



*International Civil Aviation Organization*

**MIDANPIRG MIDAD Task Force**

**First Meeting (MIDAD TF/1)**  
*(Cairo, Egypt, 16 - 18 June 2014)*

---

**Agenda Item 2: Progress Report on the MIDAD Project**

**PROGRESS REPORT ON THE MIDAD PROJECT**

*(Presented by the Secretariat)*

**SUMMARY**

This paper presents a progress report related to the MIDAD Project.

Action by the meeting is at paragraph 3.

**REFERENCES**

- AIM SG/1 Report
- DGCA-MID/1 Report
- DGCA-MID/2 Report
- MIDAD STG/2 Report
- MIDANPIRG/13 Report
- MIDANPIRG/14 Report

**1. INTRODUCTION**

1.1 The meeting may wish to recall that, taking into consideration the limitations and drawbacks related to the current operational structure and provision of AIS/AIM services in the MID Region, and the experience of adjacent Regions in the implementation of Regional AIS databases, especially the European AIS Database (EAD), the DGCA-MID/1 meeting (Abu Dhabi, UAE, 22 - 24 March 2011), through DGCA-MID/1 Conclusion 1/5, agreed that a Study be carried out in the MID Region pertaining to the establishment of a MID Region AIS Database (MIDAD).

**2. DISCUSSION**

2.1 The meeting may wish to recall that MIDANPIRG/13 through Decision 13/17 agreed to the establishment of the MIDAD Study Group (MIDAD STG), to monitor the MIDAD Project and address all associated technical, operational, financial, legal and institutional issues. The meeting may wish to note that based on the new MIDANPIRG Organizational Structure endorsed by the MIDANPIRG/14 meeting (Jeddah, Saudi Arabia, 15-19 December 2013), MIDAD Study Group has been replaced by the MIDAD Task Force.

2.2 It is to be noted that Jordan and Bahrain took the lead in carrying out the MIDAD initial study with the support of appropriate Consultant and in close coordination with ICAO. The objective of the MIDAD study, at its first step, was to collect data from States in order to get a realistic and sound picture of the situation in the AIS Offices in the Region in terms of organization, staffing, facilities and infrastructure, workload, automation, transition to AIM and most importantly to identify the States' commitment, support and interest in MIDAD and its inclusion in the planning process for the transition to AIM.

2.3 It is to be highlighted that, Missions were conducted to Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia and Syria. Missions to Iraq, UAE and Yemen could not be conducted; however, information has been provided by these States through emails. The Report related to the Initial MIDAD Study (First Phase) was endorsed by MIDANPIRG/13. Accordingly, MIDANPIRG/13 agreed that the First Phase of the MIDAD Study was considered completed and had achieved the expected goals. Based on the Recommendations contained in the Initial MIDAD Study Report, the MIDANPIRG/13 meeting agreed to move ahead with the MIDAD Project.

2.4 The meeting may wish to note that based on MIDANPIRG Conclusion 13/20, Bahrain, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE and Yemen signed the Memorandum of Agreement (MOA) reflecting their commitment to the MIDAD Project as shown in **Appendix A** to this working paper.

2.5 MIDANPIRG/14 decided that the composition of the MIDAD ST should be reduced to members from Jordan, Iran, Kuwait and the ICAO MID Regional Office and agreed to the following Decision:

*DECISION 14/20: MIDADSUPPORT TEAM*

*That, the MIDAD Support Team (MIDAD ST):*

- a) be composed of members from Jordan, Iran, Kuwait and the ICAO MID Regional Office; and*
- b) provide necessary support to Bahrain, Qatar, Saudi Arabia and UAE as well as to the MIDAD Study Group to successfully complete Phase 2 of the MIDAD Project.*

2.6 The meeting may wish to recall that in accordance with MIDANPIRG/13 Conclusion 13/21 related to the MIDAD legal framework, Bahrain, Qatar, Saudi Arabia and UAE volunteered to take the lead in carrying out the MIDAD project Phase 2- detailed study. MIDANPIRG/14 meeting agreed that, the MIDAD Project Phase 2 would consist of the following main steps:

- a) Call for Tender to select the Consultant, which will develop the Technical Specifications and Call for Tender related to the MIDAD detailed Study;
- b) selection of the Consultant and Contract negotiation;
- c) development of the Technical Specifications and Call for Tender related to the MIDAD detailed Study; and
- d) selection of the Company to develop the MIDAD detailed study and Contract negotiation.

2.7 The meeting may wish to recall that, the MIDANPIRG/14 meeting agreed that the delivery and acceptance of the MIDAD detailed study will mark the end of Phase 2 of the MIDAD Project and the start of Phase 3 (implementation, operation, maintenance, etc.).

2.8 The meeting may wish to recall that, in line with the DGCA-MID/2 Conclusion 2/7, Bahrain was assigned the responsibility for the issuance of the Call for Tender related to the MIDAD Project. In accordance with the Action Plan/Timelines related to the MIDAD Project Phase 2, the Civil Aviation Affairs of Bahrain (BCAA) published a Call for Tender on 15 August 2013.

2.9 Six tenders have been received and all tenders were valid. An evaluation document was prepared to support the Tender Board to make its final decision with inputs collected from Qatar, Saudi Arabia, and UAE and the MIDAD ST.

2.10 After clarification of some questions, ITV has been selected as the Consultant, the Statement of Work (SOW) and the Deliverables have been defined as follows and a contract was signed on 10 February 2014:

<b>Id</b>	<b>Title</b>	<b>Work Package</b>	<b>Delivery Date</b>
D0.1	Project Management Plan	WP0	15.02.2014
D1.1a	First Draft Specification of „Detailed Study“	WP1	15.03.2014
D1.1	Specification of „Detailed Study“	WP1	15.06.2014
D2.1a	Draft Tender Documentation	WP2	15.04.2014
D2.1	Tender Documentation	WP2	15.06.2014
D3.1	Tender Evaluation Report	WP3	30.11.2014

2.11 The meeting may wish to note that the selected Consultant (ITV) submitted a Project Management Plan (PMP) which has been reviewed by Bahrain, Qatar, Saudi Arabia, UAE and the MIDAD ST, as at **Appendix B** to this working paper. It is to be highlighted that Specification for the Tender Documentation of the MIDAD Project Phase 2 (Detailed Study) with a High Level Concept of Operations is being developed by ITV.

