



ICAO

AFI PLAN PROJECT

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

Synopsis	
a. Project Title:	AIM Result-Based Implementation Support (RBIS) for the AFI Region
b. Project Code:	AFI15102
c. Work order	AFI23102-01
d. Fund	3204
e. Output code	OUTPUT-CAP-WACAF
f. Executing Agency:	International Civil Aviation Organization (ICAO)
g. Eligible States:	All AFI States
h. Project Duration:	~~30~~ 48 Months
i. Revised Budget:	~~96,000~~ \$361,500
j. Strategic Objectives:	A – Safety B – Air Navigation Capacity and Efficiency

Revision index			
Version	Edition	Date	Justification
1.0	2019	May 2019	Creation of the project aiming to further enhance the effective implementation of the ICAO AIM provisions, with an implementation period of 18 months starting in 2019.
2.0	2022	May 2022	Revision of the project 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), select initial beneficiary States, and update the cost estimation.
2.1	2023	August 2023	The project phases 0 and 1 was successfully completed. The documentation to support assistance to States for the implementation of QMS, AIXM and TOD has been developed and validated. For the conduct of phase 2, very few number of States initially selected as beneficiaries, confirmed their willingness to receive assistance from the project. Considering the low level of commitment from the initial beneficiary States, the project is revised to open its assistance activities to the benefit of all AFI States which accept the said assistance. Also, the revision readjusts the budget allotment and the timeframe.

Executive summary

The AFI Plan Steering Committee approved the project “*AIM Results-Based Implementation Support (RBIS) for the AFI Region*” at its 22nd 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. [The project was revised in 2022](#) 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.

[Following the achievement of the project phases 0 and 1, documentation required to support the implementation activities was validated and the project teams are ready to conduct assistance to States. However, very few number of initial beneficiary States committed to receive assistance from the project. Considering that many States not in the initial list of beneficiaries may need support in the implementation of QMS, AIXM database, electronic AIP and TOD, it is proposed to revise the project to open its assistance activities to the benefit of all AFI States which accept the said assistance, and to consider the subsequent reallocation of the budget and the extension of timeframe 48 months from May 2022.](#)

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 13th 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 21st 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 [was](#) 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. [The project was then revised to cover also the assistance to States in TOD, AIXM and electronic AIP \(eAIP\) implementation.](#)

1.6 The AFI Plan Steering Committee approved the first [and second](#) versions of the project [respectively](#) at its 22nd meeting held on 15 May 2019, with an implementation period of 18 months, [and at its 25th meeting held from 17 to 18 May 2022, with the implementation period revised to 30 months starting in May 2022.](#)

1.7 Rationale for the update

[Following the approval of the revised project by the 25th meeting of the AFI Plan Steering Committee, three teams of experts were established for QMS, AIXM-eAIP and TOD, and trained on the Go-team methodology. The teams then identified and developed the documentation required to assist States in the implementation of QMS, AIXM database, eAIP, and TOD. The documentation was validated through a series of three webinar and finalized by the teams. Letters were sent to the States identified as initial beneficiaries of the project, requesting them to confirm their willingness to be assisted. Only two out of ten States committed to receive the project Go-team activities. The purpose of the revision of the project is to open the benefit of the Go-team assistance to all AFI States which volunteer to received support from the project. The composition of each Go-team missions is set to: three team members for QMS, AIXM-eAIP, or TOD specific assistance; five members for AIXM-eAIP/TOD joint assistance. For each assistance mission, the travel expenses of the entire team are borne by the project budget.](#)

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 2:** 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

Phase 0	Initiation of the project	
Objective 0	Establish competent teams to carry out the AIM Go-Team activities	
Key Performance indicator (s)	0.1 Go-Teams established for QMS, AIXM-eAIP and TOD	
Deliverable 0.1	Experts selected and trained on the Go-Team methodology	
<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-eAIP and TOD for the composition of Go-teams	
0.1.3	Organize the training workshop on the Go-Team methodology for the selected experts	

