



*International Civil Aviation Organization*

**MID Region ATM Enhancement Programme Board**

**Second Meeting (MAEP Board/2)**  
*(Cairo, Egypt, 11-13 April 2016)*

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**Agenda Item 3: MAEP Projects**

**MID FLIGHT PROCEDURE PROGRAMME (MID FPP)**

*(Presented by Secretariat)*

**SUMMARY**

This paper presents a progress report on the establishment of the MID Flight Procedure Programme (MID FPP).

Action by the meeting is at paragraph 3.

**REFERENCES**

- MAEP SC/2 Report
- PBN SG/2 Report

**1. INTRODUCTION**

1.1 The meeting may wish to recall that MIDANPIRG/15 meeting, Bahrain, 8-11 June 2015, emphasized that the establishment of the MID Flight Procedure Programme (MID FPP) would foster the PBN implementation in the Region.

1.2 The MIDANPIRG/15 meeting noted with appreciation that ICAO is ready to provide necessary support for the establishment of the MID FPP, and to share the experience gained from the ASIA-Pacific and AFI FPPs' establishment. Accordingly, the meeting agreed that a Workshop on the establishment of the MID FPP be held in Cairo, Egypt, 18-19 October 2015, back-to-back with the MAEP SC/2 meeting, in order to develop a framework for establishing an FPP for the MID Region along with the proposed organizational structure, governance procedures, scope of activities and services, work plan and deliverables, resources and financial structure to be presented in a Project Document.

1.3 The MID FPP Workshop was successfully held at the ICAO MID Regional Office, Cairo, Egypt, 18-19 October 2015. The Workshop was attended by a total of twenty eight (28) participants from six (6) States (Bahrain, Egypt, Jordan, Saudi Arabia, Sudan and United Arab Emirates) and four (4) International Organizations and Industries (AACO, IATA, Jeppesen and United ATS). The outcome of the MID FPP Workshop, available on the ICAO MID Regional Office website (<http://www.icao.int/MID/Pages/meetings.aspx>), was reviewed by the MAEP SC/2 meeting.

1.4 The meeting may wish to recall that the MAEP SC/2 meeting (Egypt, Cairo, 20-22 October 2015) prioritized the projects in accordance with their implementation time frame. The agreed timeframe for the MID FPP Phase I is from July 2016 to June 2019.

1.5 The Second meeting of the Performance Based Navigation Sub-Group (PBN SG/2) was successfully held in Sharm El Sheikh, Egypt, from 22 to 25 February 2016. The meeting was attended by a total of forty seven (47) participants from nine (9) States (Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Saudi Arabia, Sudan, and United Arab Emirates) and four (4) International Organizations (AACO, CANSO, IATA and IFALPA).

## 2. DISCUSSION

2.1 The MAEP SC/2 meeting reviewed the Initial Draft MID FPP ProDoc developed by the MID FPP Workshop. It was highlighted that the document requires some essential inputs and further enhancements. Accordingly, the meeting agreed that the Secretariat in coordination with the MID Region PBN Focal Points and the MAEP SC/2 meeting participants review and update the MID FPP ProDoc before formal circulation to States for their inputs and comments. The final version of the ProDoc should be signed by States with ICAO TCB.

2.2 The draft MID FPP ProDoc was further reviewed by the PBN SG/2 meeting as at **Appendix A**. The meeting encouraged States to provide their comments to the ICAO MID Regional Office, if any, by 15 March 2016, in order for the Secretariat to present the consolidated version to the MAEP Board/2 meeting. No comments/inputs have been received.

2.3 The MAEP SC/2 meeting agreed that any State willing to join the MID FPP should first join MAEP through the signature of the MAEP Memorandum of Agreement (MOA) and the MAEP ProDoc.

2.4 Regarding the MID FPP personnel, the MAEP SC/2 meeting agreed that initially a full time Programme Coordinator with Flight Procedure Design experience should be recruited, taking into consideration that the Manager of the MAEP Project Management Office (PMO) will be responsible for the management and supervision of the MID FPP.

2.5 The MAEP SC/2 meeting received with appreciation the offer from Jeppesen to support the MID FPP in performing its services. Jeppesen would support the MID FPP with the PBN procedures coding/data checking and ground validation, but this requires a formal process once the MID FPP is established.

2.6 In the same vein, the MAEP SC/2 meeting appreciated United ATS willingness to support the MID FPP through the provision of some services/activities.

2.7 In connection with the above, IATA and AACO reassured their commitment to support the MID FPP, as required (with in-kind contributions).

2.8 The MAEP SC/2 meeting emphasized the need for a survey to identify the States' capabilities related to flight procedure design and PBN implementation. The meeting agreed that the ICAO MID Regional Office circulate a Questionnaire to seek States' willingness to join the MID FPP and/or provide in-kind contributions, and their views regarding the hosting, identify the States' needs and determine the flight procedures design and PBN capabilities in the MID Region. Accordingly, the meeting agreed to the following Draft Conclusion:

*DRAFT CONCLUSION 2/2: MID FPP SURVEY*

*That, the ICAO MID Regional Office carry out a survey related to the MID FPP establishment and the identification of flight procedures design and PBN implementation capabilities in the MID Region.*

2.9 The meeting may wish to note that, as a follow-up action to the above Draft Conclusion, the ICAO MID Regional Office circulated the Questionnaire at **Appendix B** through State Letter Ref.: REF.: AN 6/33-16/023 dated 26 January 2016. Replies were received from Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Qatar, Saudi Arabia, Sudan and UAE. The PBN SG/2 meeting reviewed the analysis of the survey as at **Appendix C**.

2.10 The PBN SG/2 meeting received with appreciation three (3) offers of hosting the MID FPP from Egypt, Iran and Sudan. The meeting agreed that States should provide the ICAO MID Regional Office by 20 March 2016 with their formal offers for presentation to the MAEP Board/2 meeting. The ICAO MID Regional Office received, gratefully, offers from Egypt, Lebanon and Sudan, which will be presented to the meeting in separate working papers.

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

3.1 The meeting is invited to:

- a) review the Draft MID FPP ProDoc at **Appendix A**;
- b) agree on the host State for the MID FPP; and
- c) explore ways and means to expedite the establishment of the MID FPP.

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Draft V.6  
20 January 2016

# INTERNATIONAL CIVIL AVIATION ORGANIZATION



## MID FLIGHT PROCEDURE PROGRAMME (MID FPP)

To Enhance Sustainable Instrument Flight Procedure Capability  
in Participating States

Prepared by the

International Civil Aviation Organization (ICAO)

for the

MID Region ATM Enhancement Programme (MAEP),

and the

Civil Aviation Administrations of Participating States

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## ANNEX 1

### to the Management Service Agreement between the [State/Organization] and the International Civil Aviation Organization (ICAO)

The 37<sup>th</sup> session of the ICAO Assembly in 2010 in its Resolution A37-11 reaffirmed the global commitment for PBN implementation and called upon the States to complete a PBN implementation plan as a matter of urgency and for ICAO to develop a coordinated action plan to assist States in the implementation of PBN and to ensure development and/or maintenance of globally harmonized SARPs, Procedures for Air Navigation Services (PANS) and guidance material including a global harmonized safety assessment methodology to keep pace with operational demands.

The Second Meeting of the Directors General of Civil Aviation-Middle East Region (DGCA-MID/2) (Jeddah, Saudi Arabia, 20 to 22 May 2013), through Conclusion 2/5 agreed that a study related to the establishment of a MID Region Flight Procedure Programme (FPP) be carried out within the framework of the PBN Sub-Group, taking into consideration similar programmes in other ICAO Regions.

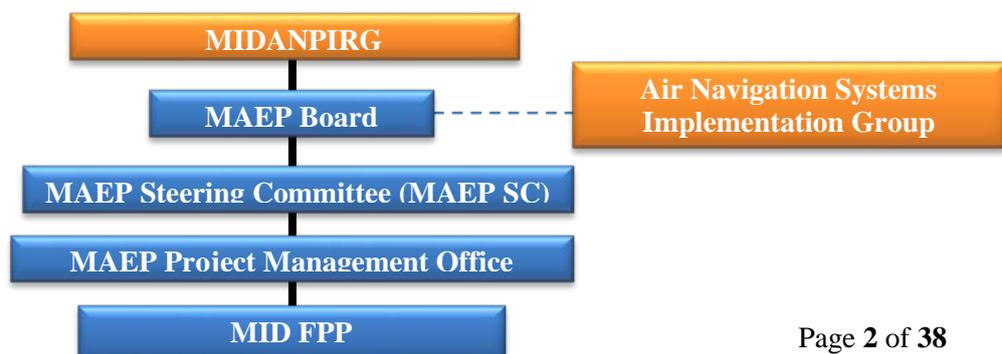
The Fifteenth Meeting of the Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG/15) (Bahrain, from 8 to 11 June 2015) emphasized that the establishment of the MID FPP would foster the PBN implementation in the Region.

The MID FPP was endorsed as one of the MID Region ATM Enhancement Programme (MAEP) projects by the MAEP Board/1 meeting (Cairo, Egypt, 23-25 June 2014), and supported by the MSG/4, MAEP Steering Committee/2, DGCA-MID/3, and MIDANPIRG/15 meetings.

The MAEP was established by the DGCA-MID/2 meeting, which, through DGCA Conclusion 2/4, agreed that a MAEP Board composed of high level representatives from concerned States and Organizations, be established to be responsible for overall supervision, direction, and management of the Programme.

The DGCA-MID/3 meeting (Doha, Qatar, 27-29 April 2015) endorsed the MAEP memorandum of Agreement (MOA), which was signed by Egypt, Jordan, Kuwait, Sudan and UAE.

The Organizational Structure is as follows:



- a) MAEP Board: composed of members from States.
- b) MAEP Steering Committee (MAEP SC): act as an advisory body to the MAEP Board, guide its work and ensure that MAEP objectives are accomplished in a timely, effective and efficient manner. The MEAP SC is composed of MAEP Board members and representative from AACO, ACAC, ACI, AIRBUS, BOEING, CANSO, EUROCONTROL/SESAR JU, FAA-USA, IATA, IFALPA and co-chaired by States and Organizations.
- c) MAEP Project Management Office (PMO): co-located in the ICAO MID Regional Office; and responsible of monitoring the implementation of the different MAEP projects.

In order to increase safety of Instrument Flight Rule (IFR) trajectories and to provide support to improve the safety and efficiency of IFR procedures in the MID Region, thereby realizing the significant safety, access, efficiency, and reduced environmental impact, MID States have agreed to establish a Flight Procedure Programme in the MID Region (MID FPP) with the goal of developing the State's capabilities in the instrument flight procedure design, PBN airspace design and PBN OPS approval, including regulatory oversight.

The MID FPP establishment was supported by the signature of the Letter of Intent for the MID FPP by, [reference] ...on [date].

[State/Organization] has agreed to host the MID FPP for an initial period of three years with a renewable three year option.

This agreement covers the period [1 July 2016 – 30 June 2019] considered as Phase I.

### **Description of Programme**

This document defines the scope of ICAO assistance to [State/Organization] as the host Administration and other participating MID Civil Aviation Administrations in establishing a functioning Flight Procedure Programme (FPP) in close collaboration with the ICAO MID Regional Office.

In Phase I, the MID FPP is envisioned to be a centre of excellence in the field of flight procedure design. The MID FPP would employ best practices in training, automation and quality assurance with subject matter experts to address the PBN flight procedure implementation needs and enhance the capabilities of the States. The programme is being established by an initial group of MID Civil Aviation Administrations (the Active States) who are funding the programme: other MID Civil Aviation Administrations may also join, by signing on to the Project Document and making a financial contribution. The duration of the Phase I of the programme will be three years, after that time, the programme would be re-evaluated.

### **Management Services to be provided:**

Through this Annex, ICAO will provide the following services to the host Administration and to any other MID Civil Aviation Administration having joined the MID FPP:

- MID FPP oversight;
- Assignment of Programme personnel to assist in achieving the planned immediate objectives through the production of relevant outputs, by carrying out activities

generally described in the Project Document.

