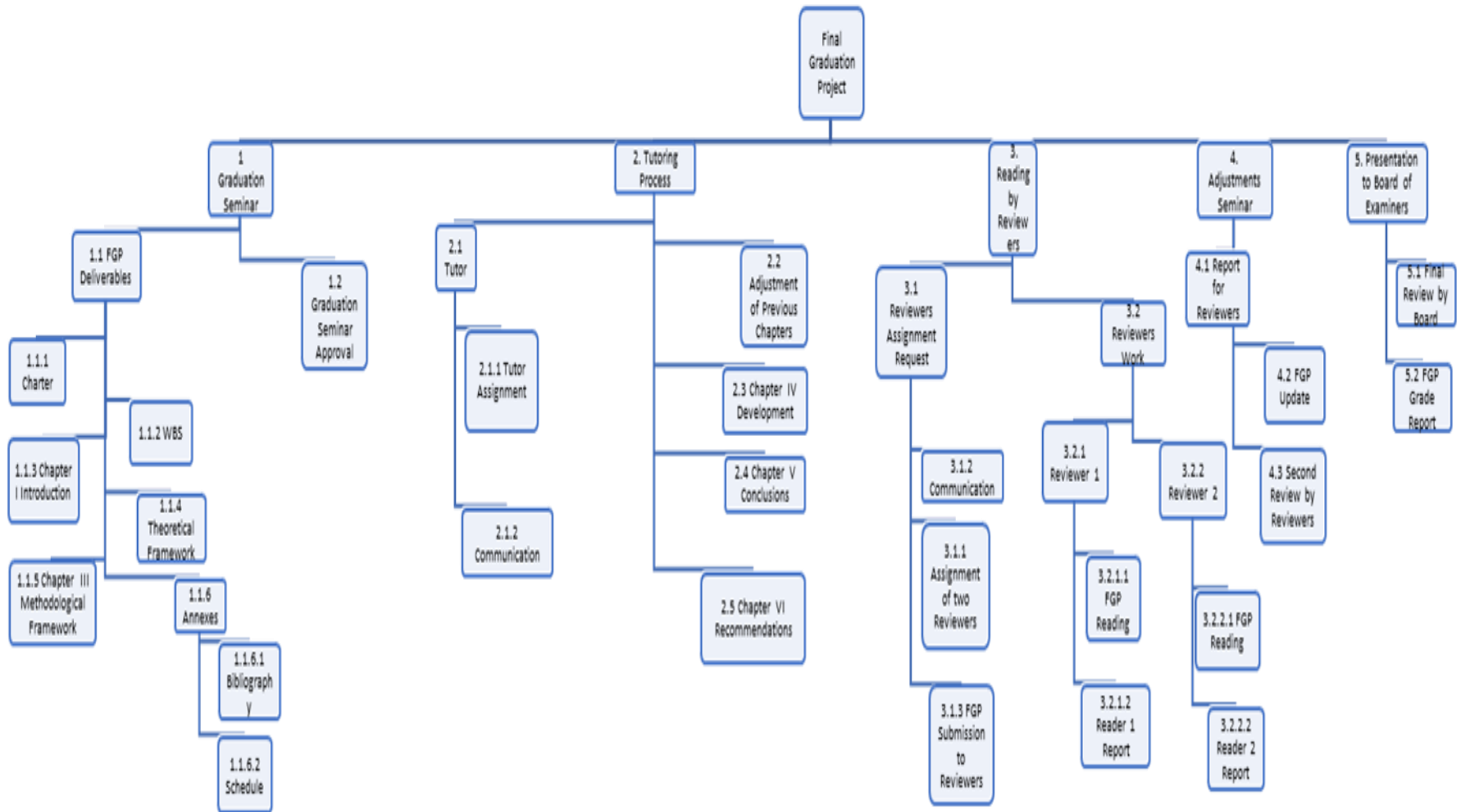
The Project Management Plan, comprised of the subsidiary management plans for the improvement of the level of effective implementation of ICAO standards and recommended practices in the area of ANS in Guyana, to 80%+, would be realised by this project. This plan would consist of all other related subsidiary plans and documents for a Project Management Plan as follows:

- A Project Charter
- A Scope Management Plan;
- A Time Management Plan;
- A Cost Management Plan;
- A Quality Management Plan;
- A Human Resource Management Plan;
- A Risk Management Plan;
- A Procurement Management Plan;
- A Communications Management Plan; and
- A Stakeholder Management Plan.