2.12 The meeting may wish to note that, AIM SG/1 meeting (Cairo, Egypt, 6-8 May 2014) was apprised of the progress of the MIDAD Project and agreed that, taking into consideration the tight timeframe for the implementation of the Action Plan related to the MIDAD Project Phase 2, and the ICAO MID Regional Office Tentative Schedule of Meetings, Seminars and Workshops, that the outcome of the MIDAD TF meetings could be reported directly to ANSIG and/or MIDANPIRG/15.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to note the information contained in this paper and take action, as appropriate.

-----

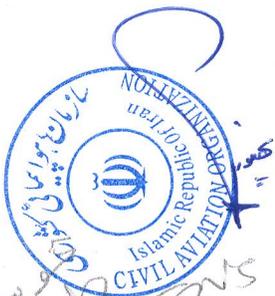


# MEMORANDUM OF AGREEMENT - MOA

## MID REGION AIS DATABASE (MIDAD) PROJECT



Date: 20 May 2013

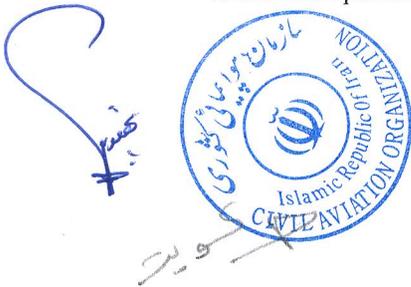


*[Handwritten signatures and initials]*

**MEMORANDUM OF AGREEMENT  
FOR THE DEVELOPMENT OF A MID REGION AIS DATABASE  
(MIDAD)**

**1. PURPOSE:**

- Considering that the implementation of a Regional/Sub-Regional AIS Database in the MID Region would improve the quality, availability and timeliness of aeronautical information provided to users and pave the way for the transition from AIS to AIM, in accordance with the ICAO Roadmap from AIS to AIM;
- Considering the limitations and drawbacks related to the current operational structure and provision of AIS/AIM services in the MID Region;
- Considering the experience of adjacent regions in the implementation of Regional AIS databases and the associated benefits;
- Considering the agreement made by the DGCA-MID/1 meeting held in Abu Dhabi, UAE from 22 to 24 March 2011, through DGCA-MID/1 Conclusion 1/5, to carry out a study/business case pertaining to the establishment of a MID Region AIS Database (MIDAD);
- Considering that a MIDAD Study Group (MIDAD STG) has been established by the Middle East Planning and Implementation Regional Group (MIDANPIRG) to monitor the MIDAD Project and address all associated technical, operational, financial, legal and institutional issues;
- Considering the outcome of the initial MIDAD Study (First phase) and the support expressed by the majority of the MID States;
- Considering the outcome of the MIDANPIRG/13 meeting related to the MIDAD Project, which considered that the first phase of the MIDAD Study is completed and has achieved the expected goals; and invited States and all concerned stakeholders to provide necessary support for the achievement of the second phase of the MIDAD Project;
- Considering that through MIDANPIRG/13 Conclusion 13/20, Bahrain, Iran, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria and Yemen confirmed their commitments to the MIDAD Project;
- Considering the agreement of the MIDAD STG, endorsed by MIDANPIRG/13 that:
  - it's necessary to reach first an agreement on the MIDAD legal framework and then the funding of the second phase of the MIDAD project, which will include, inter-alia, the development of the Financial Plan/Model for the whole MIDAD Project phases (set-up, operations, maintenance, etc); and
  - starting from phase 2 of the project (detailed study) and taking into consideration the huge amount of work to be done and Documents to be developed, it's not realistic that this task be achieved on a voluntary basis and accordingly, the outsourcing is necessary, which raises legal, institutional and financial implications; and



Handwritten signatures and initials in blue ink, including the letters 'SNS', 'P', 'AB', 'F', 'C.E', and 'M.S.D'.

- Considering MIDANPIRG/13 Conclusion 13/21 related to MIDAD Legal framework:

## 2. AGREEMENT

- 2.1 The Parties to this agreement, referred to hereunder as Participating States, agreed to the following:
- a. to reflect their commitment to the MIDAD Project, through the signature of this Memorandum;
  - b. to provide all necessary support for the achievement of the second phase of the MIDAD Project, based on the agreed legal framework;
  - c. other States from within and outside the MID Region, interested to participate in the MIDAD Project, be invited to sign this MOA;
  - d. the MIDAD STG monitor the developments of all phases of the MIDAD Project and report progress to MIDANPIRG and its relevant subsidiary bodies; and
  - e. a MIDAD Supervisory Management Board composed of Representatives from each Participating State empowered to take decisions should be established to take the strategic decisions related to the MIDAD Project, on behalf of the DGCAs of participating States.

## 3. LANGUAGE OF CORRESPONDENCE

- a. All correspondences and other information shall be in English;
- b. All correspondence relating to this Agreement, shall be addressed to:

### The ICAO Regional Director

ICAO Middle East Regional Office  
Egyptian Civil Aviation Complex, Airport Road  
P.O Box 85, Airport Post office, Terminal One  
11776, Cairo, Egypt

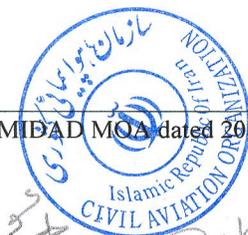
## 4. AMENDMENT TO THE AGREEMENT

- a. This agreement may be amended by an instrument in writing signed by each of the parties.

## 5. ENTRY IN FORCE

- a. This agreement shall come into force on the date it has been signed by the participating States.

MIDAD MOA dated 20 May 2013

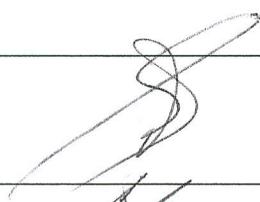
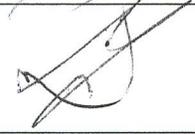


Handwritten signatures and initials in blue ink are present below the stamps, including a large signature on the left and several initials and smaller signatures on the right.

