



ICAO

## AFI PLAN PROJECT

### AIM RESULTS-BASED IMPLEMENTATION SUPPORT (RBIS) FOR THE AFI REGION

<b>a. Project Title:</b>	AIM Result-Based Implementation Support (RBIS) for the AFI Region
<b>b. Project Code:</b>	
<b>c. Executing Agency:</b>	International Civil Aviation Organization (ICAO)
<b>d. Eligible States:</b>	10 AFI States: <ul style="list-style-type: none"><li>✓ Seychelles, Namibia, Botswana, Rwanda, South Africa, Nigeria, Democratic Republic of the Congo, Ghana, Benin, Cabo Verde</li></ul>
<b>e. Project Duration:</b>	30 Months
<b>f. Revised Budget:</b>	96,000 USD
<b>g. Strategic Objectives:</b>	B – Air Navigation Capacity and Efficiency

#### Executive summary

The AFI Plan Steering Committee approved the project “*AIM Results-Based Implementation Support (RBIS) for the AFI Region*” at its 22<sup>nd</sup> meeting held on 15 May 2019, to further enhance the effective implementation of the ICAO AIM provisions, with an implementation period of 18 months starting in 2019.

The roll out of the project has been slowed down due to the COVID-19 pandemic. This proposal is a revision of the existing project with the purpose to reschedule the implementation period to 30 months starting in May 2022, reframe activities and deliverables specific to the implementation areas of quality management systems (QMS), Aeronautical Information Exchange Model (AIXM) and Terrain and Obstacles Data (TOD), and update the cost estimation.

The revision proposes sets of activities aiming to achieve the following objectives:

- a. Establish competent teams to carry out the aeronautical information management (AIM) Go-Team assistance activities covering QMS, AIXM and TOD;
- b. Develop generic documentation required for the implementation of QMS, AIXM and TOD; and
- c. Assist States in implementing QMS, AIXM and TOD, through Go-Team visits and follow-up.

## 1. BACKGROUND AND JUSTIFICATION

1.1 The ICAO Council has recently adopted a new amendment (Amendment 40) to Annex 15 to the Convention on International Civil Aviation (Chicago Convention) and approved a first new edition of PANS-AIM covering *Aeronautical Information Services (AIS)*. The new provisions enable global air transport operations to complete the transition from product-centric and paper-based AIS legacy processes to a fully data-centric, quality-assured and digital aeronautical information management (AIM) environment.

1.2 The 13<sup>th</sup> ICAO Air Navigation Conference (AN-Conf/13) held in October 2018 in Montreal, Canada highlighted the importance and the benefits associated with these new provisions which provide a harmonized approach to transition to AIM, an enhanced understanding of the roles and responsibilities of stakeholders along the aeronautical data process, better means for States to increase quality at origination and to maximize integrity along the data chain and efficiencies in managing and processing aeronautical data through the use of digital products; however their impact on States, including the transposition of Annex 15 and PANS-AIM into national and regional regulations, the reinforcement of quality measures at the origination and along the aeronautical data process, the completion of the transition to digital AIM, etc. is significant.

1.3 In light of these latest developments, ICAO has been urged to establish a robust and collaborative framework to support States to expedite implementation and to help them overcome difficulties that may be faced by users, if aeronautical information products are not of the right quality and are implemented in different ways without harmonization nor standardization.

1.4 In the AFI Region, specific AIM Projects have been initiated in the framework of the AFI Planning and Implementation Regional Group (APIRG) Projects approach, to advance implementation in the aeronautical information domain:

- a) **AFI AIM** Project 1, designed to assist AFI States with QMS implementation;
- b) **AFI AIM** Project 2, designed to assist AFI States with AIXM implementation;
- c) **AFI AIM/Project 3**, to assist AFI States with TOD Implementation.