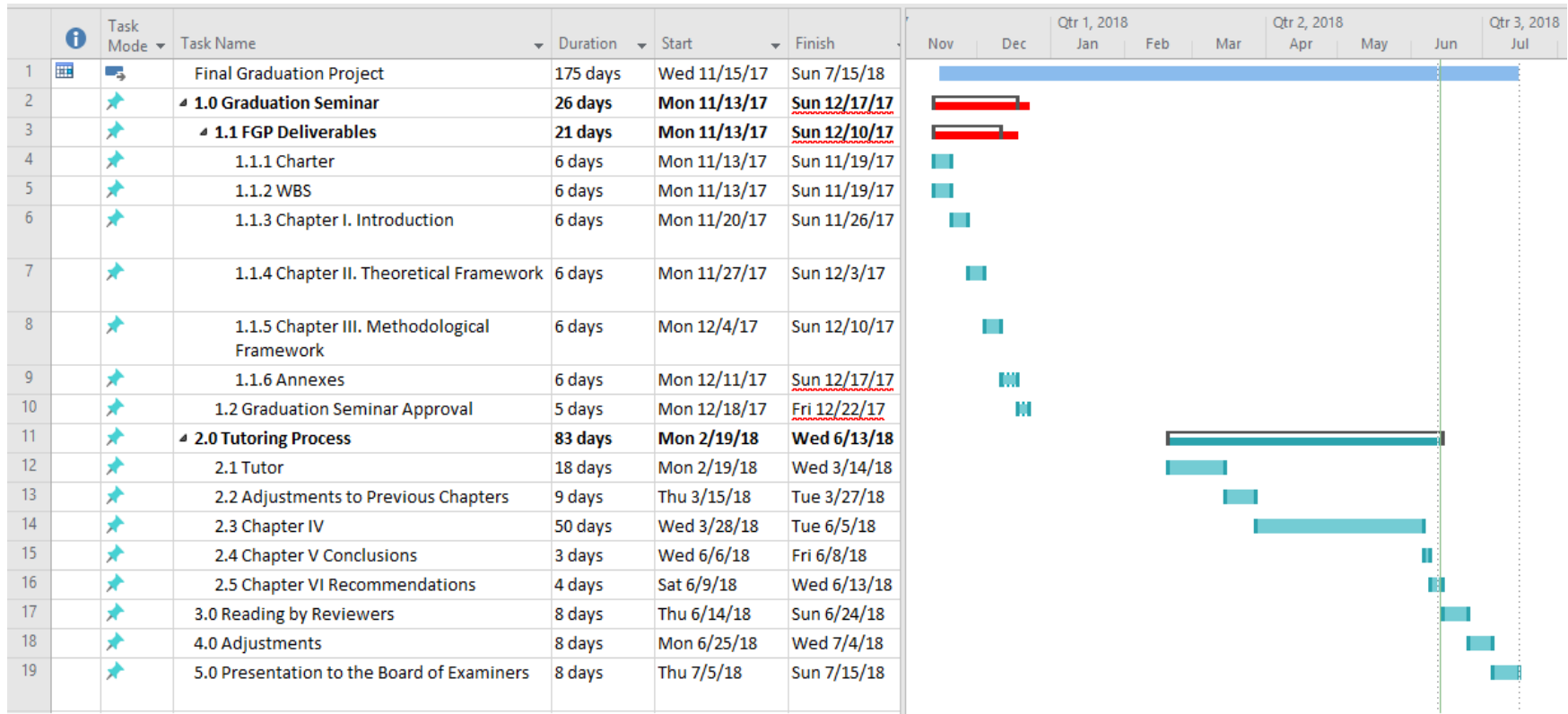
Assumptions		
It is assumed that the Project would be completed in the time allotted.		
It is assumed that there would be continued support for the project.		
Constraints		
The constraint of time may manifest since there would be the need to balance studies, job responsibilities, family commitments, and travel requirements, while doing the project.		
Preliminary risks		
If the student is required to travel during the course of his work to remote locations which lack electricity and internet access, this might cause a slow down/delay which impacts on the time allotted for the completion of the project.		
Budget		
The budgeted cost for this project is seventy thousand Guyana Dollars (GYD\$70,000.00) This includes costs for a printer, small scanner, postage, paper and other general stationary.		
Milestones and dates		
Milestone	Start date	End date
Final Graduation Project	13 November 2017	15 July 2018
1 Graduation Seminar	13 November 2017	17 December 2017
1.1 FGP Deliverables	13 November 2017	10 December 2017
1.1.1 Charter	13 November 2017	19 November 2017
1.1.2 WBS	13 November 2017	19 November 2017
1.1.3 Chapter I. Introduction	20 November 2017	26 November 2017
1.1.4 Chapter II Theoretical Framework	27 November 2017	3 December 2017
1.1.5 Chapter III Methodological Framework	4 December 2017	10 December 2017
1.1.6 Annexes	11 December 2017	17 December 2017
1.2 Graduation Seminar Approval	18 December 2017	22 December 2017
2 Tutoring Process	19 February 2018	13 June 2018
2.1 Tutor	19 February 2018	14 March 2018
2.2 Adjustments to previous chapters (if needed)	15 March 2018	27 March 2018
2.3 Chapter IV. Development (Results)	28 March 2018	5 June 2018
2.4 Chapter V. Conclusions	6 June 2018	8 June 2018
2.5 Chapter VI. Recommendations	9 June 2018	13 June 2018
3 Reading by Reviewers	14 June 2018	24 June 2018
4 Adjustments	25 June 2018	4 July 2018
5 Presentation to Board of Examiners	5 July 2018	15 July 2018