- Technical support of the Programme expert, including technical briefing and debriefing; Technical Review of Programme outputs and review, finalization and distribution of Programme reports; and.
- Programme progress monitoring.

**Budget Estimate:** An estimate of costs is provided as **Appendix D** to the Annex 2 (Project Document)

**Brief Description:** The Programme objective is to assist States to develop sustainable capability in the instrument flight procedure (IFP) design, PBN airspace design and PBN OPS approval, including regulatory oversight, so as to meet their commitments under Assembly Resolutions A37-11 for Performance Based Navigation (PBN) implementation and the regional requirements, and comply with ICAO provisions related to flight procedure design and PBN.

| <b>Signed on behalf of:</b>                      | <b>Signature</b> | <b>Name/Title</b> | <b>Date</b> |
|--|------------------|-------------------|-------------|
| <b>International Civil Aviation Organization</b> | _____            | Secretary General | _____       |
| <b>State/Organization</b>                        | _____            | _____             | _____       |



**INTERNATIONAL CIVIL AVIATION ORGANIZATION**  
**PROJECT DOCUMENT**

**Programme Title:** MID Flight Procedure Programme (MID FPP) to Enhance Sustainable Instrument Flight Procedure Capability in the Participating States

**Programme No.:**

**Duration:** 3 years: [1 July 2016- 30 June 2019]

**Sector and Sub-Sector:** Air Navigation Capacity and Efficiency – Performance Based Navigation

**Country Implementing Agency:** Civil Aviation Administration of the Participating State implementing as (check one):

|                          |  |
|--------------------------|--|
| <input type="checkbox"/> | <b>Active State</b> (A MID Participating State that commits to funding the Programme by means of an annual financial contribution in line with an approved budget) |
| <input type="checkbox"/> | <b>User State</b> (A MID Participating State that is not an Active State, but one that intends to use the MID FPP services)  |

**Executing Agency:** International Civil Aviation Organization (ICAO)

**Location:** TBD

**Estimated Start Date:** 1 July 2016

**Estimated Programme Cost:** US\$ (2016/2017) – US\$ (Remaining years)

**Brief Description:** The Programme objective is to assist States to develop sustainable capability in the instrument flight procedure (IFP) design, PBN airspace design and PBN OPS approval, including regulatory oversight, so as to meet their commitments under Assembly Resolutions A37-11 for Performance Based Navigation (PBN) implementation and the regional requirements, and comply with ICAO provisions related to flight procedure design and PBN.

**Signed on behalf of:**

**Signature**

**Name/Title**

**Date**

**International Civil Aviation  
Organization**

\_\_\_\_\_  
Secretary General

**State/Organization**

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DRAFT

## 1. BACKGROUND

1.1 ICAO developed harmonized navigation specifications for all existing area navigation applications, and published these navigation specifications in the Performance Based Navigation (PBN) Manual (Doc. 9613).

1.2 The 37<sup>th</sup> session of the ICAO Assembly in 2010 in its Resolution A37-11 reaffirmed the global commitment for PBN implementation and called upon the States to complete a PBN implementation plan as a matter of urgency and ICAO to develop a coordinated action plan to assist States in the implementation of PBN and to ensure development and/or maintenance of globally harmonized SARPs, Procedures for Air Navigation Services (PANS) and guidance material including a global harmonized safety assessment methodology to keep pace with operational demands.

1.3 In 2009, ICAO published the Quality Assurance Manual (Doc. 9906). This document addresses two levels of processes. A high-level process, called the Instrument Flight Procedure (IFP) process, covers all elements from initiation to publication of the procedure and the relevant maintenance, safety, validation and flight inspection activities. The process does not end with publication. Feedback from users must be considered in the improvement process. A second specific process, for the design of the IFP — the Flight Procedure Design (FPD) process — is part of the IFP process.

1.4 The MID Air Navigation Strategy (ICAO MID Doc 002), endorsed by MIDANPIRG, includes the Aviation System Block Upgrades (ASBU) B0-APTA, B0-CCO and B0-CDO Modules, which are considered as priority 1 for implementation in the MID Region. In this respect, the MID FPP would support its Participating States with the implementation of the mentioned Modules.

1.5 The Directors General of Civil Aviation-Middle East Region through the Doha, Declaration, April 2015, agreed to take necessary measures to implement PBN approach procedures with vertical guidance, for all runways ends at international aerodromes, either as the primary approach or as a back-up for the precision approaches by 2017.

## 2. INSTITUTIONAL FRAMEWORK

2.1 **Participating States:** The Programme will be executed on the basis of the Project Document signed by the Host [State/Organization] and ICAO and to which any State wishing to participate may sign on. Upon signature onto the attachment of the Project Document, such State becomes a Participating State. Participating States are grouped in two categories:

- **Active States:** All MID Participating States that commit to funding the programme by means of an annual financial contribution in line with an approved budget become an Active State. The Host [State/Organization] is considered an Active State, based on the in-kind contribution provided to the programme.
- **User States:** All MID States that are not Active State are User States.

2.2 Any MID State that would like to join the MID FPP should first join the MAEP Board through the signature of the MAEP Memorandum of Agreement (MOA) and the MAEP Project Document.

2.3 Participating States who are not Active States or User States are Observer States.

### 2.4 Host Administration

During Phase I of the Programme, [State/Organization] is the Host Administration.

## 2.5 MID FPP Governing Body

2.5.1 The Programme will be governed by the MAEP Board supported by the MAEP Steering Committee and monitored by the MAEP PMO. The Terms of Reference of the MAEP Steering Committee are at **Appendix E**.

2.5.2 The MID FPP Coordinator should present to MAEP PMO Manager, on quarterly basis, progress reports related to the Programme developments, recommending necessary measures to improve the effectiveness and efficiency of the Programme. The MAEP PMO Manager and/or the MID FPP Coordinator should present progress reports on annual basis to the MAEP Steering Committee, for review and proposal of recommendations to MAEP Board.

### 2.5.3 Roles and Responsibilities

In the context of the MID FPP, the roles and responsibilities of the MAEP Board/Steering Committee should include:

#### Technical

MAEP SC and/or MAEP Board:

- review of the performance of the Programme
- ensure the collaboration and consistency with other MAEP projects

#### Managerial/financial

MAEP Board:

review and approval of the:

- Strategic objectives of the MID FPP
- annual Work Programme of the MID FPP;
- annual Budget;
- annual financial contribution level for Active States, including considering request for waiver of financial contribution in lieu of in-kind contribution;
- fee schedule for services and trainings in accordance with ICAO Policy; and
- Project Document as deemed necessary.

2.5.4 ICAO will facilitate the assistance detailed in this Project Document by providing overall programme oversight, the inputs set out in **8.4** below, financial account management and budgetary control of the programme, financial reports in accordance with its rules and procedures, and implementation monitoring of the Programme in cooperation with the MID FPP Coordinator and the MAEP PMO Manager. It will provide technical support to its experts in the performance of their duties and undertake monitoring missions.

2.5.5 The Participating States will provide the respective inputs, as set out in **8.1 to 8.3** below.

## 3. ISSUES AND OPERATING CONCEPT

### 3.1 Issues

3.1.1 Instrument flight procedures developed to take advantage of the benefits of PBN are totally reliant on the data in a database on the aircraft. For this reason, quality assurance in the flight procedure design process, while always important, takes on added importance for PBN-based procedures. A great safety concern in this respect is that many States lack the expertise to establish a sustainable internal procedure design capability, meeting the requirements of PANS-OPS and their

responsibility under Annex 15 for the quality of their aeronautical information and data, including instrument flight procedures.

3.1.2 Following are some of the main procedure design-related issues and problems faced by States:

- a) Insufficient number of procedure designers;
- b) Insufficient procedure design work in some States to attain or maintain proficiency;
- c) Lack of airspace and procedure design training: initial, OJT, and/or recurrent;
- d) Lack of knowledge to integrate procedure design efficiently into airspace design;
- e) Lack of depth in procedure design organization to perform quality assurance (QA);
- f) Insufficient expertise in procedure design organization to provide adequate QA of procedures;
- g) Lack of procedure design and obstacle data storage automation in the States;
- h) Lack of operational approval expertise to obtain proper operational approval and to oversee operators for PBN operations;
- i) Lack of regulatory expertise to oversee the process leading to procedure publication; and
- j) Lack of service provision for ATC/ATM training for PBN implementation.

### 3.2 **Operating Concept**

3.2.1 The MID FPP would serve as a means to assist Participating States to address the issues listed in 3.1.2. The MID FPP will foster the implementation of instrument flight procedures, developed with the appropriate quality systems, especially focusing on PBN and vertically guided instrument approach procedures by:

- a) assisting States with sufficient density of procedures to establish a sustainable internal procedure design capability capable of meeting the requirements of PANS-OPS and their responsibility for the quality of their procedures;
- b) providing the appropriate level of technical expertise necessary to enable States that do not have the density of procedures necessary to sustain an internal procedure design capability; and
- c) providing a vehicle to improve quality in the States' procedure design process through access to procedure design automation solutions and associated data storage.

3.2.2 At Participating States' request the MID FPP would:

- a) assist State's procedure and airspace designers in developing their procedures with priority for PBN procedures;
- b) assist State with the development of a Quality Assurance (QA) system for IFP, including flight procedure regulatory approval;
- c) provide refresher, recurrent and PBN initial training courses and OJT to procedure designers, remotely, on-site\* or at the MID FPP location;

- d) provide training course and OJT for QA including flight procedure regulatory approval;
- e) provide training course and OJT for operators approval for PBN operations;
- f) assist State for PBN Plan implementation through operational assessment, business case, and activity planning for PBN Implementation;
- g) assist States in the design of SIDs, STARs, CCO and CDO;
- h) assist State in developing PBN-related regulations;
- i) develop procedures implementation for States that have no procedure design capability;
- j) assist State with data origination;
- k) assist State with ground and flight validation;
- l) assist State in operators approval for PBN operations;
- m) provide training course for air traffic controllers about PBN flight procedures operations;
- n) provide State with any other associated assistance, as required;
- o) provide training courses for new procedures designers in accordance with ICAO Doc 9906; and
- p) assist States with the estimation of environmental benefit accrued from the implementation of instrument flight procedures/PBN procedures.

*Note: in order to assist the Participating States in expediting the implementation, both training and services can be extended to relevant stakeholders such as air operators and air navigation service providers in accordance with ICAO Policy.*

3.2.3 As part of the services provided in 3.2.2 above, the Programme would:

- a) provide States access to procedure design software applications at the MID FPP location; and
- b) provide States access to available databases for training purposes.

3.2.4 Cost to Active States for the services provided in 3.2.2 a, b, c, d, e and f and 3.2.3 above would be included in the basic FPP annual participation contribution. Other services would be charged to the Active State as per a fee in accordance with ICAO Policy.

3.2.5 For User States, training courses with exception to OJT provided in 3.2.2 c, d and e and 3.2.3 above may be free of charge. Other services would be charged to the User States in accordance with ICAO Policy fee.

3.2.6 For missions/training courses on-site, the travel and accommodation expenses and the daily subsistence allowance for the MID FPP personnel, ICAO Team and course' instructors should be covered by the host States in accordance with ICAO policies.

3.2.7 Cost levels as per 3.2.4 and 3.2.5 may be adjusted depending on level of contribution to the Programme as decided by the MAEP Board.

### 3.3

#### Relevant documents

- a) Procedures for Air Navigation Services – Aircraft Operations (Doc 8168)
- b) Performance Based Navigation Manual (Doc 9613)
- c) World Geodetic System Manual (Doc 9674)
- d) Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information (Doc 9881)
- e) Required Navigation Performance – Authorization Required Procedure Design Manual (Doc 9905)
- f) Quality Assurance Manual for Flight Procedure Design (Doc 9906)
- g) Continuous Descent Operations Manual (Doc 9931)
- h) Manual on Use of PBN in Airspace Design (Doc 9992)
- i) Continuous Climb operations Manual (Doc 9993)
- j) PBN Operational Approval Manual (Doc 9997)
- k) Doc 4444
- l) ICAO Annexes 4, 11, 14 and 15
- m) ICAO Assembly Resolutions A37-11 and A38-7
- n) Manual of All-Weather Operations (Doc 9365)
- o) Aeronautical Charting Manual (Doc 8697)

## 4. PROGRAMME IMPLEMENTATION STRATEGY

4.1 In order to support the goals of Assembly Resolution A37-11, GANP and the MID regional requirements, Phase I of the Programme will commence on [1 July 2016] and is expected to last at least until [30 June 2019].