1.5 Since their final approval by the 21<sup>st</sup> meeting of APIRG, held in Nairobi, Kenya, from 9 to 11 October 2017, these Projects have not advanced much as expected. In order to expedite the support to AFI States for an effective implementation of ICAO provisions in AIM, it is proposed to complement these APIRG Projects through the establishment of an “**AIM Results-Based Implementation Support (RBIS) for the AFI Region**”, with an initial focus given to support the implementation of QMS in digital AIM environments. Once the concept proves to be successful, the same mechanism will be applied to assist States with TOD, AIXM implementation.

1.6 The AFI Plan Steering Committee approved the first version of the project at its 22<sup>nd</sup> meeting held on 15 May 2019, with an implementation period of 18 months.

### 1.7 Rationale for the update

At the end of April 2022, the project did not start yet. The roll-out has been slowed down due to the COVID-19 pandemic. The purpose of this revision of the project is to reschedule the implementation period to 30 months starting in May 2022, reframe activities and deliverables specific to the implementation areas of QMS, AIXM and TOD and update the cost estimation.

## 2. PROJECT IMPLEMENTATION

2.1 The primary objective of the AIM RBIS Concept is to bring AFI States to a good implementation level in AIM through a standard process which includes three main phases as follows:

- a) **Phase 0:** Initiation of the project
- b) **Phase 1:** Development and validation of documentation.
- c) **Phase 3:** AIM Go-Team visits and follow-up

2.2 The key elements of the RBIS Concept are the Go-Team support and the associated follow-up actions. This is where the implementation support significantly differs from the standard seminars/workshops support.

2.3 The AIM Go-Team outreaches to one State and provides tailored support. The Go-Team is composed of stakeholders covering the key roles and responsibilities to support the aeronautical data process, from origination to distribution. The AIM Go-Team composition will be adapted to the specific needs of the recipient State.

2.4 The follow-up actions will monitor and guide implementation. The AIM Go-Team does not have direct control over the implementation process within a State; decisions relating to the implementation of aeronautical information services enhancements rest with the State and its designated air navigation service provider (ANSP). However, an active engagement from States, all concerned stakeholders within the States and the Go-Team members in the execution of the follow-up actions is the key to success.

2.5 By the end of the project, AIM implementation will be strengthened not only within the States receiving support, but also within the region which will be verified through the future activities in the context of the ICAO Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA). States will benefit from receiving ad-hoc guidance; regions will benefit through the sharing of successful AIM Go-Team experiences and best practices with the other States in the regions.

## 3. PROJECT ACTIVITIES

<b>Phase 0</b>	<b>Initiation of the project</b>	
<b>Objective 0</b>	<b>Establish competent teams to carry out the AIM Go-Team activities</b>	
<b>Key Performance indicator (s)</b>	0.1 Go-Teams established for QMS, AIXM and TOD	
<b>Deliverable 0.1</b>	<b>Experts selected and trained on the Go-Team methodology</b>	
<i>Activity #</i>	<i>Description</i>	<i>Responsible entity/Actors</i>
0.1.1	Select candidate States to receive Go-Team assistance	ICAO Regional Offices
0.1.2	Select Experts in QMS, AIXM and TOD for the composition of Go-teams	
0.1.3	Organize the training workshop on the Go-Team methodology for the selected experts	