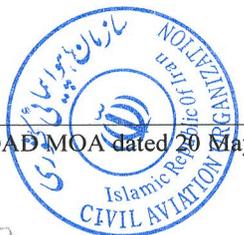
6. SIGNATURES

State	Signature	Name/Title	Date
Bahrain		AL UNDER SECRETARY	20/05/2013
Egypt			
Iran		Capt. H.R. PAHLEVANI	14 July 2013
Iraq		ALI-MUSTAFA	20/05/2013
Jordan		محمد بن القرمان	20/05/2013
Kuwait		حزارة عبدالعزيز الفرح رئيسة الطيران المدني	21/5/2013
Lebanon		دايان العيسى	20/5/2013
Libya			
Oman		SALIM AL AULI CEO / PACA	21/5/13
Qatar		Abdulaziz M. AL Noaimi	20/5/2013
Saudi Arabia			20/5/2013



Sudan		Ahmed Satti Bajouri	20-05-2013
Syria			
UAE		SAIF ALSUWAID	20-05-13
Yemen		Hamed Ahmad Farag	20/5/2013

-END-



MIDAB MOA dated 20 May 2013



٢-٤



**MID Region AIM Database MIDAD**  
**AND/9/P/73 ICAO-MIDAD/2013**  
**Project Management Plan**

9. June 2014  
Version 0.2  
Status: Final Draft

## Document Information

Project:	MID Region AIM Database MIDAD
Contract No	AND/9/P/73 ICAO-MIDAD/2013
ITV Project ID	130.6120
Title:	Project Management Plan
Author:	ITV Consult AG - Rudolf Schneeberger
File:	MIDAD_Consulting_ProjectManagementPlan_0-20.docx
Last change:	9. June 2014
Status:	Final Draft

## Document History

Version	Date	Comment
0.1	16.02.2014	Draft for review by MIDAD ST
0.2	21.03.2014	Revised draft with changes based on input of the MIDAD ST

## Table of Content

<b>1</b>	<b>Introduction .....</b>	<b>4</b>
1.1	Structure of the Project Management Plan.....	4
1.2	Reference Documents.....	4
1.3	Definition of Terms and Abbreviations.....	6
1.4	The „Detailed Study“ .....	7
<b>2</b>	<b>Statement of Work.....</b>	<b>11</b>
2.1	WP1 Specifications of „Detailed Study“ .....	11
2.2	WP2 Preparation of Call for Tender Documentation.....	12
2.3	WP3 Tender Evaluation Support.....	13
<b>3</b>	<b>Deliverables .....</b>	<b>14</b>
<b>4</b>	<b>Programme .....</b>	<b>15</b>
<b>5</b>	<b>Project Management and Quality Assurance .....</b>	<b>16</b>
5.1	Kick-off Meeting .....	16
5.2	Reporting .....	16
5.3	Risk Management .....	17
5.4	Quality Management .....	18
5.5	Documentation review.....	19
5.6	Quality records.....	19
5.7	Methodology.....	19
5.8	Configuration Control .....	20

## List of Figures

Figure 1	Project Interaction.....	17
Figure 2	Quality of Delivery.....	18

# 1 Introduction

This Project Management Plan and Statement of Work (SOW) defines the scope of consulting activities under contract N° AND/9/P/73 ICAO-MIDAD/2013 to prepare a call for tender for a „Detailed Study“<sup>1</sup>for MIDAD.

## 1.1 Structure of the Project Management Plan

This project plan is composed of five sections:

- Section 1, the present, encompasses a list of all important documents used as a reference for the execution of the project and a definition of terms and abbreviations used in this document. In addition a description of the „Detailed Study“ is given.
- Section 2, defines the Statement of Work and describes the activities to be performed
- Section 3 defines the deliverables
- Section 4 describes the timeline of the project and defines the milestones
- Section 5 covers the risk management and quality assurance the Consultant will implement to perform the assignment.

## 1.2 Reference Documents

This section lists the most important documents used as a reference to prepare this Project Management Plan.

Ref	Title	Version	Date	Originator / DocRef
1.	ICAO Convention on International Civil Aviation, Annex 15 – Aeronautical Information Services	14 <sup>th</sup> Ed.	2013	ICAO
2.	ICAO Convention on International Civil Aviation, Annex 4 – Aeronautical Charts	Amdt 56	2010	ICAO
3.	Roadmap for the Transition from AIS to AIM		2009	ICAO
4.	ICAO DOC 9750, 2013–2028 Global Air Navigation Plan	4 <sup>th</sup> Ed.	2013	ICAO
5.	ICAO Doc 9854, Global Air Traffic Management Operational Concept		2005	ICAO
6.	ICAO Doc 9082, ICAO's Policies on Charges for Airports and Air Navigation Services	8 <sup>th</sup> Ed.	2009	ICAO
7.	ICAO Doc 8126, AIS Manual	Amdt 2	2009	ICAO
8.	ICAO Doc 9855, Guidelines on the use of the Public Internet for Aeronautical Applications			ICAO
9.	ISO Standards 19100 Series: Geographic Information			ISO TC 211
10.	DO 200A/ED76 - Standards for processing of aeronautical data		1998-10	RTCA/EUROCAE

<sup>1</sup> See Section 1.4 for an explanation of the term “Detailed Study”