4.2 The following resources are planned to achieve the programme objectives for Phase I:

- a) The MID FPP is hosted by [State/organization] in [city], [Country]. The office requirements are specified in the **Appendix A**;
- b) The MID FPP Coordinator is appointed by ICAO for a period of 3 years. The Job description is presented in the **Appendix B1**;
- c) Experts in PANS-OPS, Training, OPS Approval, Data Specialist, will be nominated by States, Organizations, and Industry to create a pool of experts who will support the provisions of the MID FPP services. Their Job descriptions are presented in the **Appendices B2, B3, B4 and B5**, respectively; and
- d) Participating States or Donors will nominate appropriately qualified candidates that meet the job description requirements. The nominations will be evaluated by the Regional Director of the MID Office in coordination with the MID FPP Coordinator.

4.3 The MID FPP will build its capacity to provide assistance, training, quality assurance, procedure and airspace design, and operational approval to the Participating States. Other specific

fields may be identified during the programme implementation. Additional staff might be needed, as deemed necessary, to meet the demand.

4.4 The work plan for year [2016/2017] is presented in the **Appendix C**.

4.5 Implementation strategy detailed in 4.1 through 4.4 herein may be revised by a decision of the MAEP Board and ICAO.

## **5. EXPECTED OUTCOME OF THE PROGRAMME**

5.1 States in the region will have significantly improved competency in procedure and airspace design, and regulatory approval (PBN operational approval, IFP design approval), as evidenced by implementation and training accomplished.

5.2 Operational improvements as follows:

- i. Increase/improve States' PBN implementation Plans;
- ii. Increase in the number of PBN procedures implemented and published in States AIP;
- iii. Increase in the number of TMAs with approved PBN operations;
- iv. Increase in the number of approved local carriers for PBN operations;
- v. Demonstrated evidence for improved safety and efficiency of flight operations.

5.3 A review by the governing body should be conducted at least one (1) year prior to the end of Phase I to determine whether the programme should be continued into the next Phase, and if so, the strategic direction that the programme should take.

## **6. PROGRAMME REVIEW, MONITORING AND REPORTING**

6.1 The Programme will be monitored by ICAO HQ and ICAO MID Regional Office. Upon signature of the Project Document by at least five (5) Active States, a Steering Committee meeting may be convened at the earliest possible and ICAO TCB will initiate the recruitment process of the MID FPP staff upon receipt of the required funds.

6.2 The MID FPP Coordinator will provide quarterly reports on the implementation of the Programme to ICAO MID Regional Office, and Technical Cooperation Bureau, MAEP PMO Manager, and to the members of the Steering Committee via the ICAO MID Regional Director.

6.3 The MAEP PMO Manager and/or the MID FPP Coordinator will provide on annual basis progress report on the MID FPP to the MAEP Steering Committee.

6.4 At least two months prior to the end of his assignment, the MID FPP Coordinator will submit a draft Final Report to the ICAO MID Regional Director.

## **7. PHASE 1([1 July 2016-30 June 2019) STRATEGY FORWARD**

The objectives assigned to the MID FPP are described in 3.2.2 of the present document. The following immediate objectives related mainly to the setup of the MID FPP capabilities are targeted for the first 6 months of the duration of the programme (2016).

### **7.1 Immediate Objective 1**

Establish capability for PBN Workshop Implementation Plan, using external expertise.

**Output 1.1**

Establish workshop programme for PBN Implementation Plan

Activity 1.1.1

Define external expertise origin and source of funding

Activity 1.1.2

Determine contents and schedule for the workshop

7.2

**Immediate Objective 2**

Establish capability for operational approval of air operators by Civil Aviation Authorities (CAA) course, using external expertise.

**Output 2.1**

Establish workshop programme for operational approval of air operators by CAA

Activity 2.1.1

Define external expertise origin and source of funding

Activity 2.1.2

Determine contents and schedule for the course

7.3

**Immediate Objective 3**

Establish operating capability of the MID FPP in the areas of procedure design including initial PANS-OPS, PBN and OJT (On-The-Job) training capability.

**Output 3.1**

Establish automation system for the input, storage and output of aeronautical data required for the instrument flight procedure process, based on global standards that will interface with flight procedure design automation tools and avionics database packing tools.

Activity 3.1.1

Install automated software and middleware supporting on the software on technical computers of the internal network.

**Output 3.2**

Establish initial procedure design and OJT (On-The-Job) training capability

Activity 3.2.1

Train procedure designers as instructors.

Activity 3.2.2

Determine contents for procedure design training sessions and OJT sessions.

7.4

**Immediate Objective 4**

Establish Flight Procedure validation process and regulatory approval process support capability.

**Output 4.1**

Establishment of Flight Procedure validation process support capability.

Activity 4.1.1

Identify a list and pricing of Flight procedure validation suppliers to cover MID Region to establish initial Flight procedure validation capability, planned to be executed in 2017.

Activity 4.1.2

Train MID FPP staff in Flight Procedure design ground validation process.

Activity 4.1.3

Establish a support framework to assist States in validating flight procedures.

#### **Output 4.2**

Establishment of Flight Procedure regulatory approval process support capability.

##### Activity 4.2.1

Train MID FPP staff in Flight Procedure regulatory validation process based on Doc 9906 (Quality Assurance Manual), examples from competent States (at least three) and consultation from ICAO ANB.

##### Activity 4.2.2

Continue updating the training as new ICAO documentation becomes available.

##### Activity 4.2.3

Establish a support framework to assist States in approving flight procedures.

7.5

#### **Immediate Objective 5**

Execute 2016/2017 MID FPP annual work programme, see **Appendix C**.

#### **Output 5.1**

Successful execution of 2016/2017 MID FPP annual work programme.

##### Activity 5.1.1

Provide to Member States the schedule list of training and support activities.

##### Activity 5.1.2

Provide trainings and support activities according to annual work programme.

7.6

#### **Immediate Objective 6**

Attain the full capability for MID FPP for Phase I.

#### **Output 6.1**

Establish a pool of specialists in PANS-OPS, OPS Approval and Flight procedures Instructors who will mainly work remotely with the MID FPP Coordinator on-call basis;

##### Activity 6.1.1

Establish selection process and identify a pool of suitable candidates, preferably through approaching MID States and Donors, according to job description in **Appendix B**.

7.7

#### **Immediate Objective 7**

Obtain approved work plan, budget and agreement on annual States contribution for **201x**.

#### **Output 7.1**

Obtain approved work plan, budget and agreement on States contribution for **201x**.

##### Activity 7.1.1

Prepare and propose work plan, budget and annual States contribution level for 2016/2017 to the governing body.

##### Activity 7.1.2

Report the outcome of 7.1.1 to the governing body.

8.

### **INPUTS**

8.1.1

By [date], [State/organization] as the Host Administration will provide the following:

- a) suitable office space and furniture including maintenance and repairs if necessary as defined in **Appendix A**;
- b) computer equipment and Information Technology equipment (telephone, Internet) as defined in **Appendix A**;
- c) procedure design and charting equipment as defined in the **Appendix A**;

- d) suitably equipped classroom(s) for MID FPP training courses held in xxxx. The classroom could be located in the MID FPP premises or in any other building proposed by Host;
- e) use of vehicle for purposes of official movements between Programme office and supporting facilities as needed.
- f) operating and maintenance expenses as related to the office facility in a) including, electricity, water, internet connection, local and international phone connections, cleaning, office security

8.1.2 The host State will facilitate the issuances of visas, accreditations or residence permits for the ICAO experts and recognized dependants ensuring the expeditious relocation of them at the duty station and for the whole duration of their ICAO contracts and subsequent renewals.

8.1.3 By date, [XXXX] as the Host Administration will provide seconded personnel in accordance to 4.2.

## 8.2 Active States

Active States will provide the following:

- a) annual contributions covering the cost of the programme, as indicated in the annual budget of the Programme;
- b) participation in the governing body meetings as Member States with the right to vote.

## 8.3 Participating States

Participating States will provide the following:

- a) in-kind contribution to support the MID FPP with the following non-exhausted list:
  - furniture including maintenance and repairs if necessary as defined in **Appendix A**;
  - Computer equipment and Information Technology equipment as defined in **Appendix A**;
  - Procedure design and charting equipment as defined in the **Appendix A**;
  - Suitably equipped classroom(s) for MID FPP training courses held in their States.
  - Operating and maintenance expenses as related to the office facility in a) including, electricity, water, internet connection, local and international phone connections, cleaning,
- b) support the MID FPP by providing expertise or resources, to the extent practicable taking into account the needs of the MID FPP;
- c) authorize release to the MID FPP of aeronautical data from third parties, including AIP and electronic terrain and obstacle data, as well as appropriate topographic mapping data and charts pertaining to their State for the purposes of the Programme, in particular for the design of instrument flight procedures and for quality assurance assistance;
- d) bear the expenses of duty travel (Air Tickets, Transportation, Accommodation and Daily Subsistence Allowances) of MID FPP staff as required supporting the MID FPP activities in their States.

- e) release of the assigned experts from his daily duties in order to perform remotely the assigned tasks by the MID FPP Coordinator, and to participate in the MID FPP activities as required;
- f) complete all remaining necessary steps to publish instrument flight procedures developed wholly or partly within the MID FPP framework as public procedures in their State Aeronautical Information Publication.

#### 8.4 ICAO

ICAO will provide the following:

- a) International Personnel
  - Programme Coordinator for the MID FPP
- b) Mission travel of ICAO HQ/RO personnel for monitoring purposes; and
- c) Administrative and other services for the handling of the Programme;
- d) Financial account management and budgetary control of the programme; and
- e) Technical support to the Programme experts in the performance of their duties and undertake monitoring missions.

### 9. RISKS, MITIGATION MEASURES AND PREREQUISITES

#### 9.1 Risks and Risk Levels

| Risks  | Risk Level     |
|--|----------------|
| a) Delays in nominating of experts from participating States and Organizations | Low            |
| b) Delays in MID FPP expert training as PD Instructor                          | Low            |
| c) Delays in sourcing of implementation workshop facilitator                   | Low            |
| d) Delays in transfer of funds to ICAO   | Medium to High |
| e) Delays in secondment of experts from States/Donors                          | Medium to High |
| f) Delays in identification of suitably qualified candidates for positions     | Medium to High |
| g) Delays in sourcing OPS Approval Instructor                                  | High           |

#### 9.2 Risk Mitigation Measures

It may be considered that low level in risk level is acceptable and doesn't need any mitigation measure.

Considering the medium to high level for delays in:

- a) Transfer fund to ICAO, pressing against Active States late to transfer fund to ICAO could be related to delay for activity requested from MID FPP by the State in order to accelerate the transfer fund by CAA. This action could mitigate the risk to an acceptable low level;
- b) Secondment from States/Donors, the MID FPP activity could be difficult to be organized when the secondment is late. The MID FPP activity supposed to be provided by the missing seconded expert would be replaced by another activity that MID is in capacity to provide. This action could mitigate the risk to an acceptable low level;
- c) Identification of suitably qualified candidates for Procedure Design, Data, and IT positions. Help could be provided by MID FPP to States for identification of candidates as a mitigation measure to risk level. This mitigation could reduce risk to medium level which is not acceptable. The MID FPP activity supposed to be provided by the missing seconded expert

would be replaced by another activity that MID FPP is in capacity to provide. This action could mitigate the risk to an acceptable low level;

Considering the high level for delays in:

- a) Sourcing of OPS approval Instructor, the organization of the associated workshop should be postponed until the secondment is effective. A mitigation measure could consist of finding an external expertise for workshop facilitator. This facilitator could be obtained from Donors supporting previous workshop on the same subject. This action could mitigate the risk to an acceptable low level.