<b>Phase 1</b>	<b>Development and validation of documentation</b>	
<b>Objective 1</b>	<b>Develop generic documentation required to implement QMS, AIXM and TOD</b>	
<b>Key Performance indicator (s)</b>	1.1 QMS implementation package validated 1.2 AIXM implementation package validated 1.3 TOD implementation package validated	
<b>Deliverable 1.1</b>	<b>Implementation packages for QMS, AIXM and TOD</b>	
<i>Activity #</i>	<i>Description</i>	<i>Responsible entity/Actors</i>
1.1.1	Develop generic documentation required for effective implementation of QMS, AIXM and TOD by States. This documentation includes QMS Policy, Manual, Processes, Procedures, and Technical Specifications of Call for tenders concerning AIXM and TOD, Cost estimations, etc.	Go-Teams members
1.1.2	Conduct validation workshops on the QMS, AIXM and TOD implementation packages	
<b>Phase 2</b>	<b>AIM Go-Team visits and follow-up</b>	
<b>Objective 2</b>	<b>Assist States in implementing QMS, AIXM and TOD</b>	
<b>Key Performance indicator (s)</b>	2.1 Number of AFI States having a certified QMS in AIM 2.2 Number of AFI States having an AIXM database and electronic AIP (eAIP) 2.3 Number of AFI States providing Obstacles and Terrain Data sets	
<b>Deliverable 2.1</b>	<b>Go-Team visits to assist States in implementing QMS, AIXM/TOD and follow-up</b>	
<i>Activity #</i>	<i>Description</i>	<i>Responsible entity/Actors</i>
2.1.1	Hold the Go-Team assistance launching meeting with selected States	ICAO, selected States Go-Team members
2.1.2	Coordinate with selected States on the on-site visit programme, including logistics and agenda	Go-Team members, recipient States' Focal Points
2.1.3	Conduct the Go-Team visits to selected States for tailored support to implementation of QMS or AIXM/TOD, identifying action items to drive the follow-up activities, and delivering draft report of the visit	
2.1.4	Deliver the final report of the Go-Team 1 month after the visit, in coordination with the recipient State	Go-team members
2.1.5	Develop plan of actions, based on the Go-Team report, within 6 months after the visit	Recipient States' ANSPs
2.1.6	Approve the plan of actions, as per Go-Team final report	Recipient States' CAAs
2.1.7	Implement the approved plan of actions	Recipient States' ANSPs
2.1.8	Deliver an annual and closing performance assessment report of the operational benefits achieved, 12 months after the visit	Go-team members

#### **4. SELECTION OF RECIPIENT STATES**

- 4.1 The selection of eligible States to receive assistance is based on the following criteria:
- a. The result of the USOAP-CMA Protocol Question 7.267 on status of implementation of QMS, QMS being a prerequisite to AIXM/TOD,
  - b. The level of the effective implementation (EI) in the area of air navigation services (ANS),
  - c. The level of completion of the State Aviation Activity Questionnaire (SAAQ) in ANS.
  - d. For a given Go-Team (QM or AIXM/TOD), a group of States having the same Air Navigation Services Provider will be represented by the State with the highest average level of EI – SAAQ score in ANS.
- 4.2 Ten (10) Go-team assistance missions are planned in the initial stage of the project as follows:
- a. Five (5) QMS Go-team assistances,
  - b. Five (5) AIXM/TOD Go-team assistances.
- 4.3 The list of eligible States is established in the Appendix 1 – Selection of eligible States.

#### **5. PROJECT RESOURCES**

- 5.1 The teams supporting the RBIS Process should include experts, as part of in-kind contributions, from International Organizations, States and ANSPs that have proved to be successful in AIM implementations and Industry representatives, including representatives from the user community and AIM software development companies.
- 5.2 Three teams should be established to support the respective implementation of QMS, AIXM and TOD, each composed of at most five members. Each team should include various types of expertise, encompassing the main roles and responsibilities needed to support the aeronautical data process. This includes:
- a. experience and knowledge of international standards and recommend practices;
  - b. experience in the establishment of State regulatory framework of AIM environments;
  - c. experience in AIS organizations that have transitioned to an AIM data-centric environment and that have an AIS organizational set-up based on processes;
  - d. experience in the collection of aeronautical data and information (data originator);
  - e. experience in facilitating AIM System and Infrastructure implementation;
  - f. experience in AIM Training.
- 5.3 The Go-Team visits for the assistance in QMS implementation shall focus only on QMS, with a maximum of four members. Depending on the need of the recipient State, the Go-Team visits for the implementation of AIXM and TOD can be conducted as a joint team addressing both elements at once, with a maximum of six members.
- 5.4 The teams supporting the RBIS Process do not represent the interest of any particular State, Region or Organization. Rather they act independently and utilize their expertise in the interest of the entire international civil aviation community.
- 5.5 The costs related to the workshops and launching meeting will be covered by the project budget.
- 5.6 For the Go-Team visits, the project budget will cover the travel costs of a maximum of two Experts. The travel costs of the remaining Experts shall be at the charge of the recipient State.