Ref	Title	Version	Date	Originator / DocRef
11.	ED 77 – Standards for aeronautical information	-	2000-04	EUROCAE
12.	DGCA MID1 Report		March 2011	DGCA
13.	AIS/MAP TF6 Report		June 2011	AIS/MAP TF
14.	ATM/SAR/AIS SG/12 Report		Nov. 2011	ATM/SAR/AIS SG
15.	MID Region AIS Database Study Group – MID REGION AIS DATABASE (MIDAD)		12.02.2012	MIDAD SG*/1-WP/2
16.	MID Region AIS Database Study Group – AIS EXPERINCES IN EAD		15.02.2012	MIDAD SG*/1-WP/3
17.	MID Region AIS Database Study Group – DEVELOPMENTS IN THE WORLD AND MIDAD REQUIREMENTS		18.01.2012	MIDAD SG*/1-WP/4
18.	MID Region AIS Database Study Group – MIDAD Purpose and Scope		18.01.2012	MIDAD SG*/1-WP/5
19.	MID Region AIS Database Study Group – MIDAD FINANCIAL MODEL		18.01.2012	MIDAD SG*/1-WP/6
20.	MID Region AIS Database Study Group – BUSINESS MODEL & LEGAL FRAMEWORK		18.01.2012	MIDAD SG*/1-WP/7
21.	MID Region AIS Database Study Group – PROJECT PROCESS, TIMELINE FOR DEVELOPMENT AND IMPLEMENTATION		19.01.2012	MIDAD SG*/1-WP/8
22.	MID Region AIS Database Study Group – SYSTEM TOPOLOGY OPTIONS, INTERFACES, COMMUNICATION		16.02.2012	MIDAD SG*/1-WP/9
23.	MID Region AIS Database Study Group – CONCEPT OF OPERATION, ORGANISATIONAL STRUCTURE, STAFFING, TRAINING & MIGRATION		15.02.2012	MIDAD SG*/1-WP/10
24.	MID Region AIS Database Study Group – MIDAD STUDY REPORT		19.02.2012	MIDAD SG*/1-WP/11
25.	MIDAD SG*/1 Report		Feb.2012	MIDAD SG
26.	MID Region AIS Database (MIDAD), MIDAD – Initial Study Report, Final version: 2.0	2.0	26.03.2012	MIDAD SG*/1-Report Appendix 3A MIDAD DOC 001
27.	MIDANPIRG/13 Report		April 2012	MIDAN PIRG
28.	AIM TF7 Report		Sept 2013	AIM TF 7
29.	DGCA-MID2 Report		May 2013	DGCA
30.	MID Region AIS Database Study Group – MIDANPIRG/13 AND DGCA-MID/2 CONCLUSIONS AND DECISIONS – RELEVANT TO AIM		24.06.2013	MIDAD STG/2-WP/2
31.	MID Region AIS Database Study Group – REVIEW OF THE INITIAL MIDAD STUDY (PHASE 1)		24.06.2013	MIDAD STG/2-WP/3
32.	MID Region AIS Database Study Group – FUTURE WORK PROGRAMME		24.06.2013	MIDAD STG/2-WP/4
33.	Second Meeting of the MID Region AIS		10.06.2013	MIDAD STG/2-WP/5

Ref	Title	Version	Date	Originator / DocRef
	Database Study Group – THE CONSULTANT			
34.	MID Region AIS Database Study Group – TECHNICAL NOTE MIDAD PROJECT – IDS VISION		24.06.2013	MIDAD STG/2-WP/6
35.	MID Region AIS Database Study Group – MIDAD PROJECT		26.6.2013	MIDAD STF/2-WP/7
36.	MID Region AIS Database Study Group – DEVELOPMENTS IN THE WORLD AND MIDAD REQUIREMENTS		29.06.2013	MIDAD STG/2-WP/8
37.	MIDAD STG/2 Report		July 2013	MID
38.	Call for Tender Document “SUBJECT : MID REGION AIS DATABASE MIDAD, Call for on AIM/AIS Consultant, Contract No. AND/9/P/73 ICAO-MIDAD/2013		15.08.2013	Ministry of Transportation, Bahrain
39.	MIDAD Call for on AIM/AIS Consultant, Analysis of States’ replies and questions to the Call for tender / request for Proposal AND/9/P/73 ICAO-MIDAD/2013	Ver. 4	13.10.2013	Ministry of Transportation, Bahrain
40.	MIDANPIRG/14 Report	Draft	Dec 2013	MIDAN PIRG

## 1.3 Definition of Terms and Abbreviations

### 1.3.1 Abbreviations

ADQ	EU 73/2010 regulation on Aeronautical Data Quality
AIM TF	AIM Taskforce
ASBU	ATM System Block Upgrades
CBA	Cost Benefit Analysis
CONOPS	Concept of Operations
DGCA-MID	Directors General of Civil Aviation – Middle East Region
EAD	European AIS Database
KoM	Kick-off Meeting
MID	Middle East Region
MIDAD	Middle East Regional AIS Database
MIDAD STG	MIDAD Study Group, also abbreviated as MIDAD SG*
MIDAD ST	MIDAD Support Team
MIDANPIRG	Middle East Air Navigation Planning and Implementation Regional Group
PMP	Project Management Plan
WP	Work Package

WP\*                      Optional Work Packages

## 1.4 The „Detailed Study“

When the MIDAD project was set up in 2011 it was decided that in Phase 2 a detailed study would be necessary to cover all technical, financial, human, legal and institutional issues. Since then the term “*Detailed Study*” has been used to define the deliverables of Phase 2. The “Detailed Study” is defined in the Tender specification for this consultancy [38] to consist of:

- (1) a Concept of Operations – CONOPS,
- (2) functional and non-functional requirements documentation,
- (3) commercial and legal call for tender documentation.

As a matter of fact what is really meant with the term “*Detailed Study*” is not a study but the tender documentation for procurement of the MIDAD System.

For reasons of consistency with previous MIDAD documents listed in section 1.2 we keep the Term “*Detailed Study*” in this project management plan but put it in quotes. We recommend to use the more appropriate term *Tender Documentation* in all future documents produced under this contract.

### 1.4.1 Concept of Operations

A Concept of Operations (CONOPS) is defined as a: “... a user-oriented document that describes system characteristics for a proposed system from the users' viewpoint. The CONOPS document is used to communicate the overall quantitative and qualitative system characteristics to the user, buyer, developer and other organizational elements (e.g. training, facilities, staffing and maintenance). It is used to describe the user organization(s), mission(s) and organizational objectives from an integrated systems point of view.”<sup>2</sup>

Examples for CONOPS in the field of ATM are the SESAR Concept of Operations or the Concept of Operations for the future European Centralised Services (e.g. CS5).

It is our understanding that a CONOPS is a description on a conceptual level of the actors, roles and responsibilities, the user functions and requirements, the data items and data flow of a system.