In any case, mitigation measure could consist of creation of external incomes by the MID FPP providing charged activity. This action could mitigate the risk level to an acceptable low level but could not concern all risks.

### 9.3 Pre-requisites

- a) Project Document would be signed by a minimum of five (5) States as Active States before the start of the Programme to ensure funding for the Annual Budget and permits the MID FPP to provide activity and training;
- b) Facilities and equipment available for MID FPP activities, as detailed in 8.1.

## 10. PROGRAMME WORK PLAN

The Programme work plan for 2016/2017, is provided in **Appendix C**.

## 11. PROGRAMME BUDGET

11.1 The activities/events shall normally be convened at the MID FPP premises. If a State/Organization offers to host an activity, it shall coordinate with the MID FPP Coordinator as early as possible, but in any case at least six (06) months in advance and, shall be responsible for providing a venue, services and all costs of travel, accommodation and subsistence allowance for Instructors/Experts performing the activity.

11.2 The Programme budget corresponding to Phase I (2016/2017), is provided in **Appendix D**.

## INTERNATIONAL CIVIL AVIATION ORGANIZATION

### TECHNICAL CO-OPERATION PROGRAMME

#### MID FPP OFFICE REQUIREMENTS

This Appendix presents the minimum MID FPP office requirements.

| <b>MID FPP staff</b>              |  |
|-----------------------------------|--|
|                                   | <ul style="list-style-type: none"> <li>• Programme Coordinator (1) Full Time Recruited by ICAO TCB</li> <li>• 5 to 10 Procedure Designers and Airspace Planners, 2- to 4 OPS Approval experts and 2 to 4 PD Instructors assigned by States and Donors, who will work on-call-basis.</li> <li>• PANS-OPS Specialist, Data Specialist (1), Administrative Assistant (1) and/or IT Specialist (1) should be seconded when needed.</li> </ul>  |
| <b>Office space</b>               |  |
| 1 office                          | <ul style="list-style-type: none"> <li>• Programme Coordinator</li> </ul>  |
| 1 office                          | <ul style="list-style-type: none"> <li>• PANS-OPS Expert</li> </ul>  |
| 1 room                            | <ul style="list-style-type: none"> <li>• Lab for procedure design</li> </ul>   |
| 1 room                            | <ul style="list-style-type: none"> <li>• Classroom/ Meeting room</li> </ul>  |
| <b>Furniture equipment</b>        |  |
| Coordinator                       | <ul style="list-style-type: none"> <li>• Desk and chair</li> <li>• Storage/File cabinet</li> <li>• Book case</li> <li>• Conference table (6 persons) and chairs</li> <li>• Monitor/Webcam for conferences</li> </ul>   |
| Offices                           | <ul style="list-style-type: none"> <li>• Standard furniture for all offices</li> <li>• Desk, chair, storage/file cabinet, book case – per person</li> </ul>  |
| Classroom<br>OJT room             | <ul style="list-style-type: none"> <li>• Adequate space for 20 students</li> <li>• 4 drawing tables</li> <li>• White boards</li> <li>• Student tables</li> <li>• Projector</li> </ul>  |
| Meeting room                      | <ul style="list-style-type: none"> <li>• Adequate equipment for 20 persons</li> </ul>  |
| <b>IT equipment</b>               |  |
|                                   | <ul style="list-style-type: none"> <li>• Secure Wi-Fi Internet connexion</li> <li>• Desk-top Phone with international services</li> <li>• 1 Mobile phone (Coordinator) <ul style="list-style-type: none"> <li>– Laptop computer with docking station</li> <li>– monitor 19"</li> </ul> </li> <li>• Data Specialist when seconded <ul style="list-style-type: none"> <li>– Office computer equipment (monitor 19")</li> </ul> </li> <li>• External storage disks</li> <li>• 1 desktop multi-functional colour copier/scanner/printer</li> </ul> |
| <b>Procedure Design equipment</b> |  |
| Offices                           | <ul style="list-style-type: none"> <li>• Maps Storage cabinet</li> <li>• Maps A3 printer</li> <li>• A0 scanner</li> </ul>  |

|           |   |
|-----------|---|
|           | <ul style="list-style-type: none"> <li>• A0 printer Semi-professional</li> <li>• GPS</li> <li>• 1 server and 2 workstations (PCs)</li> </ul>  |
| Classroom | <ul style="list-style-type: none"> <li>• Computer Data Projector</li> <li>• Supplies for training sessions : set squares, protractors, compasses, rulers and pocket calculators</li> </ul>  |
| software  | <ul style="list-style-type: none"> <li>• 2 Procedure Design Software Licenses</li> <li>• 2 GOOGLE EARTH licenses</li> <li>• 2 ACROBAT READER licenses</li> <li>• 2 COREL DRAW licenses</li> <li>• 2 virtual machines (such as VMWARE) licenses for the remotely use of the Procedure Design Software</li> </ul> |

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DRAFT

## APPENDIX B - JOB DESCRIPTION



## International Civil Aviation Organization Technical Cooperation Bureau – Job Description

| POSITION INFORMATION |                       |                       |  |
|----------------------|-----------------------|-----------------------|--|
| Generic Title:       | Programme Coordinator | Position Number (ID): |  |
| Specific Title:      | MID FPP Coordinator   | Job Card:             |  |
| Project Number:      |                       | Post Number/Job Code: |  |
| Duty Station:        | TBD                   | CCOG code:            |  |
| Duration:            | 3 years               | Starting Date:        |  |

### ORGANISATIONAL SETTING

Under the direction of the Director/Technical Cooperation Bureau, the Field Operations Section is responsible for the strategic planning, development, execution and evaluation of Projects in TCB. The Section assists with the identification of priority development requirements across civil aviation and with technical cooperation to recipient States. It carries out resource mobilization with multilateral and bilateral development partners and industry and develops regional and country specific technical cooperation programmes and projects. The Section executes these programmes and projects in accordance with the policies and contractual modalities of TCB.

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### MAJOR DUTIES AND RESPONSIBILITIES

Under the direction of the ICAO Middle East Regional and in cooperation with MAEP PMO Manager, the national counterparts and other programme personnel:

- Work with ICAO, MAEP PMO Manager and the participating States on creation of the MID FPP Office and commencement of operations, including establishment of office capability and processes.
- Be responsible for all aspects of the operation and management of the Flight Procedure Programme to include programme coordination functions, personnel resourcing and training, office software and automation implementation, work plans, travel, and budget.
- Coordinate, develop and provide specific support activities as follows:
  - a. Training and support for local airspace and procedure designers;
  - b. The design and implementation of Instrument flight procedures for those States without procedure design capability;
  - c. Training about regulatory processes to approve procedures (including PBN procedures)
  - d. Training about validation and quality assurance process;
  - e. PBN training for ATC and ATM staff; and
  - f. Training and support on operational approval for aircraft operators.
- Perform frequent coordination at all levels with ICAO MID Regional Office, other FPP offices, sub-regional groups, International Organizations and States on issues related to FPP operations.
- Foster positive relationships and cooperation among assigned staff, international experts, seconded officers and CAA officers.
- Identify, and develop programme resources.

- Report on a regular basis to the MAEP PMO Manager and , the ICAO Middle East Regional Director, on the progress of the FPP to include:
  - a. Programme Status (Interim or Full Operational Capability, status of resources, budget, etc.);
  - b. Accomplishments (since last report);
  - c. Objectives for the next reporting period; and
  - d. Other (new requirements, concerns, issues, etc.)
- Conduct Quality Assurance of procedures designed by the MID FPP PANS-OPS Specialists.
- Responsible for the implementation of MID FPP work plan approved by the MAEP Board.
- Develop and amend business plans (deliverables, timeline, budget and concerned entities) for MID FPP and recommends them to the Steering Committee.
- Develop Key Performance Indicators (KPIs) for tracking the implementation of the Programme and to assess and measure the effectiveness of the Programme.
- Submit progress reports to the MAEP PMO Manger, as appropriate and when required.
- Identify and report Programme risk to the MAEP PMO and maintain a risk database.
- Foster positive relationships and cooperation among assigned staff, international experts, seconded officers and CAA officers.
- Assign projects to the MID FPP personnel.
- Review and approve the procedure designed by the MID FPP Specialists.
- Supervise/monitor the performance of the MID FPP Specialists.
- Perform other related duties as required.

## QUALIFICATIONS AND EXPERIENCE

### Educational background

University degree in business administration or public administration or equivalent management and business experience

### Professional experience and knowledge

- At least 10 years operational experience (pilot or Air Traffic Controller) with a good understanding of instrument flight procedure design process. A working knowledge of the Ops Approval and Airspace Design processes is highly desirable
- Knowledge in aeronautical data quality and trajectories' publication;
- At least 5 years aviation management experience;
- Knowledge of the ICAO GANP and ASBUs, as well as the Performance Based Navigation (PBN) concept, objectives and supporting ICAO provisions and guidance;
- Ability to work and coordinate with civil aviation officials at all levels, as well as industry, regional and sub-regional groups, to accomplish the goals of the Programme;
- Ability to successfully lead major projects under a team structure; Experience in team management with the ability to foster and maintain harmonious, positive working relationships in an multi-national environment;
- Satisfactory completion of formal PANS-OPS course(s) to cover the conventional and PBN procedure design criteria;
- Significant Experience in the development of IFPs for conventional and PBN procedures;
- Experience in the implementation of Flight Procedure Design Quality Assurance (Doc 9906) requirements;
- Advanced Experience using Flight Procedure Design automation systems for flight procedure design is preferable, Experience as an Instrument Flight Procedure Design Instructor for ICAO PANS-OPS (Doc 8168) courses is also preferable

### Language Skills

#### Essential

- Fluent reading, writing and speaking abilities in English are essential.

#### Desirable

- A working knowledge of Arabic is an asset

### Competencies

- **Judgment/Decision-Making:** Demonstrated ability to take ownership of all responsibilities and commitments, to exercise a mature opinion, to recognize key issues and analyse relevant information, to formulate viable recommendations and make decisions.
- **Vision:** Identifies strategic issues, opportunities and risks.

- **Leadership:** Drives for change and improvement, does not accept the status quo, establishes and maintains relationships with a broad range of people to understand needs and gain support.
- **Managing Performance:** Monitor progress against milestones and deadlines.
- **Building Trust:** Operates with transparency, treats sensitive or confidential information appropriately.
- **Teamwork:** Ability to work with colleagues to achieve the project objectives and maintain harmonious working relations in a multinational environment.
- **Client Orientation:** Ability to establish and maintain partnerships with outside partners, to work and argue effectively in a system based on consensus and to successfully manage and resolve conflicts.
- **Communication:** Ability to write clearly and concisely and present oral reports.

## REMUNERATION

TBD

DRAFT

## APPENDIX B - JOB DESCRIPTION



## International Civil Aviation Organization Technical Cooperation Bureau – Job Description

| POSITION INFORMATION |                    |                       |  |
|----------------------|--------------------|-----------------------|--|
| Generic Title:       | Procedure Designer | Position Number (ID): |  |
| Specific Title:      | Procedure Designer | Job Card:             |  |
| Project Number:      |                    | Post Number/Job Code: |  |
| Duty Station:        | Remotely           | CCOG code:            |  |
| Duration:            | 3 years            | Starting Date:        |  |

### ORGANISATIONAL SETTING

Under the direction of the Director/Technical Cooperation Bureau, the Field Operations Section is responsible for the strategic planning, development, execution and evaluation of Projects in TCB. The Section assists with the identification of priority development requirements across civil aviation and with technical cooperation to recipient States. It carries out resource mobilization with multilateral and bilateral development partners and industry and develops regional and country specific technical cooperation programmes and projects. The Section executes these programmes and projects in accordance with the policies and contractual modalities of TCB.