Phase 1	Development and validation of documentation	
Objective 1	Develop generic documentation required to implement QMS, AIXM-eAIP and TOD	
Key Performance indicator (s)	1.1 QMS implementation package validated 1.2 AIXM-eAIP implementation package validated 1.3 TOD implementation package validated	
Deliverable 1.1	Implementation packages for QMS, AIXM-eAIP and TOD	
Activity #	Description	Responsible entity/Actors
1.1.1	Develop generic documentation required for effective implementation of QMS, AIXM-eAIP and TOD by States. This documentation includes QMS Policy, Manual, Processes, Procedures, and Technical Specifications of Call for tenders concerning AIXM-eAIP and TOD, Cost estimations, etc.	Go-Teams members
1.1.2	Conduct validation workshops on the QMS, AIXM-eAIP and TOD implementation packages	
Phase 2	AIM Go-Team visits and follow-up	
Objective 2	Assist States in implementing QMS, AIXM-eAIP and TOD	
Key Performance indicator (s)	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	
Deliverable 2.1	Go-Team visits to assist States in implementing QMS, AIXM-eAIP, TOD and follow-up	
Activity #	Description	Responsible entity/Actors
2.1.1	Hold the Go-Team assistance launching meeting with selected States (Cancelled)	ICAO, States, Go-Team members
2.1.2	Coordinate with volunteer 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 volunteer States for tailored support in implementation of QMS, AIXM-eAIP or 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 Recipient States are selected based on their acceptance of the project assistance proposal sent by the accredited ICAO Regional Office.
- 4.2 QMS implementation or QMS assistance shall be a prerequisite for AIXM-eAIP assistance.
- 4.3 AIXM-eAIP implementation or AIXM-eAIP assistance is required before TOD assistance. However, AIXM-eAIP and TOD assistances can be conducted as a joint AIXM-eAIP/TOD Go-team mission depending on the needs of the recipient States.
- 4.4 A group of States can receive assistance at once through a Go-team activity hosted by one State. Specifically, for QMS or AIXM-eAIP assistances, a group of States having the same Air navigation service provider (ANSP) will be assisted through a single Go-team activity hosted by one of the member States of the said ANSP.
- 4.5 States that have implemented AIXM versions less than AIXM 5.1 can request assistance for upgrading their database.
- 4.6 A State that has implemented QMS and AIXM-eAIP can request assistance for TOD implementation.
- 4.7 The eligibility of States for assistance in the implementation of QMS, AIXM-eAIP and TOD is provided in the Appendix 1 – Eligibility of States for assistance.

5. PROJECT RESOURCES

- 5.1 The teams supporting the RBIS Process includes 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 are established to support the respective implementation of QMS, AIXM-eAIP and TOD, each composed of at most five members and including 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 three members. Depending on the need of the recipient State, the Go-Team visits for the implementation of AIXM-eAIP and TOD can be conducted separately as AIXM-eAIP assistance or TOD assistance with three members each, or as a joint AIXM-eAIP/TOD assistance addressing both elements at once with a maximum of five 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 For the Go-Team visits, the project budget will cover the travel expenses for all team experts.

6. PROJECT BUDGET

Description	Total	2022	2023	2024
Expenditures	96,000	50,500	45,500	-
Phase 0	6,500	6,500	-	-
Training webinar on the Go-Team methodology (Activity 0.1.3) – (Conducted with no expenditure incurred)	6,500	6,500	-	-
Phase 1	19,500	19,500	-	-
QMS implementation package validation webinar (Activity 1.1.2) – (Conducted with no expenditure incurred)	6,500	6,500	-	-
AIXM implementation package validation webinar (Activity 1.1.2) – (Conducted with no expenditure incurred)	6,500	6,500	-	-
TOD implementation package validation webinar (Activity 1.1.2) – (Conducted with no expenditure incurred)	6,500	6,500	-	-
Phase 2	65,500	22,500	43,000	-
Go-team assistance launching meeting with selected States (Activity 2.1.1) – (Cancelled)	2,500	2,500	-	-
QMS Go-Team visits (Activity 2.1.3) (Cancelled)	39,500	20,000	19,500	-
State 1 (Democratic Republic of the Congo) (Cancelled)	6,500	6,500	-	-
State 2 (Nigeria) (Cancelled)	6,000	6,000	-	-
State 3 (Seychelles) (Cancelled)	7,500	7,500	-	-
State 4 (Botswana) (Cancelled)	6,000	-	6,000	-
State 5 (Namibia) (Cancelled)	6,000	-	6,000	-
AIXM/TOD Go-Team visits (Activity 2.1.3)	23,500	-	23,500	-
State 1 (Benin) (Revised)	5,000	-	5,000	-
State 2 (Cabo Verde) (Cancelled)	6,500	-	6,500	-
State 3 (Rwanda) (Cancelled)	6,000	-	6,000	-
State 4 (South Africa) (Cancelled)	6,000	-	6,000	-
State 5 (Ghana) (Cancelled)	7,500	-	7,500	-
Sundry	4,500	2,000	2,500	-
Contributions	(96,000)	(96,000)		
Contribution from AFI-Plan Budget	(96,000)	(96,000)		
Total	-	(45,500)	45,500	-