Relevant historical information	
<p>Guyana is a Contracting State of the International Civil Aviation Organisation. This means Guyana has an obligation to ensure certain standards are met and kept in civil aviation locally. This was done through the Department of Civil Aviation, and in 2002 to present, the Guyana Civil Aviation Authority (GCAA). The GCAA is responsible for all matters regarding civil aviation.</p> <p>When it was found that Guyana was not ensuring a high percentage of effective implementation of ICAO Standards and Recommended Practices, in 2015 a decision was made to address this situation. A project was to be initiated and executed to address this situation. The end results of the project as it relates to Air Navigation Services in Guyana, was an increase of effective implementation from 10.82% to 54.17%.</p> <p>Presently as it relates to the area of Air Navigation Services, the goal is to improve the level of Effective Implementation to 80%+. Hence a Project Management Plan must be developed as a first step towards achieving this goal.</p>	
Stakeholders	
<p>Direct stakeholders:</p> <p>Adrian Bassier, Director General of Guyana Civil Aviation Authority, Director of Aviation Safety Regulations, Air Navigation Services Provider, Airport Operators, Project Team Members, The Minister Responsible for Civil Aviation, Mr. Roberto Sosa of the ICAO South American Office in Lima, Peru.</p> <p>Indirect stakeholders:</p> <p>Aircraft Owners and Operators of Guyana, Airlines, Air Passengers, Remote Area Medical Service, Communities that depend of Air Services.</p>	
Project Manager: Adrian Earle Bassier	Signature: 
Authorized by:	Signature:

Appendix 2: FGP WBS



Appendix 3: FGP Schedule (Revised)



Appendix 4: List of Relevant ICAO Protocol Questions (PQs) and Guidance (Source: ICAO)

Guidance Material	Protocol Question	Guidance for Review
GM Doc 9734 Part A, 3.4	7.061 Does the State employ a sufficient number of qualified air traffic services (ATS) technical staff to carry out its safety oversight tasks and regulatory functions?	1) Review methodology established for determining staffing needs. 2) Review ability to attract new inspectors as well as existing vacancies and level of turnovers in past years. Review ability to carry out all safety oversight-related tasks, including review and revision of regulations, training of technical staff, development of guidance material, issuance of approvals, conducting of surveillance and resolution of identified safety
GM Doc 9734 Part A, 3.4	7.269 Does the State employ sufficient qualified technical staff to carry out its oversight tasks over the entity providing the AIS?	1) Review methodology established for determining staffing needs. 2) Review ability to attract new inspectors as well as existing vacancies and level of turnover in past years. 3) Review ability to carry out all safety oversight-related tasks, including: a) review and revision of regulations, b) training of technical staff, c) development of guidance material, d) issuance of approvals, e) conducting of surveillance, and resolution of identified safety concerns.
GM Doc 9734 Part A, 3.4	7.487 Does the State employ a sufficient number of qualified technical staff to carry out its safety oversight tasks over the rescue coordination centre (RCC) and, as appropriate, rescue	1) Review methodology established for determining staffing needs. 2) Review ability to attract new inspectors as well as existing vacancies and level of turnovers in past years. 3) Review ability to carry out all safety oversight related tasks, including: a) review and revision of regulations,

	sub-centre (RSC)?	<ul style="list-style-type: none"> b) training of technical staff, c) development of guidance material, d) issuance of approvals, e) Conducting of surveillance, and Resolution of identified safety concerns.
GM Doc 9734 Part A, 3.4	7.373 Does the State employ sufficient qualified technical staff to carry out its safety oversight tasks over the entity operating CNS systems and facilities?	<ul style="list-style-type: none"> 1) Review methodology established for determining staffing needs. 2) Review ability to attract new inspectors as well as existing vacancies and level of turnovers in past years. 3) Review ability to carry out all safety oversight related tasks, including: <ul style="list-style-type: none"> a) review and revision of regulations, b) training of technical staff, c) development of guidance material, d) issuance of approvals, e) conducting of surveillance, and resolution of identified safety concerns.
STD A3 2.1.5 GM A19 Att. A, 3.3 Doc 9734 Part A, 3.4 Doc 9859 4.2.36, 4.2.37 & 4.4.17	7.417 Does the State employ a sufficient number of qualified MET inspectors to carry out its safety oversight tasks over the MET authority?	<ul style="list-style-type: none"> 1) Review mechanism established to ensure effective implementation. 2) Review methodology established for determining staffing needs. 3) Review ability to attract new inspectors as well as existing vacancies and level of turnovers in past years. 4) Review ability to carry out all safety oversight-related tasks, including: <ul style="list-style-type: none"> a) review and revision of regulations, b) training of technical staff, c) development of guidance material, d) issuance of approvals, e) conducting of surveillance, and resolution of identified safety concerns
GM Doc 9734	7.069 Is the training programme	Verify that the type and frequency of training provided (initial, recurrent and specialized) are sufficient to