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### MAJOR DUTIES AND RESPONSIBILITIES

Under the direction of the ICAO Middle East Regional and in cooperation with MAEP PMO Manager and the MID FPP Coordinator, the national counterparts and other programme personnel;

- Design instrument procedures as tasked by the FPP Coordinator according to ICAO specifications;
- Review, verify, maintain and make sure that the flight procedure is ready for the final approval.
- Guarantee a quality assurance in the flight procedure design
- Provide training of the flight procedure designer staff and elaborate all necessary documentation and guidance materials
- Introduce and implement PNB according to ICAO specifications and taking into consideration national and regional plans
- Maintain a well-structured database for obstacles assessment
- Provide on-the-job training
- Perform other related duties as assigned

### QUALIFICATIONS AND EXPERIENCE

#### Educational background

University degree or equivalent qualifications and experience in the air navigation.

#### Professional experience and knowledge

- Minimum ten years' experience at increasing levels of responsibility and leading to supervisory level in Air Navigation Services (ANS) and flight procedure design in large government, in an international organization or in aviation industry.
- Experience in aviation operations as a pilot, navigator or air traffic controller.
- Satisfactory completion of an approved PANS OPS flight procedures design courses and an advanced courses on PANS OPS flight procedures design (PBN, RNAV, SBAS, GBAS, etc.) at a specialized international school.
- Knowledge in the aeronautical information conceptual and exchange model (AICM/AIXM), automation, digital terrain model (DTM), geographic information systems and cartography.
- Experience in the use of flight procedure designer software during the flight procedure design process.
- Experience in providing flight procedures design training.
- Knowledge in quality systems and flight procedure design software.
- Experience in participating in the work of International Organization for Standardization (ISO) and quality assurance.
- Thorough knowledge of ICAO Standards and Recommended Practices (SARPs) and Procedures for Air Navigation Services (PANS).
- Ability to write clearly and concisely detailed technical and specialized reports and to make verbal presentations.
- Ability to develop clear goals that are consistent with agreed strategies. Identify priorities and adjust as required.

## Language Skills

### Essential

- Good command of oral and written English is essential.

### Desirable

- A working knowledge of Arabic is an asset.

## Competencies

- **Judgment/Decision-Making:** Demonstrated ability to take ownership of all responsibilities and commitments, to exercise a mature opinion, to recognize key issues and analyse relevant information, to formulate viable recommendations and make decisions.
- **Vision:** Identifies strategic issues, opportunities and risks.
- **Leadership:** Drives for change and improvement, does not accept the status quo, establishes and maintains relationships with a broad range of people to understand needs and gain support.
- **Managing Performance:** Monitor progress against milestones and deadlines.
- **Building Trust:** Operates with transparency, treats sensitive or confidential information appropriately.
- **Teamwork:** Ability to work with colleagues to achieve the project objectives and maintain harmonious working relations in a multinational environment.
- **Client Orientation:** Ability to establish and maintain partnerships with outside partners, to work and argue effectively in a system based on consensus and to successfully manage and resolve conflicts.
- **Communication:** Ability to write clearly and concisely and present oral reports.

## REMUNERATION

Provided by the State/Donors nominating the experts

## APPENDIX B - JOB DESCRIPTION



## International Civil Aviation Organization Technical Cooperation Bureau – Job Description

| POSITION INFORMATION |            |                       |  |
|----------------------|------------|-----------------------|--|
| Generic Title:       | Instructor | Position Number (ID): |  |
| Specific Title:      | Instructor | Job Card:             |  |
| Project Number:      |            | Post Number/Job Code: |  |
| Duty Station:        | Remotely   | CCOG code:            |  |
| Duration:            | 3 years    | Starting Date:        |  |

### ORGANISATIONAL SETTING

Under the direction of the Director/Technical Cooperation Bureau, the Field Operations Section is responsible for the strategic planning, development, execution and evaluation of Projects in TCB. The Section assists with the identification of priority development requirements across civil aviation and with technical cooperation to recipient States. It carries out resource mobilization with multilateral and bilateral development partners and industry and develops regional and country specific technical cooperation programmes and projects. The Section executes these programmes and projects in accordance with the policies and contractual modalities of TCB.

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### MAJOR DUTIES AND RESPONSIBILITIES

Under the direction of the MID FPP Coordinator the national counterparts and other programme personnel:

- Conduct airspace planning, procedure design and OPS Approval courses as tasked by the MID FPP Coordinator;
- Perform other related duties as assigned by the MID FPP Coordinator

### QUALIFICATIONS AND EXPERIENCE

#### Educational background

University degree or equivalent qualifications and experience in the air navigation.

#### Professional experience and knowledge

- Significant aviation experience as an Air Traffic Controller or a pilot or demonstrated equivalencies;
- Significant experience as Instrument Flight Procedure Design specialist with extensive knowledge of ICAO PANS-OPS (Doc 8168) and ICAO PBN (Doc 9613) requirements;
- Significant experience as an Airspace Design specialist with knowledge of ICAO use of PBN In Airspace Design (Doc 9992);
- Training and Experience as an Instrument Flight Procedure Design Instructor for ICAO PANS-OPS (Doc 8168) courses with thorough understanding of teaching techniques and assessment methods;
- Thorough understanding of Flight Procedure Design Quality Assurance (Doc 9906) requirements and its implementation

## Language Skills

### Essential

- Good command of oral and written English is essential.

### Desirable

- A working knowledge of Arabic is an asset.

## Competencies

- **Judgment/Decision-Making:** Demonstrated ability to take ownership of all responsibilities and commitments, to exercise a mature opinion, to recognize key issues and analyse relevant information, to formulate viable recommendations and make decisions.
- **Vision:** Identifies strategic issues, opportunities and risks.
- **Leadership:** Drives for change and improvement, does not accept the status quo, establishes and maintains relationships with a broad range of people to understand needs and gain support.
- **Managing Performance:** Monitor progress against milestones and deadlines.
- **Building Trust:** Operates with transparency, treats sensitive or confidential information appropriately.
- **Teamwork:** Ability to work with colleagues to achieve the project objectives and maintain harmonious working relations in a multinational environment.
- **Client Orientation:** Ability to establish and maintain partnerships with outside partners, to work and argue effectively in a system based on consensus and to successfully manage and resolve conflicts.
- **Communication:** Ability to write clearly and concisely and present oral reports.

## REMUNERATION

Provided by the State/Donors nominating the experts

## APPENDIX B - JOB DESCRIPTIONS



## International Civil Aviation Organization Technical Cooperation Bureau – Job Description

### POSITION INFORMATION

|                 |                     |                       |  |
|-----------------|---------------------|-----------------------|--|
| Generic Title:  | OPS approval Expert | Position Number (ID): |  |
| Specific Title: | OPS approval Expert | Job Card:             |  |
| Project Number: |                     | Post Number/Job Code: |  |
| Duty Station:   | Remotely            | CCOG code:            |  |
| Duration:       | 3 years             | Starting Date:        |  |

### ORGANISATIONAL SETTING

Under the direction of the Director/Technical Cooperation Bureau, the Field Operations Section is responsible for the strategic planning, development, execution and evaluation of Projects in TCB. The Section assists with the identification of priority development requirements across civil aviation and with technical cooperation to recipient States. It carries out resource mobilization with multilateral and bilateral development partners and industry and develops regional and country specific technical cooperation programmes and projects. The Section executes these programmes and projects in accordance with the policies and contractual modalities of TCB.

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### MAJOR DUTIES AND RESPONSIBILITIES

Under the direction of the MID FPP Coordinator the national counterparts and other programme personnel:

- Assist States with the flight procedure regulatory approval as tasked by the MID FPP Coordinator
- Review, verify, maintain and make sure that the flight procedure is ready for the final approval.
- Provide on-the-job training to OPS Approval experts
- Perform other related duties as assigned

### QUALIFICATIONS AND EXPERIENCE

#### Educational background

University degree or equivalent qualifications and experience in the air navigation.

#### Professional experience and knowledge

- Satisfactory completion of formal PANS-OPS course(s) to cover the conventional and PBN procedure design criteria;
- Experience in the development of IFPs for conventional and PBN procedures;
- Understanding of Flight Procedure Design Quality Assurance (Doc 9906) requirements and its implementation;
- Experience using Flight Procedure Design automation systems for flight procedure design is preferable, Experience as an Instrument Flight Procedure Design Instructor for ICAO PANS-OPS (Doc 8168) courses is also preferable.
- Experience of working with CAAs (Regulatory authorities), preferably in the MID Region

## Language Skills

### Essential

- Good command of oral and written English is essential.

### Desirable

- A working knowledge of Arabic is an asset.

## Competencies

- **Judgment/Decision-Making:** Demonstrated ability to take ownership of all responsibilities and commitments, to exercise a mature opinion, to recognize key issues and analyse relevant information, to formulate viable recommendations and make decisions.
- **Vision:** Identifies strategic issues, opportunities and risks.
- **Leadership:** Drives for change and improvement, does not accept the status quo, establishes and maintains relationships with a broad range of people to understand needs and gain support.
- **Managing Performance:** Monitor progress against milestones and deadlines.
- **Building Trust:** Operates with transparency, treats sensitive or confidential information appropriately.
- **Teamwork:** Ability to work with colleagues to achieve the project objectives and maintain harmonious working relations in a multinational environment.
- **Client Orientation:** Ability to establish and maintain partnerships with outside partners, to work and argue effectively in a system based on consensus and to successfully manage and resolve conflicts.
- **Communication:** Ability to write clearly and concisely and present oral reports.

## REMUNERATION

Provided by the State/Donors nominating the experts

## APPENDIX B - JOB DESCRIPTIONS



## International Civil Aviation Organization Technical Cooperation Bureau – Job Description

### POSITION INFORMATION

|                 |                 |                       |  |
|-----------------|-----------------|-----------------------|--|
| Generic Title:  | Data Specialist | Position Number (ID): |  |
| Specific Title: | Data Specialist | Job Card:             |  |
| Project Number: |                 | Post Number/Job Code: |  |
| Duty Station:   | TBD             | CCOG code:            |  |
| Duration:       | 3 years         | Starting Date:        |  |

### ORGANISATIONAL SETTING

Under the direction of the Director/Technical Cooperation Bureau, the Field Operations Section is responsible for the strategic planning, development, execution and evaluation of Projects in TCB. The Section assists with the identification of priority development requirements across civil aviation and with technical cooperation to recipient States. It carries out resource mobilization with multilateral and bilateral development partners and industry and develops regional and country specific technical cooperation programmes and projects. The Section executes these programmes and projects in accordance with the policies and contractual modalities of TCB.

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### MAJOR DUTIES AND RESPONSIBILITIES

Under the direction of the MID FPP Coordinator the national counterparts and other programme personnel:

- Establish and update MID FPP data base of aeronautical data to support procedure design
- Acquire and store obstacle data to support procedure design
- Perform other related duties as assigned

### QUALIFICATIONS AND EXPERIENCE

#### Educational background

University degree or equivalent qualifications and experience in the air navigation.

#### Professional experience and knowledge

- Significant experience in aeronautical data management;
- Knowledge of ICAO PANS-OPS (Doc 8168) and ICAO PBN (Doc 9613) data requirements;
- Thorough understanding of Flight Procedure Design Quality Assurance (Doc 9906) requirements and its implementation;
- Training and experience using Flight Procedure Design automation systems for flight procedure design,
- Experience of working with CAAs, preferably in the MID Region.

## Language Skills

### Essential

- Good command of oral and written English is essential.

### Desirable

- A working knowledge of Arabic is an asset.

## Competencies

- **Judgment/Decision-Making:** Demonstrated ability to take ownership of all responsibilities and commitments, to exercise a mature opinion, to recognize key issues and analyse relevant information, to formulate viable recommendations and make decisions.
- **Vision:** Identifies strategic issues, opportunities and risks.
- **Leadership:** Drives for change and improvement, does not accept the status quo, establishes and maintains relationships with a broad range of people to understand needs and gain support.
- **Managing Performance:** Monitor progress against milestones and deadlines.
- **Building Trust:** Operates with transparency, treats sensitive or confidential information appropriately.
- **Teamwork:** Ability to work with colleagues to achieve the project objectives and maintain harmonious working relations in a multinational environment.
- **Client Orientation:** Ability to establish and maintain partnerships with outside partners, to work and argue effectively in a system based on consensus and to successfully manage and resolve conflicts.
- **Communication:** Ability to write clearly and concisely and present oral reports.