Item	Total	2023	2024	2025
Expenditures	361,500	52,000	156,500	153,000
Phase 0				
Phase 1				
Phase 2	344,000	49,500	149,000	145,500
QMS Go-Team visits (Activity 2.1.3)	117,000	19,500	68,500	29,000
States 1 (Guinea, Liberia, Sierra Leone)	10,500	10,500		
State 2 (Democratic Republic of the Congo)	10,000		10,000	
State 3 (Nigeria)	9,000	9,000		
State 4 (Seychelles)	11,500		11,500	
State 5 (Botswana)	9,000		9,000	
State 6 (Namibia)	8,500		8,500	
State 7 (Mauritius)	10,000		10,000	
State 8 (Malawi)	9,500		9,500	
State 9 (Angola)	10,000		10,000	
State 10 (Djibouti)	10,000			10,000
State 11 (Gambia)	9,500			9,500
State 12 (Zimbabwe)	9,500			9,500
AIXM/TOD Go-Team visits (Activity 2.1.3)	190,500	30,000	80,500	80,000
States 1 (Guinea, Liberia, Sierra Leone)	17,000	17,000		
State 2 (Benin)	13,000	13,000		
State 3 (Ethiopia)	16,000		16,000	
State 4 (Tanzania)	16,500		16,500	
State 5 (Mozambique)	17,000		17,000	
State 6 (Nigeria)	14,500		14,500	
State 7 (Democratic Republic of the Congo)	16,500		16,500	
State 8 (Zambia)	17,000			17,000
State 9 (Uganda)	14,500			14,500
State 10 (Algeria)	15,500			15,500
State 11 (Tunisia)	14,000			14,000
State 12 (Egypt)	19,000			19,000
TOD Go-Team visits (Activity 2.1.3)	36,500			36,500
State 1 (Mauritania)	8,500			8,500
State 2 (Togo)	10,000			10,000
State 3 (Gabon)	10,000			10,000
State 4 (Côte d'Ivoire)	8,000			8,000
Sundry (5%)	17,500	2,500	7,500	7,500
Contributions	(361,500)	(52,000)	(156,500)	(153,000)
Contribution from AFI-Plan Budget	(361,500)	(52,000)	(156,500)	(153,000)
Total	-	-	-	-

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 webinar on the Go-Team methodology	No expenditure incurred.
b. QMS implementation package validation webinar	No expenditure incurred.
c. AIXM-eAIP implementation package validation webinar	No expenditure incurred.
d. TOD implementation package validation webinar	No expenditure incurred.
Familiarization webinar on the project documentation	No expenditure to incur.
Go-Team visits	The amounts correspond to mission costs (air ticket, terminal allowance and daily subsistence allowance) for a duration of 5 working days (6 nights) and three experts (one Regional Office expert and two Go-Team experts) for QMS Go-team and TOD Go-team visits, five experts for AIXM-eAIP/TOD Go-team visits.
Sundry	The amounts is rounded to 5 per cent of the above-mentioned costs and are included in the budget as a contingency and to cover cost such as extra expenditures.
General	a) Mission costs include ticket cost of \$1,500, terminal allowance of \$154, and two travel days. The DSA rates are based on the standard DSA rates of April 2023 for the capital cities. b) All amounts are rounded up to the nearest multiple of \$500.

Appendix 1 – Eligibility of States for assistance

1. The tables below gives information on the status of implementation of QMS, AIXM, eAIP and TOD by States. This information is complemented by the Effective Implementation (EI) in the Air navigation services (ANS) audit area, collected from the USOAP CMA Online Framework (OLF), in July 2023.

2. Based on the available information on the status of implementation, the column “Assistance eligibility” of the tables provide which areas each States would need to be assisted in.