Part A, 3.5	appropriately implemented for the air traffic service (ATS) inspectors?	acquire/maintain the required level of knowledge, skills, competence and qualifications in accordance with the duties and responsibilities assigned to each technical staff.
GM Doc 9734 Part A, 3.5	7.071 Are air traffic service (ATS) inspectorate staff required to satisfactorily complete their on-the-job- training (OJT) before being assigned their tasks and responsibilities?	1) Review requirement for the provision of OJT. Verify that OJT is provided by an experienced senior inspector.
GM Doc 9734 Part A, 3.5	7.281 Is the training programme appropriately implemented for AIS inspectors?	Verify that the type and frequency of training provided (initial, OJT, recurrent and specialized) is sufficient to acquire/maintain the required level of knowledge, skills, competence and qualifications in accordance with the duties and responsibilities assigned to each technical staff.
GM Doc 9734 Part A, 3.5	7.385 Is the training programme appropriately implemented for CNS inspectors?	Verify that the type and frequency of training provided (initial, OJT, recurrent and specialized) is sufficient to acquire/maintain the required level of knowledge, skills, competence and qualifications in accordance with the duties and responsibilities assigned to each technical staff.
GM Doc 9734 Part A, 3.5	7.429 Is the training programme appropriately implemented for MET inspectors?	Verify that the type and frequency of training provided (initial, OJT, recurrent and specialized) is sufficient to acquire/maintain the required level of knowledge, skills, competence and qualifications in accordance with the duties and responsibilities assigned to each technical staff.
GM Doc 9734 Part A, 3.5	7.499 Is the training programme appropriately implemented for SAR inspectors?	Verify that the type and frequency of training provided (initial, OJT, recurrent and specialized) is sufficient to acquire/maintain the required level of knowledge, skills, competence and qualifications in accordance with

		the duties and responsibilities assigned to each technical staff.
GM Doc 9734 Part A, 3.5	7.073 Does the ATS inspectorate have a system for the maintenance of training records for its technical staff?	<ol style="list-style-type: none"> 1) Review requirements/instructions for the establishment and maintenance of training records. 2) Review the system in place. 3) Sample training records. 4) Verify that training records are systematically retained, including records of the OJT.
GM Doc 9734 Part A, 3.5	7.285 Does the AIS inspectorate have a system for the maintenance of training records for its technical staff?	<ol style="list-style-type: none"> 1) Review instruction or requirement for the establishment and maintenance of training records. Verify that training records are systematically retained.
GM Doc 9734 Part A, 3.5	7.389 Does the CNS inspectorate have a system for the maintenance of training records for its technical staff?	<ol style="list-style-type: none"> 1) Review instruction or requirement for the establishment and maintenance of training records. Verify training records are systematically retained.
GM Doc 9734 Part A, 3.5	7.433 Does the MET inspectorate have a system for the maintenance of training records for its technical staff?	<ol style="list-style-type: none"> 1) Review instruction or requirement for the establishment and maintenance of training records. 2) Verify that training records are systematically retained.
GM Doc 9734 Part A, 3.5	7.503 Does the SAR inspectorate have a system for the maintenance of training records for its technical staff?	<ol style="list-style-type: none"> 1) Review instruction or requirement for the establishment and maintenance of training records. 2) Verify training records are systematically retained.
PANS Doc 4444 (ATM) 3.1	7.081 Does the State ensure that the service provider	<ol style="list-style-type: none"> 1) Review mechanism to ensure compliance. 2) Review the documented process applied in determining

<p>GM Doc 9426 Part II, Section 1, C1, 2 & App. C</p>	<p>responsible for the air traffic service (ATS) has developed policies and procedures for determining the capacity of the ATS system, including the number of staff required to ensure the provision of an adequate ATS system?</p>	<p>staff requirements. Confirm effective application to ensure provision of adequate service.</p>
<p>GM Doc 9734 Part A, 3.7 Doc 9426 Part IV, Section 1, C2</p>	<p>7.085 Does the State ensure that the service provider responsible for the air traffic service (ATS) has developed and implemented policies and procedures to enable recruitment and retention of appropriately qualified and experienced ATS staff?</p>	<p>1) Review State mechanism to ensure compliance. 2) Review policies and procedures. Review staff records to assess conformity with identified need and stability in staff retention.</p>
<p>PANS Doc 4444 (ATM) 2.5.2 GM Doc 9426 Doc 9734 Part A, 3.7</p>	<p>7.087 Does the State ensure that the service provider responsible for air traffic service (ATS) has developed and implemented a training programme for its ATS staff?</p>	<p>1) Review State mechanism to ensure compliance. 2) Review training programme and ensure that it includes competency on new equipment, procedures and communications systems*. 3) Verify if it includes, as applicable, initial, recurrent and specialized training. 4) Review evidence of completed training. Note: This PQ is merged with now deleted 7.091 of 2014 PQs.</p>
<p>STD A11 7.3 A10 Vol. I, 2.3 GM Doc. 9426</p>	<p>7.139 Does the State ensure that information on the operational status of navigation aids is promptly forwarded to</p>	<p>1) Review mechanism established to ensure effective implementation. 2) Review documented evidence of procedures to provide information on visual and non-visual aids to ATS units.</p>