Our analysis of the available MIDAD documentation produced a list of topics which have to be treated and documents which need to be produced in MIDAD Phase 2:

- MIDAD Purpose and Scope;
- System topology (Central, Replicated or Distributed)
- Internal and External Interfaces
- Communication (with other existing systems and databases)
- Data Modelling
- Training
- Data migration and Conversion concepts and plans
- Financial Plan including Business Case with CBA, cost recovery, funding mechanism
- Legal / Institutional Issues (legal body, location of centres, supervisory body)

---

<sup>2</sup> 1362-1998 - IEEE Guide for Information Technology - System Definition - Concept of Operations (ConOps) Document and wikipedia

- Project management, methodology (e.g. V-Model ® XT) and timeline
- Project Documents to be produced [25]:

No	Doc Group	Doc Title	Audience	Priority
1.1	Planning and Control	Program Manual	Internal	-
1.2		Program Plan	Internal	High
2.1	Requirements and Analyses	Program Proposal	Internal	High
2.2		Legal Framework of the operation of the MIDAD	Internal	High
2.3		Operational Concept	External	High
2.4		Requirements Specification Overall Project	External	High
2.5		Requirements Evaluation	External	-
2.6		Service Provision Requirements	External	High
3.1	Acquisition and Contracting ( <i>in case of procurement</i> )	RFP Concept	Internal	High
3.2		Criteria Catalogue for Assessment of Offers	Internal	-
3.3		Request for Proposal	External	-
3.4		Offer Assessment	Internal	-
3.5		Contract	External	-
3.6		Contract Addendum	External	-
3.7		Statement of Acceptance	External	-

No	Doc Group	Doc Title	Audience	Priority
4.1	Configuration and Change Management	Problem Report - Change Request	External	-
4.2		Change Status List	Internal	-
4.3		Problem Change Evaluation	Internal	-
4.4		Change Decision	External	-

One of our tasks will be the evaluation of these topics. Together with the MIDAD ST we will have to define the content of the CONOPS and what is not part of the CONOPS and should be covered elsewhere.

Some of the documents listed above will have to be prepared internally by the MIDAD ST, another set will be part of the „Detailed Study“ (CONOPS or requirements documentation) and there might be a third set of documents/studies which could be contracted out to another party.

#### 1.4.2 Requirements Documentation

The second deliverable of the „Detailed Study“ will be the functional and non-functional requirement specification. The contractor of the „Detailed Study“ will derive the functional requirements mainly from the CONOPS. The regulatory requirements constitute a substantial part of the non-functional requirements. As the MIDAD is a long term program it will not be sufficient to only take into account today's regulation and standards but it will be necessary to also consider the trends in the industry and the upcoming regulation, standards and technology of the next 10 – 15 years. The MIDAD ST and the MIDAD SG have already identified a list of requirements which have to be considered when specifying MIDAD:

- ICAO Doc 9854 ATM Operational Concept [5]
- ICAO AIS to AIM Roadmap [3]

- ICAO AIS\_AIM SG results: - Amendments 36 and 38 to Annex 15
  - Amendments 57 and 58 to Annex 4
  - AIM Operational Concept and PANS AIM Document
- ICAO Doc 9750 Air Navigation Plan including the ASBUs, specially ASBU B0-DTAM (formerly B0-30), B1-DTAM (B1-30) and B1-SWIM (B1-31) [4]
- Collaborative Decision Making CDM
- System Wide Information Management SWIM (see also ASBU B1-SWIM and B2-SWIM)
- RTCA DO-200A/EUROCAE ED76 Standard [10]
- AIXM see also ASBU B0-DTAM

As a matter of course all ICAO standards and recommended practices have to be considered when preparing the requirements documents as defined in the MID ANP, VOLUME I, BASIC ANP<sup>3</sup>:

*“The Standards, Recommended Practices and Procedures and related guidance material applicable to the provision of AIS and ultimately AIM are contained in the following ICAO documentation:*

- a) *Annex 4 – Aeronautical Charts;*
- b) *Annex 15 – Aeronautical Information Services;*
- c) *Doc 7030 – Regional Supplementary Procedures, MID Region;*
- d) *Doc 7383 – Aeronautical Information Services Provided by States;*
- e) *Doc 7910 – Location Indicators;*
- f) *Doc 8126 – Aeronautical Information Services Manual;*
- g) *Doc 8168 – Aircraft Operations Volume 2 – Construction of Visual and Instrument Flight Procedures;*
- h) *Doc 8400 – ICAO Abbreviations and Codes (PANS-ABC);*
- i) *Doc 8697 – Aeronautical Charts Manual;*
- j) *Doc 9377 – Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services;*
- k) *Doc 9674 – World Geodetic System (1984) Manual;*
- l) *Doc 9855 – Guidelines on the Use of the Public Internet for Aeronautical Applications; and*
- m) *Doc 9881 – Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information.*
- n) *Doc 9906 (Volume I) – Flight Procedure Design Quality Assurance System.”*

We will have to analyse these documents and together with the MIDAD ST define which regulations and standards the contractor of the „Detailed Study“ has to include in the non-functional requirements.

### **1.4.3 Call for Tender documentation**

The last part that of the „Detailed Study“ will be the commercial and legal call for tender documentation for the procurement of the MIDAD system. A prerequisite for the preparation of the tender documentation will be the determination of the contracting body for the procurement of the MIDAD System. This implies that parallel to the elaboration of the

---

<sup>3</sup> MID Basic ANP – AIM Part, Working Copy April 2012, see [27]

CONOPS and Requirements Documentation the MIDAD states have to agree on the legal and institutional set-up for MIDAD.

## 2 Statement of Work

The objective of the project, as described in the Call for Tender [38], is to support MIDAD by developing a Call for Tender for an industry or consulting company which shall develop the MIDAD „Detailed Study“.

In order to achieve this objective a set of activities will have to be performed. These activities will be addressed individually through the following work packages:

- WP0: Project Management and Quality Assurance  
This WP covers the planning, preparation and performance of the whole project and is documented in Section 5 of this document. The following elements will be set up:
  - a quality and risk management for the project
  - a project organisation with proper assignment of responsibility
  - a reporting and communication frameworkAny request from MIDAD Project Team for specific support will equally be managed through this activity.
- WP1: Specification of „Detailed Study“  
The WP covers the elaboration of the specification for the „Detailed Study“
- WP2: Preparation of Call for Tender Documentation  
The WP covers the preparation of the Call for Tender Documentation
- WP3: Tender Evaluation Support  
The WP covers the support required for the evaluation of the tenders for a „Detailed Study“

The work packages listed above are further detailed in the following subsections.