## REMUNERATION

Provided by the State/Donors nominating the experts

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**  
**TECHNICAL COOPERATION PROGRAMME**

**WORK PLAN 2016/2017<sup>[DS1]</sup>**

**MID FPP Objectives for Year 2016/2017**

Year 2016 will be an important year for the MID Flight Procedures Programme (MID FPP). The purpose of the Programme is to provide opportunity to use the training activities and services proposed by the Programme for MID Member States.

In order to propose a variety of training activities and services to meet the needs of Member States needs according to the ICAO Resolution A37-11, ASBU B0-APTA and the Global and regional requirements, the 2016/2017 MID FPP Training Programme is composed of workshops, training courses and support activities. The training activities centered on PBN Plan implementation, regulatory approval procedures and PBN OPS approval for operators have to be considered as essential to improve or start PBN implementation in States.

On the other hand, specific projects and implementation support activities will support Participating States to consolidate or implement the flight procedures through ground validation and approval process.

These activities will allow the Participating States to expedite or to make the first steps for implementing PBN flight procedures in the Region.

The MID FPP Objectives for 2016/2017 are as follows;

- Commence Phase 1 MID FPP operations on [01 July 2016];
- Conduct 4 Training activities; and
- Conduct 2 Project-orientated implementation support activities
- Design a minimum of [X] PBN instrument procedures/year

**MID FPP Training Activities for 2016/2017**

**1) PBN Implementation Workshop– 3-4 days – [date] 2016**

**Description:** This PBN Implementation Workshop is intended to assist States/Administrations in enhancing their PBN Implementation Plans and move forward with actual PBN implementations. The Workshop will also provide updated information regarding global PBN activities and how PBN can be an enabler for enhancing ATM operations. During the workshops, the participants with assistances from African FPP facilitators will develop a list of short-term action items aiming to enhance their existing PBN Implementation Plans and advance their on-going PBN implementations and deployments. The list of action items along with relevant recommendations will then be submitted to appropriate CAAs for their actions.

Participants of these workshops should be representatives from all aviation stakeholders with an interest in PBN implementation.

- Facilitator – TBD
- Coordination/Sponsorship –TBD
- Material – ANB, APAC FPP, AFPP, MID FPP
- Facility – TBD
- Funding – TBD (from SIP 15000 USD)

**2) PBN Ops Approval Course - 1 week - [date] 2016**

**Description:** The course is based on ICAO Doc 9997 and conducts to support States in developing their operational approval capability for approving PBN operations and air operators in obtaining PBN OPS approvals. The purpose of the course is to provide experienced flight inspectors, flight operations regulators and air operators' personnel with a comprehensive understanding of the requirements for PBN operational approval.

At the end of the course, each student will be individually assessed for successfully acquiring the required competencies, and the outcome of the assessment will then be reported to each student and his/her agency.

The course is open to qualified and experienced flight inspectors, regulators and air operator personnel involved in PBN flight operations.

- Instructor – TBD
- Coordination/Sponsorship – TBD
- Material – ANB, TBD
- Facility – TBD
- Funding - TBD

### **3) PANS-OPS Initial Procedure Design Course– 4 Weeks – [dates] 2016**

**Description:** The course is based on ICAO PANS-OPS and aims to support States in developing their conventional flight procedures and basic procedure design capability by providing fundamental knowledge regarding procedure design. The instruction consists of lecturing, exercises, progress tests and examinations.

At the end of the course, each student will be individually assessed for successfully acquiring the required competencies, and the outcome of the assessment will then be reported to each student and his/her agency.

- Instructor – TBD
- Material – TBD
- Facility – TBD
- Funding – TBD

### **4) PBN Procedure Design – English – 3 Weeks – [dates] 2016**

**Description:** The course aimed to support States/Administrations in developing their PBN procedure design capacity and to support ICAO's global PBN implementation goals as indicated in the ICAO 2010 and 2013 Assembly Resolutions. The course is follow-on of the ICAO PANS-OPS Initial Procedure Design Course.

At the end of the course, each student will be individually assessed for successfully acquiring the required competencies, and the outcome of the assessment will then be reported to each student and his/her agency.

The course is open to qualified procedure designers who have successfully completed PANS-OPS Initial Course either at the African FPP or other institutions.

- Instructor – TBD
- Material – TBD
- Facility – TBD
- Funding - TBD

## **MID FPP Project-oriented Implementation Support for 2016**

### **1) OJT on ground validating and approving procedures with specific projects, [States, dates]**

**Description:** The OJT sessions are targeted to assist regulators in validating and approving specific PBN procedures. The purpose of the session is to provide hands-on assistance for regulators in reviewing specific procedure design and validation packages which have been submitted prior to actual approvals and publications into the State AIPs. It is expected that once the validation and approval process is completed, the said procedures will be promptly published and implemented.

- Instructor - Qualified procedure designer from MID FPP
- Funding by States participating on the OJTs or Donors if available
- Facility - TBD
- Conditions – This OJT session is available for
  - Active States with annual contributions to the MID FPP; or
  - States who requests for this support under a service fee

**2) Design of 10 new instrument procedures (minimum), [States, dates]**

Plan, consult with concerned stakeholder and design at least 10 Instrument procedures and present them to the requesting States for validation and publication.

DRAFT

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**  
**TECHNICAL CO-OPERATION PROGRAMME**

**BUDGET 2016/2017**

| Project Budget            |  | In US\$                         |                  |         |
|---------------------------|--|---------------------------------|------------------|---------|
| Programme Title           | MID FPP  | PHASE I                         |                  |         |
| Year July 2016/ June 2017 |  | Minimum expenses (if sponsored) | Minimum expenses | Revenue |
| <b>Salaries</b>           |  |                                 |                  |         |
| MID FPP Coordinator       |  |                                 |                  |         |
| <b>EXPERTISE</b>          |  |                                 |                  |         |
| Consultant Hiring         | PBN Implementation Plan                        |                                 |                  |         |
|                           | Ops Approval                                   |                                 |                  |         |
|                           | PANS-OPS initial                               |                                 |                  |         |
|                           | PBN Design                                     |                                 |                  |         |
| <b>ORGANIZATION</b>       |  |                                 |                  |         |
|                           | Implementation PBN Plan                        |                                 |                  |         |
|                           | Ops Approval                                   |                                 |                  |         |
|                           | PBN Design                                     |                                 |                  |         |
| <b>MISSION TRAVEL</b>     |  |                                 |                  |         |
| (travel expenses +DSA)    |  |                                 |                  |         |
|                           |  |                                 |                  |         |
| <b>OFFICE EQUIPMENT</b>   |  |                                 |                  |         |
|                           | Software*                                      |                                 |                  |         |
|                           | Software annual maintenance*                   |                                 |                  |         |
|                           | water, electricity, telephone, internet, fax   |                                 |                  |         |
|                           | documentation                                  |                                 |                  |         |
|                           | office supplies                                |                                 |                  |         |
| <b>MISCELLANEOUS</b>      |  |                                 |                  |         |
|                           |  |                                 |                  |         |
| <b>CONTRIBUTION</b>       |  |                                 |                  |         |
|                           | Active participation States                    |                                 |                  |         |
|                           | SAFE   |                                 |                  |         |
|                           | Donors   |                                 |                  |         |
| <b>ACTIVITY INCOMES</b>   |  |                                 |                  |         |
|                           | Expertise: 2 activities, 5 days each           |                                 |                  |         |
|                           | Procedure design                               |                                 |                  |         |
|                           | <i>Travel expenses, DSA in charge of State</i> |                                 |                  |         |
|                           |  |                                 |                  |         |
| <b>OVERALL TOTAL</b>      |  |                                 |                  |         |

\*Could be provided through in-kind contributions

## INTERNATIONAL CIVIL AVIATION ORGANIZATION

## TECHNICAL CO-OPERATION PROGRAMME

## BUDGET 2017/2018

| Project Budget            |  | In US\$                         |                  |          |
|---------------------------|--|---------------------------------|------------------|----------|
| Programme Title           | MID FPP  | PHASE I                         |                  |          |
| Year July 2017/ June 2018 |  | Minimum expenses (if sponsored) | Minimum expenses | Revenue  |
| <b>Salaries</b>           |  |                                 |                  |          |
| MID FPP Coordinator       |  |                                 |                  |          |
| <b>EXPERTISE</b>          |  |                                 |                  |          |
| Consultant Hiring         | PBN Implementation Plan                        |                                 |                  |          |
|                           | Ops Approval                                   |                                 |                  |          |
|                           | PNAS-OPS initial                               |                                 |                  |          |
|                           | PBN Design                                     |                                 |                  |          |
| <b>ORGANIZATION</b>       |  |                                 |                  |          |
|                           | Implementation PBN Plan                        |                                 |                  |          |
|                           | Ops Approval                                   |                                 |                  |          |
|                           | PBN Design                                     |                                 |                  |          |
| <b>MISSION TRAVEL</b>     |  |                                 |                  |          |
| (travel expenses+ DSA)    |  |                                 |                  |          |
|                           |  |                                 |                  |          |
| <b>OFFICE EQUIPMENT</b>   |  |                                 |                  |          |
|                           | Software annual maintenance*                   |                                 |                  |          |
|                           | water, electricity, telephone, internet, fax   |                                 |                  |          |
|                           | documentation                                  |                                 |                  |          |
|                           | office supplies                                |                                 |                  |          |
| <b>MISCELLANEOUS</b>      |  |                                 |                  |          |
|                           |  |                                 |                  |          |
| <b>CONTRIBUTION</b>       |  |                                 |                  | <b>0</b> |
|                           | Active participation States                    |                                 |                  |          |
|                           | SAFE   |                                 |                  |          |
|                           | Donors   |                                 |                  |          |
| <b>ACTIVITY INCOMES</b>   |  |                                 |                  | <b>0</b> |
|                           | Expertise: activities, 5 days each             |                                 |                  |          |
|                           | Procedure design                               |                                 |                  |          |
|                           | <i>Travel expenses, DSA in charge of State</i> |                                 |                  |          |
|                           |  |                                 |                  |          |
| <b>OVERALL TOTAL</b>      |  |                                 |                  | <b>0</b> |

\*Could be provided through in-kind contributions

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**  
**TECHNICAL CO-OPERATION PROGRAMME**  
**BUDGET 2018/2019**

| Project Budget            |  | In US\$                         |                  |         |
|---------------------------|--|---------------------------------|------------------|---------|
| Programme Title           | MID FPP  | PHASE I                         |                  |         |
| Year July 2018/ June 2019 |  | Minimum expenses (if sponsored) | Minimum expenses | Revenue |
| <b>Salaries</b>           |  |                                 |                  |         |
| MID FPP Coordinator       |  |                                 |                  |         |
| <b>EXPERTISE</b>          |  |                                 |                  |         |
| Consultant Hiring         | PBN Implementation Plan                        |                                 |                  |         |
|                           | Ops Approval                                   |                                 |                  |         |
|                           | PANS-OPS initial                               |                                 |                  |         |
|                           | PBN Design                                     |                                 |                  |         |
| <b>ORGANIZATION</b>       |  |                                 |                  |         |
|                           | Implementation PBN Plan                        |                                 |                  |         |
|                           | Ops Approval                                   |                                 |                  |         |
|                           | PBN Design                                     |                                 |                  |         |
| <b>MISSION TRAVEL</b>     |  |                                 |                  |         |
| (travel expenses+ DSA)    |  |                                 |                  |         |
|                           |  |                                 |                  |         |
| <b>OFFICE EQUIPMENT</b>   |  |                                 |                  |         |
|                           | Software annual maintenance*                   |                                 |                  |         |
|                           | water, electricity, telephone, internet, fax   |                                 |                  |         |
|                           | documentation                                  |                                 |                  |         |
|                           | office supplies                                |                                 |                  |         |
| <b>MISCELLANEOUS</b>      |  |                                 |                  |         |
|                           |  |                                 |                  |         |
| <b>CONTRIBUTION</b>       |  |                                 |                  |         |
|                           | Active participation States (5x20000)          |                                 |                  |         |
|                           | SAFE   |                                 |                  |         |
|                           | Donors   |                                 |                  |         |
| <b>ACTIVITY INCOMES</b>   |  |                                 |                  |         |
|                           | Expertise: activities, 5 days each             |                                 |                  |         |
|                           | Procedure design                               |                                 |                  |         |
|                           | <i>Travel expenses, DSA in charge of State</i> |                                 |                  |         |
|                           |  |                                 |                  |         |
| <b>OVERALL TOTAL</b>      |  |                                 |                  |         |

\*Could be provided through in-kind contributions

**MAEP STEERING COMMITTEE (MAEP SC)**

**TERMS OF REFERENCE**

**A) Purpose of the MAEP SC:**

The MAEP SC is established to act as an advisory body to the MAEP Board, guide its work and ensure that MAEP objectives are accomplished in a timely, effective and efficient manner.