Part 1, C10 & App A	appropriate air traffic service (ATS) units?	
STD A19 4.1.7	7.169 Does the State ensure that the air traffic service (ATS) provider has established and implemented SMS acceptable to the State?	<ol style="list-style-type: none"> 1) Review mechanism established to ensure effective implementation. 2) Verify the implementation. 3) Verify the approval process. <p>Note to the auditor: Unless an SMS is fully implemented, this PQ cannot be satisfactory.</p>
PANS Doc 4444 (ATM) 2.6	7.177 Does the State ensure that the service provider carries out safety assessments, with respect to significant airspace reorganizations, a) for significant changes in the provision of ATS procedures applicable to an airspace or an aerodrome, and b) for the introduction of new equipment, systems or facilities?	<ol style="list-style-type: none"> 1) Review mechanism established to ensure effective implementation. 2) Review documented evidence requiring safety assessment of any significant safety related change to the ATS system and confirm enforcement. <p>Review methodology and effectiveness.</p>
GM Doc 9734 Part A, 3.8	7.063 Has the State established and implemented a formal surveillance programme for the continuing supervision of the service provider responsible for air traffic service (ATS)?	<ol style="list-style-type: none"> 1) Review surveillance programme. 2) Confirm if plan is implemented and in compliance with surveillance programme (implementation evidence may be based on proven safety indicators or results of inspections from previous years). <p>Inclusion of random inspections.</p>
PANS Doc 4444 (ATM) 2.5	7.183 Does the State ensure that safety reviews are	<ol style="list-style-type: none"> 1) Review mechanism established to ensure effective implementation. 2) Check findings of last safety review that was carried out and

	conducted regularly by the ATS service provider?	follow up action(s) taken.
GM STD & RP A4 1.3.2.2, 3.2, 6.2, 7.2, 8.2, 9.2, 10.2, 11.2, 12.2, 13.2, 14.2, 15.2, 16.2, 17.2, 18.2, 19.2 & 21.2	7.363 Has the State made available to users all the charts which are applicable in the State?	Review if the following charts, as applicable, are made available by the State and are published in the AIP in compliance with the Annexes 4 and 15: 1. Aerodrome Obstacle Chart – ICAO Type A. 2. Precision Approach Terrain Chart – ICAO. 3. En-route Chart – ICAO. 4. Area Chart – ICAO or, alternatively, Standard Departure Chart – Instrument (SID) – ICAO and Standard Arrival Chart – Instrument (STAR) – ICAO. 5. Instrument Approach Chart – ICAO. 6. Visual Approach Chart – ICAO. 7. Aerodrome/ Heliport Chart – ICAO. 8. Aerodrome Ground Movement Chart – ICAO. 9. Aircraft Parking/Docking Chart – ICAO. 10. World Aeronautical Chart – ICAO 1: 1 000 000 or, alternatively, Aeronautical Chart – ICAO 1: 500 000 or Aeronautical Navigation Chart – ICAO Small Scale. 11. Plotting Chart – ICAO. 12. ATC Surveillance Minimum Altitude Chart – ICAO.
GM Doc 9734 Part A, 3.7	7.303 Does the State ensure that the AIS service providers develop a training programme for AIS technical staff?	1) Review mechanism established to ensure effective implementation. 2) Review documented training programme and verify if it includes, when applicable, initial, recurrent or specialized training.
STD A15 2.2	7.267 Does the State ensure that a properly organized quality management system in the AIS has been established?	1) Review mechanism established to ensure effective implementation. Review documented evidence of established quality management system which includes procedures, processes and resources.
GM Doc 9734	7.287 Does the State effectively conduct	1) Confirm inspection procedures and inspection reports.