There will be a close cooperation and coordination between the Consultant, the MIDAD Project Manager and the MIDAD ST.

In addition there are several ICAO bodies (DGCA-MID, MIDANPIRG, AIM SG, MIDAD TF) that have to be informed about the progress of the project and for defining the specification for the „Detailed Study“ there will be consultation necessary with more stakeholders (AACO, IATA GCC, etc.).

Therefore 4 Missions to the MID Region are planned, 2 of them mainly with the MIDAD Project Manager and ST and 2 more for coordination with GCC. The duration of each Mission is expected to be one to two weeks.

### 2.1 WP1 Specifications of „Detailed Study“

#### Objective

The objective if this WP is to specify the scope and content of the „Detailed Study“ in a way that a consultant or industry can develop the study in compliance with the expectations' of the MIDAD ST. The „Detailed Study“ will consist of a Concept of Operations and functional and non-functional requirements documentation.

#### Prerequisite

The MIDAD STG has made available several working papers and reports which document its vision for a regional integrated database.

## Statement of Work

The work to be done in this WP can be broken into the following tasks:

- Gathering information from the MIDAD ST and the different stakeholders about their expectations of the „Detailed Study“
- Defining of the scope and content of the „Detailed Study“.
- Evaluating of all the topics and documents listed in 1.4.1 and defining the scope and the requirements of the CONOPS.
- Analysing the documents listed in 1.4.2 and defining which regulations and standards the contractor of the „Detailed Study“ has to include in the non-functional requirements
- Preparing the draft specification of the „Detailed Study“
- Conduct an information Workshop for interested consultant companies who want to bid for the „Detailed Study“. The main purpose of the workshop will be to inform potential bidders about the up-coming tender and not to collect requirements<sup>4</sup>.
- Reviewing and revising the specification

## Output

Deliverable D1.1 Specification document of the „Detailed Study“

## 2.2 WP2 Preparation of Call for Tender Documentation

### Objective

The objective of this WP is to make available a complete set of tender documents for the Call for Tender for an industry or consulting company which shall develop the MIDAD „Detailed Study“ and prepare the Call for Tender for the MIDAD System

### Prerequisite

According to the Tender Specification [38] the procurement law of Bahrain and the Ministry of Transportation will apply for the Call for Tender for the „Detailed Study“.

The specification document of the „Detailed Study“ (D1.1) will be part of the Tender Documentation.

### Statement of Work

The work to be done in this WP can be broken into the following tasks:

- Defining the tender procedure
- Gathering information from the MIDAD ST and the different stakeholders about their expectations of the tasks and required qualifications of the Contractor
- Defining the required qualification of the Contractor
- Defining the evaluation criteria for awarding the contract
- Defining the milestones and reporting for the „Detailed Study“ project
- Preparing the draft tender documentation
- Reviewing and revising the tender documentation

---

<sup>4</sup> The workshop will not be addressed to the industry who wants to bid for the supply of systems. (This will be an issue when the System Specifications have been drafted as part of the „Detailed Study“).

## **Output**

Deliverable D 2.1 Commercial and legal call for tender documentation

## **2.3 WP3 Tender Evaluation Support**

### **Objective**

The objective of this WP is to support the MIDAD ST in evaluating the bidder for the „Detailed Study“ with the best terms and lowest price

„Detailed Study“ Depending on the proposals received it will have to be considered to invite the top 3 companies to present their proposal and answer questions during the tender evaluation process.

### **Prerequisite**

Tenders for the „Detailed Study“

### **Statement of Work**

- Analysis of the tenders,
- Provide a technical and financial evaluation report with recommendations, regarding award of contract.
- If the Tenderers are invited to present their tenders and to answer questions participate in the presentation sessions and act as secretary.

## **Output**

Deliverable D3:1 Evaluation report with recommendations regarding the award of contract

### 3 Deliverables

The WPs defined for the project will provide the following formal deliverables at the time specified:

Id	Title	Work Package	Delivery Date
D0.1	Project Management Plan	WP0	15.02.2014
D1.1a	First Draft Specification of „Detailed Study“	WP1	15.03.2014
D1.1	Specification of „Detailed Study“	WP1	15.06.2014
D2.1a	Draft Tender Documentation	WP2	15.04.2014
D2.1	Tender Documentation	WP2	15.06.2014
D3.1	Tender Evaluation Report	WP3	30.11.2014

## 4 Programme

The current timeline for MIDAD Phase 2 in 2014 according to MIDN/PIRG14 [40] is as follows:

	Action	Deliverable	Responsible	Timeline
6	Contract negotiation with the selected Consultant	Contract with the selected Consultant	Bahrain, Qatar, Saudi Arabia and UAE with the support of the MIDAD ST	07/02/2014
7	Contact (Workshops) with potential Companies interested to bid for the development of the MIDAD „Detailed Study“	First Draft of technical specifications for the MIDAD „Detailed Study“	Bahrain, Qatar, Saudi Arabia and UAE with the support of the chosen Consultant	15/03/2014
8	Preparation of the Technical Specifications and Call for Tender related to the MIDAD „Detailed Study“ for review by the MIDAD STG/3 meeting	Final Draft of the Technical Specifications	Consultant	15/06/14
9	Review and endorsement of the specifications for the MIDAD „Detailed Study“ by the MIDAD STG/3 meeting	Call for Tender specifications approved	MIDAD STG/3	30/06/14
10	Tender Phase (opening)	Call for Tender	Bahrain	31/07/14
11	Tender Phase (closing)	Call for Tender	Bahrain	31/08/14
12	Receipt of the Offers	Offers	Industry	31/10/14
13	Evaluation of the offers and selection of the Company which will be awarded the contract related to the MIDAD „Detailed Study“	Company selected	Bahrain, Qatar, Saudi Arabia and UAE with the support of the MIDAD ST and Consultant	31/12/14