ESAF States

STATES	QMS	AIXM	eAIP	TOD	ANS EI	Assistance eligibility
Madagascar	Yes	Yes	Yes	No	92,31	TOD
Ethiopia	Yes	No	No	No	86,11	AIXM-eAIP, TOD
South Africa	Yes	Started	Started	No	85,05	TOD
Rwanda	Yes	Started	Started	No	83,02	TOD
Botswana	Started	No	No	No	82,41	QMS, AIXM-eAIP, TOD
Kenya	Yes	Yes	Yes	Yes	80,00	
United Republic of Tanzania	Yes	No	No	No	66,36	AIXM-eAIP, TOD
Mozambique	Yes	No	No	No	65,42	AIXM-eAIP, TOD
Seychelles	Started	No	No	No	55,96	QMS, AIXM-eAIP, TOD
Mauritius	No	No	No	No	49,53	QMS, AIXM-eAIP, TOD
Zambia	Yes	No	No	No	48,08	AIXM-eAIP, TOD
Malawi	No	No	No	No	44,66	QMS, AIXM-eAIP, TOD
Uganda	Yes	No	No	No	42,31	AIXM-eAIP, TOD
Angola	No	No	No	No	41,80	QMS, AIXM-eAIP, TOD
Djibouti	No	No	No	No	41,53	QMS, AIXM-eAIP, TOD
Namibia	Started	No	No	No	30,19	QMS, AIXM-eAIP, TOD
Zimbabwe	No	No	No	No	26,85	QMS, AIXM-eAIP, TOD
Comoros	Yes	Yes	Yes	No	25,23	TOD
Lesotho	No	No	No	No	18,69	QMS, AIXM-eAIP, TOD
Eritrea	No	No	No	No	13,21	QMS, AIXM-eAIP, TOD
Eswatini	No	No	No	No	10,58	QMS, AIXM-eAIP, TOD
Burundi	No	No	No	No	0	QMS, AIXM-eAIP, TOD
Somalia	No	No	No	No	0	QMS, AIXM-eAIP, TOD
South Sudan	No	No	No	No	0	QMS, AIXM-eAIP, TOD

WACAF States

STATES	QMS	AIXM	eAIP	TOD	ANS EI	Assistance eligibility
Mauritania	Yes	Yes	Yes	No	86,54	TOD
Togo	Yes	Yes	Yes	No	86,54	TOD
Gabon	Yes	Yes	Yes	No	86,41	TOD
Cote d'Ivoire	Yes	Yes	Yes	No	83,78	TOD
Gambia	No	No	No	No	82,35	QMS, AIXM-eAIP, TOD
Ghana	Yes	Started	Started	No	80,00	TOD
Mali	Yes	Yes	Yes	No	75,96	TOD
Senegal	Yes	Yes	Yes	No	74,77	TOD
Niger	Yes	Yes	Yes	No	71,43	TOD
Burkina Faso	Yes	Yes	Yes	No	69,23	TOD
Cabo Verde	Yes	Yes	Yes	No	67,92	TOD
Congo	Yes	Yes	Yes	No	65,09	TOD
Equatorial Guinea	Yes	Yes	Yes	No	64,71	TOD
Benin	Yes	Yes	Yes	No	62,00	TOD
Cameroon	Yes	Yes	Yes	No	55,66	TOD
Nigeria	No	No	No	No	48,62	QMS, AIXM-eAIP, TOD
Democratic Republic of the Congo	No	No	No	No	32,08	QMS, AIXM-eAIP, TOD
Chad	Yes	Yes	Yes	No	32,08	TOD
Sierra Leone	No	No	No	No	31,43	QMS, AIXM-eAIP, TOD
Sao Tome and Principe	No	No	No	No	16,82	QMS, AIXM-eAIP, TOD
Liberia	No	No	No	No	14,05	QMS, AIXM-eAIP, TOD
Central African Republic	Yes	Yes	Yes	No	08,65	TOD
Guinea	No	No	No	No	04,81	QMS, AIXM-eAIP, TOD
Guinea-Bissau	Yes	Yes	Yes	No	03,85	TOD

EUR/NAT States

STATES	QMS	AIXM	eAIP	TOD	ANS EI	Assistance eligibility
Morocco	Yes	Yes	Yes	No	78,90	TOD
Algeria	Yes	No	No	No	62,26	AIXM-eAIP, TOD
Tunisia	Yes	No	No	No	57,27	AIXM-eAIP, TOD

MID States

STATES	QMS	AIXM	eAIP	TOD	ANS EI	Assistance eligibility
Egypt	Yes	No	No	No	71,56	AIXM-eAIP, TOD
Sudan	No	No	No	No	44,76	QMS, AIXM-eAIP, TOD
Libya	No	No	No	No	35,24	QMS, AIXM-eAIP, TOD