Part A, 3.8	surveillance over the entity providing the AIS?	2) Review checklist used by inspectors. Review inspection schedules.
GM Doc 9734 Part A, 3.7	7.533 Does the State ensure that each rescue coordination centre (RCC) and, if appropriate, rescue sub-centre (RSC), establish a training programme for their staff?	1) Review mechanism established to ensure effective implementation. Review documented training programme and verify if it includes, when applicable, initial, recurrent or specialized training
GM Doc 9734 Part A, 3.8	7.505 Does the State effectively conduct surveillance over the rescue coordination centre (RCC) and, as appropriate, rescue sub-centre (RSC)?	1) Confirm inspection procedures and inspection reports. 2) Review checklist used by inspectors. Review inspection schedules.
GM Doc 9734 Part A, 3.7	7.535 Does the State ensure that each rescue coordination centre (RCC) and, if appropriate, rescue sub-centre (RSC), maintain training records for their technical staff?	Review method used by State to confirm that training records are maintained.
STD A12 4.4 GM Doc 9731 (IAMSAR Manual) Vol. I, C3, 3.3	7.545 Does the State ensure that SAR personnel are regularly trained and that appropriate SAR exercises are arranged?	1) Review mechanism established to ensure effective implementation. 2) Review training schedule, SAR training syllabus, lesson plans and results of training
STD A12 3.1.1	7.517 Does the State coordinate its	Review international letters of agreement and national SAR plans.










RP A12 3.1.5	SAR organization with those of neighbouring States?	
GM Doc 9734 Part A, 3.7	7.403 Does the State ensure that the entity operating CNS systems and facilities has developed a training programme for its technical staff?	1) Review mechanism established to ensure effective implementation. 2) Review documented training programme and verify if it includes, when applicable, initial, recurrent or specialized training.
GM Doc 9734 Part A, 3.8	7.391 Does the State effectively conduct surveillance over the entity responsible for the maintenance and operation of CNS systems and facilities?	1) Confirm inspection procedures and inspection reports. 2) Review checklist used by inspectors. 3) Review inspection schedules. Confirm that facilities and staff of entity are included.
GM Doc 9734 Part A, 3.7	7.405 Does the State ensure that the entity operating CNS systems and facilities maintains training records for its technical staff?	Review method used by State to confirm that training records are maintained.
STD A3 2.1.5 GM Doc 9734 Part A, 3.7	7.453 Does the State ensure that the entity providing the MET service has developed job descriptions for its technical staff?	1) Review mechanism established to ensure effective implementation. Review job descriptions and confirm rational application.
STD A3 2.1.5 GM Doc 9734 Part A, 3.7	7.455 Does the State ensure that the entity providing the MET service has established a training programme for its technical staff?	1) Review mechanism established to ensure effective implementation. Review documented training programme and verify if it includes, when applicable, initial, recurrent or specialized training.
RP A3 4.6.1.2	7.459 Does the State ensure that the	1) Review mechanism established to ensure effective implementation.