Based on this timeline the following milestones are established for the project

16.02.2014	Contract Signed
15.03.2014	First Draft of technical specifications for the MIDAD „Detailed Study“
15.06.2014	Final Draft of the Technical Specifications and call for Tender documents
30.06.2014	Call for Tender specifications approved
30.11.2014	Final Draft of Evaluation Report
31.12.2014	Evaluation of the offers and selection of the Company which will be awarded the contract for the MIDAD „Detailed Study“

## 5 Project Management and Quality Assurance

### 5.1 Kick-off Meeting

The project will be initiated by a Kick-off Meeting (KoM) to be held at a location determined by the Customer. One week prior to the KoM, we will forward a draft Project Management Plan (PMP) to the Customer for review. The PMP will include:

- Introduction, describing the purpose of the document and background;
- Project development approach describing the objectives of the project, formal deliverables and identification of tasks;
- Project schedule and resources with a detailed planning of the activities and tasks of the project;
- Project organization describing roles, responsibilities and arrangements to be put in place for coordination with MIDAD project manager and Support Team;
- Management processes describing in detail processes for progress monitoring and reporting, risks, deliverables and quality management.

The PMP with comments will be introduced at the KoM for further approval within 2 weeks.

The KoM should be scheduled at the beginning of the first mission to the MID region. The objectives are to present the Project Team; to discuss and agree on the planning, project execution and deliverables and to identify initial actions.

The Consultant will provide the minutes of the KoM within 3 days for review and approval.

### 5.2 Reporting

The Consultant will be the focal point of contact for This Project. He will ensure that updates on the project are provided to MIDAD through regular progress reports. These progress reports will be produced every month, the first one being produced one month after the beginning of the project.

The monthly progress reports will provide detailed information on the following items:

- Actual progress since the last report;
- Expected achievements in the next period;
- Milestones and deliverables achieved;
- Actions' list and status of the actions;
- Risk management;
- Problems encountered;
- Changes (if any);
- Any other relevant information.

The envisaged interaction between ITV Consult and MIDAD is illustrated in Figure 1.

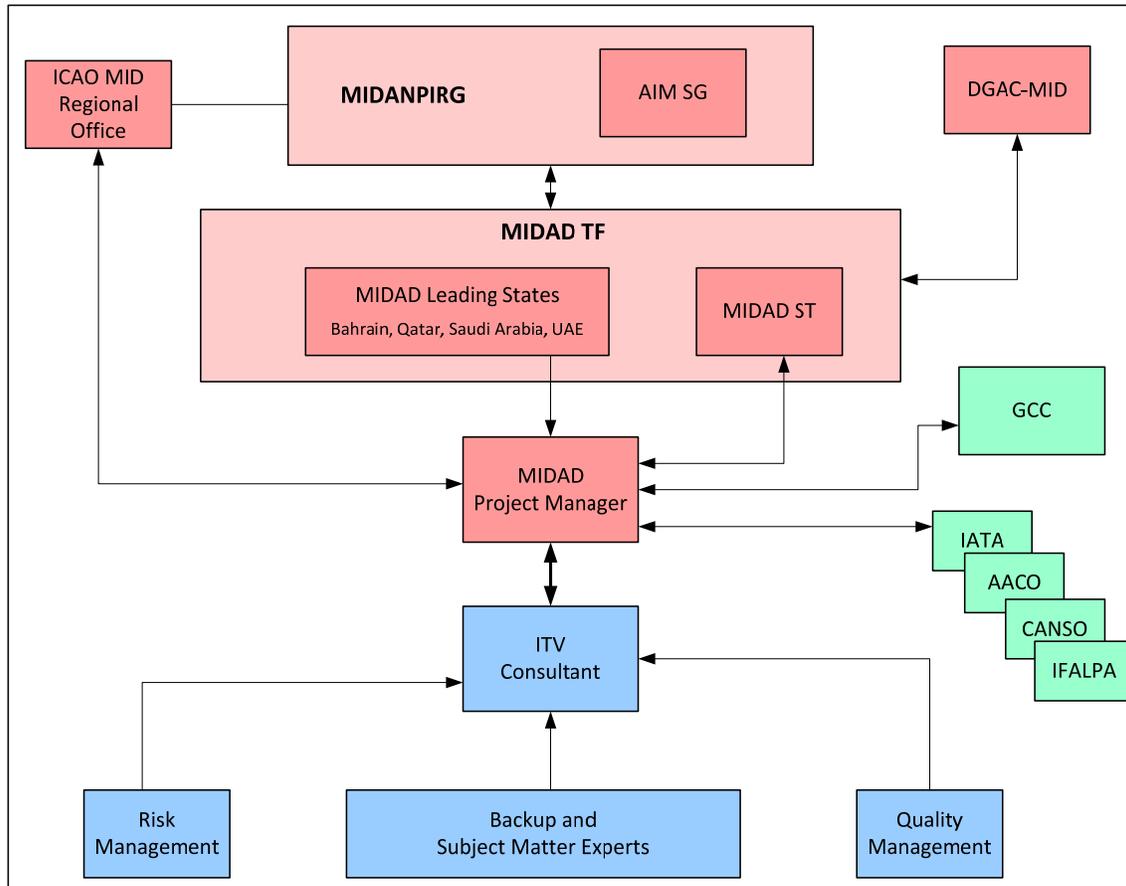


Figure 1 Project Interaction

### 5.3 Risk Management

The Consultant is responsible for risk management. Any risk identified in the project will be registered and follow the process implemented for the project. Any risk identified will be discussed with the MIDAD Project Manager. Mitigation actions, including responsibilities, will be defined for each risk.

Description of the risks and progress on mitigation actions will be part of the regular progress meetings and reports.

The analysis of the Tender specification and the background of the MIDAD project permits the identification of the following risks:

- The first risk is the complexity of the environment. Unlike projects where an ANSP procures an IT System the implementation of a regional AIS Database is a complex undertaking with different stakeholders: several ICAO bodies (DGCA-MID, MIDANPIRG, AIM SG, MIDAD TF), GCC, the different States, ANSPs and user organisations (AACO, IATA, IFALPA etc.). Good program management, coordination and communication will be required to keep this risk under control.
- The second risk is linked to the availability of the MIDA ST members. The work of the Consultant and the preparation of the „Detailed Study“ will be closely interlinked with the representatives of the four leading States and the MIDAD Support Team. Non-availability of the MIDAD ST members can lead to delays in the project or to requirements which are not broadly supported.