## 6. PROJECT BUDGET

Description	Total	2022	2023	2024
<b>Expenditures</b>	<b>96,000</b>	<b>50,500</b>	<b>45,500</b>	<b>-</b>
Phase 0	6,500	6,500	-	-
Training workshop on the Go-Team methodology (Activity 0.1.3)	6,500	6,500	-	-
Phase 1	19,500	19,500	-	-
QMS implementation package validation workshop (Activity 1.1.2)	6,500	6,500	-	-
AIXM implementation package validation workshop (Activity 1.1.2)	6,500	6,500	-	-
TOD implementation package validation workshop (Activity 1.1.2)	6,500	6,500	-	-
Phase 2	65,500	22,500	43,000	-
Go-team assistance launching meeting with selected States	2,500	2,500	-	-
(Activity 2.1.1)				
QMS Go-Team visits (Activity 2.1.3)	39,500	20,000	19,500	-
State 1 (Democratic Republic of the Congo)	6,500	6,500	-	-
State 2 (Nigeria)	6,000	6,000	-	-
State 3 (Seychelles)	7,500	7,500	-	-
State 4 (Botswana)	6,000	-	6,000	-
State 5 (Namibia)	6,000	-	6,000	-
AIXM/TOD Go-Team visits (Activity 2.1.3)	23,500	-	23,500	-
State 1 (Benin)	5,000	-	5,000	-
State 2 (Cabo Verde)	6,500	-	6,500	-
State 3 (Rwanda)	6,000	-	6,000	-
State 4 (South Africa)	6,000	-	6,000	-
State 5 (Ghana)	7,500	-	7,500	-
Sundry	4,500	2,000	2,500	-
<b>Contributions</b>	<b>(96,000)</b>	<b>(96,000)</b>		
Contribution from AFI-Plan Budget	(96,000)	(96,000)		
<b>Total</b>	<b>-</b>	<b>(45,500)</b>	<b>45,500</b>	<b>-</b>

6.1 The proposed budget for the project is presented in the table above. The estimates for each activity were determined as described below.

Item	Description
a. Training workshop on the Go-Team methodology	The amounts correspond to interpretation cost for the duration of the workshops of 3 days each.
b. QMS implementation package validation workshop	
c. AIXM implementation package validation workshop	
d. TOD implementation package validation workshop	
Go-team assistance launching meeting with selected States	The amount corresponds to interpretation cost for the meeting duration of 1 day.

Item	Description
QMS Go-Team visits AIXM/TOD Go-Team visits	The amounts correspond to mission costs (air ticket, terminal allowance and daily subsistence allowance) for a duration of 5 working days and two experts (one Regional Office expert and one Go-Team expert).
Sundry	The amounts correspond to 5 per cent of the above-mentioned costs and are included in the budget as a contingency and to cover cost such as reporting cost.
General	<ul style="list-style-type: none"> <li>a) Workshop costs are based on the assumption that workshops are held in English and French and that they are served by a restricted team of two interpreters. The daily rate for the interpreters is based on the Agreement between the United Nations Common System Chief Executives Board for Coordination and the Association internationale des interprètes de conférence regulating the conditions of employment of short-term conference interpreters of 1 January 2019.</li> <li>b) Mission costs include ticket cost of \$1,500, terminal allowance of \$104, and two travel days. The DSA rates for each State are based on the standard DSA rates of January 2022 for the capital cities.</li> <li>c) All amounts are rounded up to the nearest multiple of \$500.</li> </ul>

**Appendix 1 – Selection of eligible States**

1. The data were collected from the USOAP CMA Online Framework (OLF), in April 2022, to assess the eligibility of recipient States.

2. The table below shows the following eligible States of the AFI Region, as per the selection criteria:

- a. *Seychelles, Namibia, Botswana* are eligible for the QMS Go-team assistance as they have started QMS implementation;
- b. *Nigeria, and the Democratic Republic of the Congo* are eligible for the QMS Go-Team assistance as they have the higher average of ANS EI – ANS SAAQ among States that are yet to implement QMS;
- c. *Benin, Cabo Verde, Rwanda, South Africa, and Ghana* are eligible for the AIXM/TOD Go-team assistance as they are in top of the States having completed QMS implementation, with the higher average of ANS EI – ANS SAAQ.