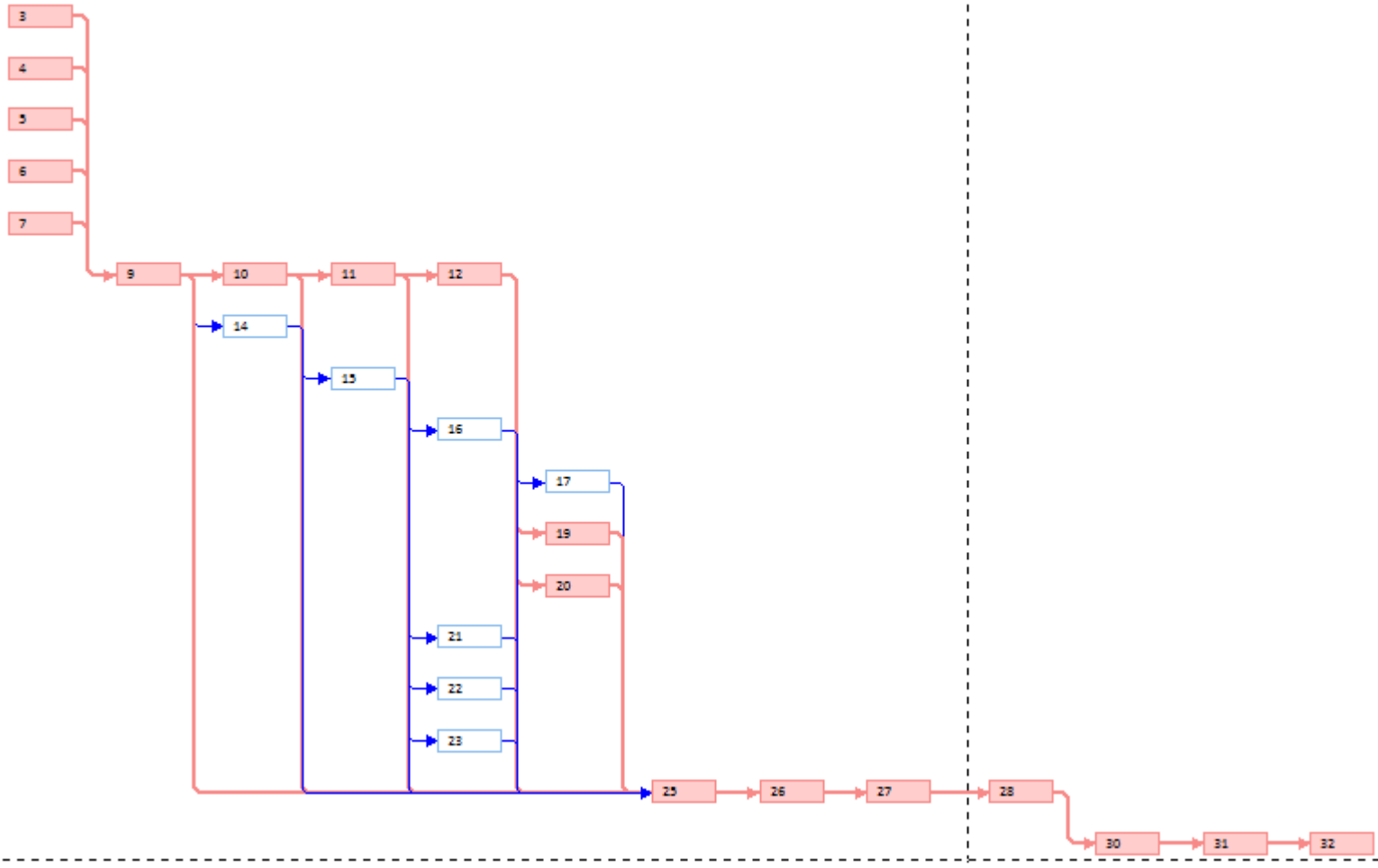
	wind sensors for local routine reports are appropriately sited to give the best practicable indication of conditions along the runway/touchdown zone?	2) Also see AIP GEN 3.5.3. Verify on industry visit.
STD A3 5.8 A11	7.463 Does the State ensure that provisions related to special air-reports, including those for volcanic ash, are followed with respect to their relay to the relevant MET offices?	1) Review mechanism established to ensure effective implementation. 2) Verify the existence of staff instructions at the air traffic services (ATS) and MET units
STD A3 7.1 & 7.4.1	7.465 Does the State ensure that MET offices issue wind shear warnings for aerodromes where wind shear is considered as a safety factor?	1) Review mechanism established to ensure effective implementation. 2) Verify the existence of staff instructions concerning the issuance of wind shear warnings.
STD A3 4.4.1	7.467 Does the State ensure that the MET authority, in coordination with the air traffic service (ATS) authority, have established criteria for special observations?	1) Review mechanism established to ensure effective implementation. Verify existence of criteria.
STD A3 4.1.3, 4.3.1, 4.3.2, 4.4.2 and 6.2.1	7.471 Does the State ensure that the MET offices issue METAR, SPECI and TAF?	1) Review mechanism established to ensure effective implementation. 2) Request examples of METAR, SPECI and TAF issued over the last seven days.

GM Doc 9734 Part A, 3.8	7.435 Does the State effectively conduct surveillance over the entity providing the MET service?	1) Confirm inspection procedures and inspection reports. 2) Review checklist used by inspectors. Review inspection schedules.
STD A3 2.2.1 & 2.2.2 RP 2.2.3	7.451 Does the State ensure that the entity providing the MET service has established a properly organized quality system?	1) Review mechanism established to ensure effective implementation. Review documented evidence of established quality system including procedures, processes and resources.
STD A3 2.2.1 & 2.2.2 RP 2.2.3	7.451 Does the State ensure that the entity providing the MET service has established a properly organised quality system?	2) Review mechanism established to ensure effective implementation. Review documented evidence of established quality system including procedures, processes and resources.
GM Doc 9734 Part A, 3.7	7.457 Does the State ensure that the entity providing the MET service maintains training records for its technical staff?	Review method used by State to confirm that training records are maintained.

Appendix 5: Project Network Diagram (Source: The Author, April 2018)