- The third risk is related to travel restrictions and the political situation in some States of the region. The organization of coordination meetings and missions of the Consultant could be hindered or delayed.

## 5.4 Quality Management

A Quality Management process will be implemented for This Project. This process shall ensure control of the progress achieved, the level of development of deliverables and the identification of specific efforts to be made to guarantee timely completion of the work and a high quality of the deliverables.

Quality Management takes care of the Quality of the Delivery, i.e. compliance with programme standards and competencies, and the Quality of the Processes, i.e. compliance with the execution procedures.

The Quality management principles are:

- Quality assessment must be supported by evidence;
- Formal assessment and acceptance for the deliverables;
- Internal Monitoring System;
- External Monitoring System.

The principle for assessing the quality of the delivery is illustrated in Figure 2.

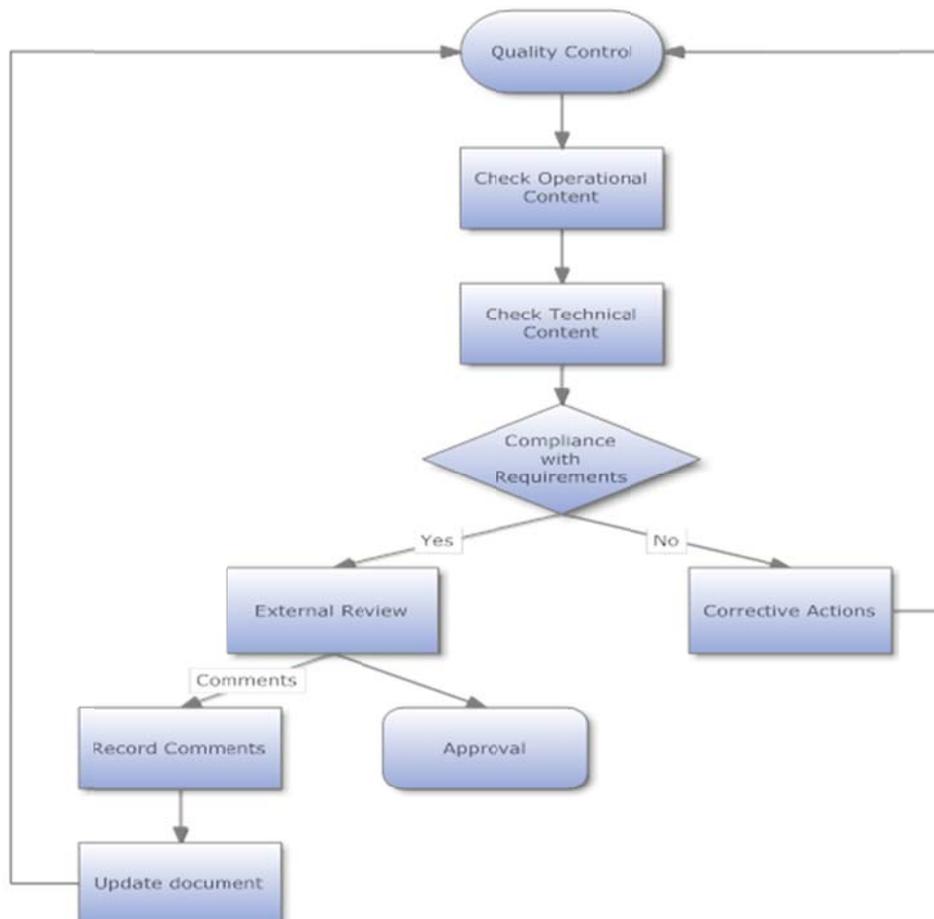


Figure 2 Quality of Delivery

## **5.5 Documentation review**

### **5.5.1 Internal review prior to release**

The documentation review shall ensure that the documents forwarded to our customers have the required quality and that the documents have been proof read and all graphics in the documents are of sufficient high quality. ITV Consult's standard procedure will apply in connection with the documentation review which includes the following activities:

- Release of the deliverables by the author(s).
- Internal review by the project team and other consultants, if found relevant, to ensure the quality of the contents.
- Review meeting, where the different comments are discussed and an update of the deliverables is performed.
- Release of the deliverables to ITV Consult's administrative support to ensure that the language and the presentation fulfil ITV Consult's high standard.
- Update of deliverables with comments coming from the proof reading and update of the graphical lay-out process.
- Issue of the deliverables for external review by the Project Manager.

The ITV Consult Project Manager is the responsible person for the adherence to the above activities and to ensure the quality of the deliverables.

### **5.5.2 Review by the MIDAD Project Organisation**

Draft and released documents are submitted to the MIDAD Project Manager for review

The MIDAD Project Manager checks the documents and if they are acceptable for a review he sends them together with a feedback form to the MIDAD Leading States and the MIDAD Support Team for review.

The reviewers are kindly requested to submit their comments on a structured form (with document reference, page and section, subject, comment and proposed change) within two weeks to the MIDAD Project Manager who will collect the comments and pass them to the Consultant.

The Consultant will together with the MIDAD Project Manager analyse the comments, prepare responses and within two weeks after reception of the last comments, submit a revised version of the document and a sheet with responses to the comments.

## **5.6 Quality records**

Quality records will also be implemented in the project. Any internal and external comments about the quality of a document or deliverable will be noted and reviewed. Corrective actions will be identified and imposed on the project. Quality records will be maintained in ITV Consult's files to ensure continuous improvement in ITV's overall quality in deliverables.

## **5.7 Methodology**

We plan to use the project management methodology of the V-Model ® XT as recommended in [18].

## **5.8 Configuration Control**

Each deliverable will be subject to ITV Consult's configuration management system. This system will ensure that proper records are kept during the development of the deliverables, proper versioning of documents are implemented and that changes can be traced from version to version including the source of the change.

-END-