STATES	QMS	AIXM	TOD	ANS EI	ANS SAAQ	AVERAGE	GO-TEAM ELIGIBILITY
<b>Rwanda</b>	Yes	No	No	83,02	100	91,51	<b>AIXM/TOD</b>
<b>Seychelles</b>	Started	No	No	55,96	96	75,98	<b>QMS</b>
<b>Namibia</b>	Started	No	No	44,05	100	72,03	<b>QMS</b>
Madagascar	Yes	Yes	No	91,3	32	61,65	
Zimbabwe	No	No	No	26,85	96	61,43	
<b>South Africa</b>	Yes	Yes	No	85,05	32	58,53	<b>AIXM/TOD</b>
Ethiopia	Yes	No	No	86,11	28	57,06	
Kenya	Yes	Yes	Yes	80	32	56,00	
Uganda	Yes	No	No	42,31	64	53,16	
United Republic of Tanzania	Yes	No	No	66,36	32	49,18	
Djibouti	No	No	No	29,29	69	49,15	
Zambia	Yes	No	No	48,08	50	49,04	
Mozambique	Yes	No	No	65,42	32	48,71	
<b>Botswana</b>	Started	No	No	59,26	32	45,63	<b>QMS</b>
Mauritius	No	No	No	52,66	32	42,33	
Eritrea	No	No	No	15,48	64	39,74	
Comoros	Yes	Yes	No	25,23	28	26,62	
Angola	No	No	No	14,15	32	23,08	
Eswatini	No	No	No	10,58	32	21,29	
Malawi	No	No	No	42,33	0	21,17	
Lesotho	No	No	No	18,69	0	9,35	
Burundi	No	No	No	0	17	8,50	
Somalia	No	No	No	0	0	0,00	
South Sudan	No	No	No	0	0	0,00	

STATES	QMS	AIXM	TOD	ANS EI	ANS SAAQ	AVRAGE	GO-TEAM ELIGIBILITY
<b>Benin</b>	Yes	Yes	No	62	96	79,00	<b>AIXM/TOD</b>
<b>Nigeria</b>	No	No	No	48,62	96	72,31	<b>QMS</b>
<b>Democratic Republic of the Congo</b>	No	No	No	32,08	92	62,04	<b>QMS</b>
<b>Ghana</b>	Yes	No	No	80	43	61,50	<b>AIXM/TOD</b>
Liberia	No	No	No	34,29	85	59,65	
Mauritania	Yes	Yes	No	86,54	32	59,27	
Togo	Yes	Yes	No	86,54	32	59,27	
Gabon	Yes	Yes	No	86,41	32	59,21	
Cote d'Ivoire	Yes	Yes	No	83,78	32	57,89	
Mali	Yes	Yes	No	75,96	32	53,98	
Senegal	Yes	Yes	No	74,77	32	53,39	
Niger	Yes	Yes	No	71,43	32	51,72	
Burkina Faso	Yes	Yes	No	69,23	32	50,62	
<b>Cabo Verde</b>	Yes	Yes	No	67,92	32	49,96	<b>AIXM/TOD</b>
Congo	Yes	Yes	No	65,09	32	48,55	
Equatorial Guinea	Yes	Yes	No	64,71	32	48,36	
Cameroon	Yes	Yes	No	55,66	32	43,83	
Gambia	No	No	No	82,35	0	41,18	
Chad	Yes	Yes	No	32,08	32	32,04	
Sierra Leone	No	No	No	31,43	32	31,72	
Sao Tome and Principe	No	No	No	16,82	28	22,41	
Central African Republic	Yes	Yes	No	8,65	32	20,33	
Guinea	No	No	No	4,81	32	18,41	
Guinea-Bissau	Yes	Yes	No	3,85	0	1,93	