In order to meet its Terms of Reference, the MAEP SC shall:

1. Review regional objectives, plans and users' requirements, and recommend priorities to the MAEP Board.
2. Review plans submitted by the PMO, and recommend priorities, projects/working packages and associated funding arrangements to the MAEP Board.
3. Ensure that the business plans are in line with the MID Air Navigation Strategy.
4. Oversee the activities of the PMO in line with the plans and budgets approved by the MAEP Board.
5. Monitor the financial performance at project level in line with the Board approved budget for each project/working package.
6. Monitor and follow-up the implementation of the MAEP Board Conclusions and Decisions related to the projects/working packages management.
7. Follow up with the PMO the implementation of the agreed projects/working packages and provide regular progress report to the Board.
8. Coordinate technical issues with the appropriate MIDANPIRG subsidiary bodies;
9. Establish Task Forces and implementation bodies, as deemed necessary, provided that:
  - i. the MAEP SC ensure harmonization and avoidance of duplication of efforts;
  - ii. the MAEP SC assumes the role of maintaining accountability for the established task forces and implementation bodies ensuring that they meet their deliverables; and
  - iii. all ATM stakeholders, including Industry and International Organizations, have an active participation in the established task forces and implementation bodies.
10. Monitor the progress of work and provide guidance to the established Task Forces and implementation bodies.

**B) Composition:**

The MAEP SC is composed of:

- a) The MAEP SC Co-Chairpersons
- b) MAEP Board Chairperson
- c) Members/Alternates from the MAEP member States
- d) MAEP Representatives/Alternates from the following Partners:

AACO, ACAC, ACI, AIRBUS, BOEING, CANSO, EUROCONTROL/SESAR JU, FAA-USA, IATA, IFALPA

Other representatives from States and industry may be invited on ad-hoc basis, as required.

**Note 1:** *The MAEP SC meetings are organised by the PMO. The PMO Manager will act as the Secretary of the MAEP SC meetings.*

**Note 2:** *ICAO will attend the MAEP SC meetings as Observer and would provide support as appropriate.*

**Note 3:** *The composition of the MAEP SC might be updated over time to include only Member States and Partners that could participate actively in the MAEP SC and contribute to its work.*

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DRAFT



International  
Civil Aviation  
Organization

Organisation  
de l'aviation civile  
internationale

Organizacion  
de Aviación Civil  
Internacional

Международная  
организация  
гражданской  
авиации

منظمة الطيران  
المدنى الدولى

国际民用  
航空组织

Ref: AN 6/33 – 16/023

26 January 2016

**Subject: ICAO MID Region Flight Procedure Programme**

**Action required: Reply not later than 15 February 2016**

Sir,

I have the honour to refer to the outcome of the Second meeting of the MID Region ATM Enhancement Programme Steering Committee (MAEP SC/2), Cairo, Egypt, 20-22 October 2015, in particular to the following Draft Conclusion:

*DRAFT CONCLUSION 2/2: MID FPP SURVEY*

*That, the ICAO MID Regional Office carry out a survey related to the MID FPP establishment and the identification of flight procedures design and PBN implementation capabilities in the MID Region.*

The attached questionnaire was developed in order to seek States' willingness to join the MID FPP, identify the States' needs and determine the flight procedures design and Performance Based Navigation (PBN) capabilities in the MID Region.

The MID FPP objective is to assist States to develop sustainable capability in the Instrument Flight Procedure (IFP) design, PBN Airspace Design and PBN OPS Approval, including regulatory oversight, so as to meet their commitments under ICAO General Assembly Resolutions A37-11 and the regional requirements (MID Region Air Navigation Strategy, MID Region PBN Implementation Plan and the Doha Declaration on Aviation Safety and Air Navigation in the MID Region) for the PBN implementation. Accordingly, the MID FPP will support States to overcome the following challenges, which have been identified as the main impediments faced by States in meeting the agreed global and regional PBN Performance Targets:

- insufficient number of procedure designers;
- insufficient procedure design work in some States to attain or maintain proficiency;
- lack of airspace and procedure design training: initial, OJT, and/or recurrent;
- lack of knowledge to integrate procedure design efficiently into airspace design;

../.

- insufficient expertise in procedure design organization to provide adequate Quality Assurance of procedures;
- lack of operational approval expertise to obtain proper operational approval and to oversee operators for PBN operations;
- lack of regulatory expertise to oversee the process leading to procedure publication; and
- lack of service provision for ATC/ATM training for PBN implementation.

The MID FPP Concept Document at **Attachment A** provides insight into the objectives, outputs, and resource, hosting and office minimum requirements of the MID FPP. ICAO is presently developing a more comprehensive document “the MID FPP Project Document”, which will include additional detail on project milestones, work plan, personnel resources and financial commitments. The Project Document will be finalized based on the Survey results and coordinated with your Administration at a later stage.

The questionnaire results will be presented to the Second meeting of the Performance Based Navigation Sub-Group (PBN SG/2), Sharm El Sheikh, Egypt, 22-25 February 2016. Therefore, you are kindly requested to complete the questionnaire at **Attachment B** and send it back to the ICAO MID Regional Office as soon as possible, preferably, not later than **15 February 2016**.

Accept, Sir, the assurances of my highest consideration.



Mohamed Smaoui  
A/Regional Director, Cairo

**Attachments**

## Programme Concept Document

**Background:** The DGCA-MID/2 meeting (Jeddah, Saudi Arabia, 20 - 22 May 2013) noted that there is a shortage of expertise in the field of flight procedure design, which is a critical element of PBN and recognized the need for cooperation and exchange of experience between MID States in this field. MIDANPIRG/14 meeting, based on the outcome of its relevant subsidiary bodies, agreed that a MID Flight Procedure Programme to be implemented under the framework of the MID Region ATM Enhancement Programme (MAEP).

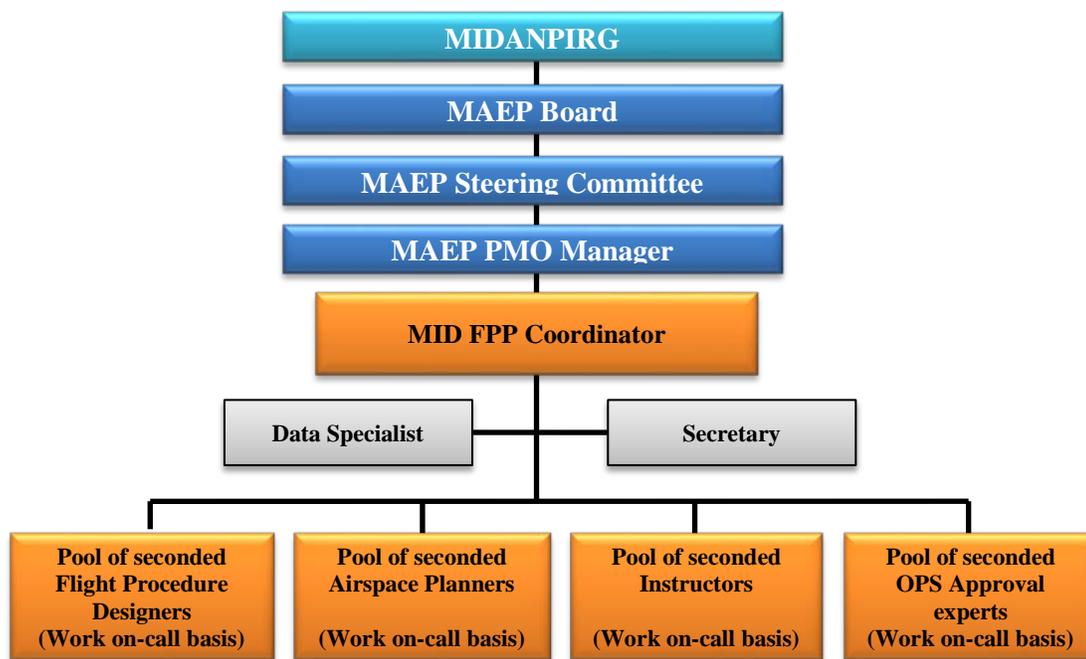
**Programme Duration:** Three years with the option of renewal for a second three-year term.

**Programme Concept:** The MID Flight Procedure Programme is envisioned as a not-for-profit programme of excellence in the field of performance-based navigation implementation. The programme will be based on the creation of an ICAO programme office in a host State, which will utilize best practices in training, automation and quality assurance. The programme will foster all aspects of PBN implementation including training, procedure design, validation and quality assurance, airspace design, and operational approval.

**Programme Goal:** The goal of the programme is to foster the implementation of safe and efficient flight procedures with specific attention on PBN procedures and airspace design techniques to facilitate benefits of PBN including approaches with vertical guidance. Inter alia the following support activities are envisaged:

- training and support for local airspace and procedure designers;
- design of IFR procedures for those States without procedure design capability;
- training about regulatory processes to approve procedures (including PBN procedures);
- training about validation and quality assurance process;
- PBN training for ATC; and
- training and support on PBN operational approval for aircraft operators.

**Resource Requirements:** The Civil Aviation Administrations in the MID Region are invited to participate by signing the MID FPP Project Document and by making contributions including the possibility of financial or in-kind contributions. From the start of the programme, the FPP Office will build its capacity to provide assistance, training, quality assurance, procedure and airspace design, and OPS approval support to the Participating States. Additional staff will be requested as necessary to meet the demand. The MID FPP proposed organizational structure is reflected in the Graph below, the Manager of the MAEP Project Management Office (PMO) will be recruited through the MAEP project, acts as the manager of the MID FPP and reports to the MAEP Steering Committee, which recommends appropriate actions to the MAEP Board. The progress of the MAEP projects is reported to MIDANPIRG. Table 1 provides a breakdown of resource requirements and responsibilities:



MID FPP organizational Structure

| Resource  | Responsibility                        | Remarks   |
|---|---------------------------------------|---|
| ICAO Programme Coordinator<br>(Chief Procedure Designers) | ICAO                                  | One full time ICAO recruited Programme Coordinator responsible for the coordination of ICAO support and monitoring of the MID FPP.<br>Oversees instrument approach procedure design and the provision of training |
| Expert Consultants  | ICAO                                  | Short term consultants to assist in the start-up of the MID Office and its functionality. <i>(If required)</i>  |
| Procedure Designers                                       | States<br>Organizations               | Pool of 5 to 10 Qualified PANS-OPS Instrument Procedure Designers, including both conventional and PBN designs. At least Five (5) designers qualified in Quality Assurance process.                               |
| Instructors   | States<br>Organizations               | Pool of 2 to 4 Qualified Instructors to instruct on Procedure Design, Airspace Design, and Operations Approvals.  |
| Airspace Planners   | States<br>Organizations               | Pool of 3 to 5 Qualified Airspace Planners  |
| OPS Approval  | States<br>Organizations               | Pool of 2 to 4 Qualified OPS Approval experts with working experience with CAAs (Regulatory authorities)  |
| Data Specialist   | Host State<br>States<br>Organizations | One aeronautical information data specialist responsible for the Aeronautical Information Database.<br><i>(might be recruited with the advancement of the programme)</i>  |
| Administrative and Information Technology support staff   | Host State                            | One administrative assistant/secretary and one information technology specialist<br><i>(might be recruited with the advancement of the programme)</i>   |
| Site host and Infrastructure                              | TBD                                   | Office space, furniture, etc.   |
| Automated Procedure Design Software                       | TBD                                   | Includes software, funding and personnel training.  |

Table 1. MID FPP Resources

**Criteria to be considered for the hosting of the MID FPP to be provided by the Host State**

- a) Provision of adequate office facilities.
- b) Suitably equipped classroom(s) for MID FPP training courses.
- c) Operating and maintenance expenses as related to the office facility, including, electricity, water internet connection, local and international phone connections, cleaning, office security, etc.
- d) Provision of ease of movement/entry/exit and residence visas for staff and their families.
- e) Provision of adequate transportation; the location must be easily accessible by air, etc.
- f) Provision of a reasonable cost of living, including accommodation for staff.
- g) Ability to meet satisfactory conditions for the security of staff and their families.
- h) Facilitation of the provision of immunities and privileges for staff and their families.
- i) Facilitation/support for the holding of meetings, including visa facilitation and the availability of hotels, transportation, etc.
- j) Provision of amenable working/living environment/conditions.