1		1 Eighty Percent or More EI (ANS)	161 days		Yes
2		1.1 Recruitment	20 days		Yes
3		1.1.1 Recruitment of ATS Inspector	20 days		Yes
4		1.1.2 Recruitment of AIS Inspector	20 days		Yes
5		1.1.3 Recruitment of SAR Inspector	20 days		Yes
6		1.1.4 Recruitment of CNS Inspector	20 days		Yes
7		1.1.5 Recruitment of MET Inspector	20 days		Yes
8		1.2 Inspector Training	80 days		Yes
9		1.2.1 Initial Training for each Inspector	5 days	3,4,5,6,7	Yes
10		1.2.2 On-the-Job Training for each Inspector	60 days	9	Yes
11		1.2.3 Specialized Training for each Inspector	5 days	10	Yes
12		1.2.4 Recurrent Training for ATS and AIS Inspectors	10 days	11	Yes
13		1.3 Inspector Training Records	76 days		No
14		1.3.1 Compile, File, Maintain Initial Training Records for all Inspectors	1 day	9	No
15		1.3.2 Compile, File, Maintain OJT Records for all Inspectors	1 day	10	No
16		1.3.3 Compile, File, Maintain Specialized Training Records for all Inspectors	1 day	11	No
17		1.3.4 Compile, File, Maintain Recurrent Training Records for ATS and AIS Inspectors	1 day	12	No
18		1.4 Audit/Inspection of ANS Provider	11 days		Yes
19		1.4.1 Audit/Inspection of ATS Provider	1 day	12	Yes
20		1.4.2 Audit/Inspection of AIS Provider	1 day	12	Yes
21		1.4.3 Audit/Inspection of SAR Provider	1 day	11	No
22		1.4.4 Audit/Inspection of CNS Provider	1 day	11	No
23		1.4.5 Audit/Inspection of MET Provider	1 day	11	No
24		1.5 Documentation/Evidence	15 days		Yes

24		1.5 Documentation/Evidence	15 days		Yes
25		1.5.1 Complete Audit/Inspection Checklists	1 day	19,20,21,22,23	Yes
26		1.5.2 Prepare and Submit Audit/Inspection Reports	4 days	25	Yes
27		1.5.3 Request, Obtain, Approve Corrective Action Plans from	5 days	26	Yes
28		1.5.4 Compile and File all Documentation	5 days	9,10,11,12,27,14,	Yes
29		1.6 ICAO Validation	45 days		Yes
30		1.6.1 Upload all Filed Documentation (Evidence) to the ICAO Online Framework (OLF)	35 days	28	Yes
31		1.6.2 Invite ICAO Mission to Validate	5 days	30	Yes
32		1.6.3 ICAO Mission validation	5 days	31	Yes



Appendix 6: WBS-Protocol Question Relationship (Source: The Author)

No.	WBS ID	Activity Description	Protocol Questions to be Addressed	Total PQs
1	1.1.1	Recruitment of ATS Inspector	7.061,	1
2	1.1.2	Recruitment of AIS Inspector	7.269,	1
3	1.1.3	Recruitment of SAR Inspector	7.487,	1
4	1.1.4	Recruitment of CNS Inspector	7.373,	1
5	1.1.5	Recruitment of MET Inspector	7.417,	1
6	1.2.1	Initial Training for each Inspector	7.069, 7.071, 7.281, 7.385, 7.429, 7.499,	6
7	1.2.2	On-the-Job Training for each Inspector		
8	1.2.3	Specialized Training for each Inspector		
9	1.2.4	Recurrent Training for ATS and AIS Inspectors		
10	1.3.1	Compile, File, Maintain Initial Training Records for all Inspectors	7.073, 7.285, 7.389, 7.433, 7.503,	5
11	1.3.2	Compile, File, Maintain OJT Records for all Inspectors		
12	1.3.3	Compile, File, Maintain Specialized Training Records for all Inspectors		
13	1.3.4	Compile, File, Maintain Recurrent Training Records for ATS and AIS Inspectors		
14	1.4.1	Audit/Inspection of ATS Provider	7.081, 7.085, 7.087, 7.139, 7.169, 7.177, 7.063, 7.183,	8
15	1.4.2	Audit/Inspection of AIS Provider	7.303, 7.267, 7.287, 7.363	4
16	1.4.3	Audit/Inspection of SAR Provider	7.533, 7.505, 7.535, 7.545, 7.517	5
17	1.4.4	Audit/Inspection of CNS Provider	7.403, 7.391, 7.405,	3
18	1.4.5	Audit/Inspection of MET Provider	7.453, 7.455, 7.459, 7.463, 7.465, 7.467, 7.471, 7.435, 7.451, 7.457,	10
Total PQs to be addressed:				46

Note: See details of each Protocol Question in Appendix 4

Appendix 7: Dictum and Proof of Philological Corrections

Guyana Publications Inc.

E1/2 46-47 Robb street, Lacytown, Georgetown, Guyana.
Tel: 225-3376 / 227-4080 / Fax: Admin – 226-3237 Editorial 225-4637
Publishers of Stabroek News and Sunday Stabroek
P.O. Box 10407
www.stabroeknews.com


12th, June, 2018

To whom it may concern _____

I am the Editor of the Stabroek News, a privately-owned daily and online newspaper, and I hold a Bachelor's Degree in English from the University of Guyana.

After reviewing the Final Graduation Project of Mr. Adrian Bassier, this letter serves as formal confirmation that Mr. Bassier has made all the advised structural and grammatical corrections where necessary and, therefore, meets the literary and linguistic standards expected of a student reading for a degree at the Masters level.

Yours sincerely,


.....
Andre Haynes
Editor
Stabroek News
Office: (592) 227-0616
Mobile: (592) 681-3385
Email: stabroekeditor@gmail.com