**The following Table presents the minimum MID FPP Office requirements:**

| <b>Office Space</b> |   |
|---------------------|---|
| 1 office            | <ul style="list-style-type: none"> <li>• Programme Coordinator</li> </ul>   |
| 1 office            | <ul style="list-style-type: none"> <li>• PANS-OPS Expert</li> </ul>   |
| 1 room              | <ul style="list-style-type: none"> <li>• Lab for procedure design</li> </ul>  |
| 1 room              | <ul style="list-style-type: none"> <li>• Classroom/ Meeting room (Adequate space for 20 students at least)</li> </ul> |

| <b>Furniture Equipment</b> |  |
|----------------------------|--|
| Coordinator                | <ul style="list-style-type: none"> <li>• Desk and chair</li> <li>• Storage/File cabinet</li> <li>• Book case</li> <li>• Conference table (6 persons) and chairs</li> <li>• Monitor/Webcam for conferences</li> </ul> |
| Offices                    | <ul style="list-style-type: none"> <li>• Standard furniture for all offices</li> <li>• Desk, chair, storage/file cabinet, book case – per person</li> </ul>  |
| Classroom<br>OJT room      | <ul style="list-style-type: none"> <li>• Adequate space for 20 students</li> <li>• 4 drawing tables</li> <li>• White boards</li> <li>• Student tables</li> <li>• Projector</li> </ul>                                |
| Meeting room               | <ul style="list-style-type: none"> <li>• Adequate equipment for 20 persons</li> </ul>  |

| <b>IT Equipment</b> |   |
|---------------------|---|
|                     | <ul style="list-style-type: none"> <li>• Secure Wi-Fi internet connection</li> <li>• Desk-top phone with international services</li> <li>• 1 Mobile phone (Coordinator) <ul style="list-style-type: none"> <li>– Laptop computer with docking station</li> <li>– monitor 19"</li> </ul> </li> <li>• Data Specialist when seconded <ul style="list-style-type: none"> <li>– Office computer equipment (monitor 19")</li> </ul> </li> <li>• External storage disks</li> <li>• 1 desktop multi-functional colour copier/scanner/printer</li> </ul> |

| <b>Procedure Design Equipment</b> |   |
|-----------------------------------|---|
| Offices                           | <ul style="list-style-type: none"> <li>• Maps Storage cabinet</li> <li>• Maps A3 printer</li> <li>• A0 scanner</li> <li>• A0 printer Semi-professional</li> <li>• GPS</li> <li>• 1 server and 2 workstations (PCs)</li> </ul>   |
| Classroom                         | <ul style="list-style-type: none"> <li>• Computer Data Projector</li> <li>• Supplies for training sessions : set squares, protractors, compasses, rulers and pocket calculators</li> </ul>  |
| Software                          | <ul style="list-style-type: none"> <li>• 2 Procedure Design Software Licenses</li> <li>• 2 GOOGLE EARTH licenses</li> <li>• 2 ACROBAT READER licenses</li> <li>• 2 COREL DRAW licenses</li> <li>• 2 virtual machines (such as VMWARE) licenses for the remotely use of the Procedure Design Software</li> </ul> |

-----

|   |                             |   |  |  |
|---|-----------------------------|---|--|--|
| <b>Please complete and sent it back to the ICAO MID Regional Office by fax or email before 15 February 2016:</b>  |                             |   |  |  |
| <b>Fax: +20-2-2267-4843, email: <a href="mailto:icaomid@icao.int">icaomid@icao.int</a> cc: <a href="mailto:ekhoury@icao.int">ekhoury@icao.int</a></b>   |                             |   |  |  |
| <b>State:</b>   |                             |   | <b>Date:</b>   |  |
| <b>Name and contact details for the person completing the form:</b>   |                             |   |  |  |
| <b>State PBN Focal Point</b>  |                             |   |  |  |
| <b>Name:</b>  |                             | <b>Title:</b>                             |  |  |
| <b>Administration:</b>  |                             | <b>Department:</b>                        |  |  |
| <b>Office Phone:</b>  |                             | <b>Fax:</b>                               |  |  |
| <b>Mobile:</b>  |                             | <b>email:</b>                             |  |  |
| <b>Working with:</b>  |                             | <b>Regulator</b> <input type="checkbox"/> |  | <b>Service Provider:</b> <input type="checkbox"/>        |
| <b>Procedure Designer and Runway Information</b>  |                             |   |  |  |
| How many trained procedure designers are there in your State?   |                             |   |  |  |
| How many of the trained procedure designers in your State work for the State regulator?   |                             |   |  |  |
| How many of the trained procedure designers in your State work for the State's procedure design service provider?   |                             |   |  |  |
| How many procedure designers work for the State training organization?  |                             |   |  |  |
| How many of the trained procedure designers in your State have successfully completed advanced training in PBN procedure design?  |                             |   |  |  |
| Does your State use a 3rd party provider for procedure design services?   |                             |   |  | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| How many international runway ends are there in your State?   |                             |   |  |  |
| How many domestic-only runway ends with operations of aircraft over 5700 kg are there in your State?  |                             |   |  |  |
| <b>Procedure Designer Training</b>  |                             |   |  |  |
| How many class slots do you anticipate needing in the next years for the following:   |                             |   |  |  |
|   | Procedure Designer training |   | Airspace planner   | OPS approval   |
|   | Initial                     | Advanced (PBN)                            |  |  |
| One year  |                             |   |  |  |
| Two years   |                             |   |  |  |
| Three years   |                             |   |  |  |
| <b>If a MID Flight Procedure Programme is established would your State use the following services :</b>   |                             |   |  |  |
| Quality assurance of completed flight procedure design package(s)   |                             |   | Yes <input type="checkbox"/>   | No <input type="checkbox"/>                              |
| Assistance with the development of PBN-related regulations  |                             |   | Yes <input type="checkbox"/>   | No <input type="checkbox"/>                              |
| On-the-job training of procedure designers  |                             |   | Yes <input type="checkbox"/>   | No <input type="checkbox"/>                              |
| Assistance with procedure design, including use of automation   |                             |   | Yes <input type="checkbox"/>   | No <input type="checkbox"/>                              |
| Assistance with the development of Quality Assurance for flight procedure design  |                             |   | Yes <input type="checkbox"/>   | No <input type="checkbox"/>                              |
| Complete design and quality assurance of procedures   |                             |   | Yes <input type="checkbox"/>   | No <input type="checkbox"/>                              |
| Procedure design: Ground validation Yes <input type="checkbox"/> No <input type="checkbox"/>  |                             |   | Flight validation Yes <input type="checkbox"/> No <input type="checkbox"/> |  |
| PBN procedures coding/data checking   |                             |   | Yes <input type="checkbox"/>   | No <input type="checkbox"/>                              |
| <b>Financial support of the MID Flight Procedure Programme (MID FPP)</b>  |                             |   |  |  |
| Is your State interested in hosting the FPP? If yes, please attach details of your offer to host.   |                             |   | Yes <input type="checkbox"/>   | No <input type="checkbox"/>                              |
| Will your State contribute financially to the start-up or annual operating expenses of the FPP? If yes, please attach details of your offer to provide financial support.   |                             |   | Yes <input type="checkbox"/>   | No <input type="checkbox"/>                              |
| Would your State be interested in nominating procedure designer(s), Airspace Planner(s), OPS-Approval expert(s), PBN Instructor(s), to work remotely or on-call basis to support the activities of the MID FPP?<br>If yes, please attach details of your offer, including the qualification and experience of the designated experts. |                             |   | Yes <input type="checkbox"/>   | No <input type="checkbox"/>                              |

For any enquiry please contact Mr. Elie El Khoury RO/ATM/SAR email [ekhoury@icao.int](mailto:ekhoury@icao.int)

## ICAO MID Flight Procedure Programme (FPP) Survey

| State          | Replied   | How many trained procedure designers are there in your State? | How many of the trained procedure designers in your State work for the State regulator? | How many of the trained procedure designers in your State work for the State's procedure design service provider? | How many procedure designers work for the State training organization? | How many of the trained procedure designers in your State have successfully completed advanced training in PBN procedure design? | Would Benefit from Services | Willing to Host | Provided Hosting Offer | Willing to Support  |                       |
|----------------|-----------|---|---|---|--|--|-----------------------------|-----------------|------------------------|---|-----------------------|
|                |           |   |   |   |  |  |                             |                 |                        | Financial to the start-up or annual operating expenses of the FPP | Expertise             |
| Bahrain        | Yes       | Non   | Non   | Non   | Non  | Non  | Yes                         | NO              | N/A                    | Yes   | NO                    |
| Egypt          | Yes       | 10  | 1   | 10  | 4  | 8  | Yes                         | Yes             | Yes                    | Yes   | Yes                   |
| Iran           | Yes       | 7   | 2   | 5   | 4  | 3  | Yes                         | Yes             | Yes                    | Yes   | Yes                   |
| Iraq           | -         | -   | -   | -   | -  | -  | -                           | -               | -                      | -   | -                     |
| Jordan         | Yes       | 3   | 1   | 2   | 0  | 3  | Yes                         | NO              | N/A                    | NO  | Yes                   |
| Kuwait         | Yes       | 2   | 0   | 2   | 2  | 0  | Yes                         | NO              | N/A                    | NO  | NO                    |
| Lebanon        | Yes       | 2   | 0   | 0   | 0  | 0  | Yes                         | Yes             | N/A                    | Yes   | Yes                   |
| Libya          | -         | -   | -   | -   | -  | -  | -                           | -               | -                      | -   | -                     |
| Oman           | -         | -   | -   | -   | -  | -  | -                           | -               | -                      | -   | -                     |
| Qatar          | Yes       | 4   | 0   | 4   | N/A  | 3  | Yes                         | NO              | N/A                    | NO  | Yes                   |
| Saudi Arabia   | Yes       | 8   | 3   | 5   | 0  | 5  | NO                          | NO              | N/A                    | NO  | NO                    |
| Sudan          | Yes       | 4   | 2   | 4   | 0  | 4  | Yes                         | Yes             | Yes                    | Yes   | Yes                   |
| Syria          | -         | -   | -   | -   | -  | -  | -                           | -               | -                      | -   | -                     |
| UAE            | Yes       | 8   | 2   | 7   | 0  | 8  | Yes                         | NO              | N/A                    | Yes   | NO                    |
| Yemen          | -         | -   | -   | -   | -  | -  | -                           | -               | -                      | -   | -                     |
| <b>Results</b> | <b>10</b> | <b>48</b>   | <b>11</b>   | <b>39</b>   | <b>10</b>  | <b>34</b>  | <b>9 Yes<br/>1 NO</b>       | <b>Yes</b>      | <b>3 offers</b>        | <b>6 Yes<br/>4 NO</b>   | <b>6 Yes<br/>4 NO</b> |

- END -