

AERONAUTICAL INFORMATION MANAGEMENT

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Dutch Caribbean - Air Navigation Service Provider

FOR REF Only

# Manual of Standards

AERONAUTICAL INFORMATION MANAGEMENT DC-ANSP

## Manual of Standards

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## 0 Administration and Manual Control

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## 0.2 Foreword

Aeronautical information/data plays a vital role in the safety, regularity and efficiency of international air navigation. Aeronautical data has become more significant with the implementation of area navigation, required navigation performance and sophisticated computer based air navigation systems, such as Flight Management System.

Aeronautical information/data is provided by the Aeronautical Information Services department of DC-ANSP, through Integrated Aeronautical Information Package consisting of Aeronautical Information Publication, AIP Amendments, AIP Supplements, NOTAM and Pre-flight Information Bulletins, and Aeronautical Information Circulars. The Integrated Aeronautical Information Package constitutes fundamental tool for Aviation Industry as the data so published is utilized by Airlines, General Aircraft Operators, ATS Personnel, Aviation Service Providers, etc.

Pursuant to the Civil Aviation Regulations of all six Dutch Caribbean territory islands, the ICAO Annexes 4, 11, 15; Documents 4444, 7383, 7910, 8126, 8400, 8585, 8643, 9674, 9859, 9991 and this Manual of Standards - Aeronautical Information Management (issued by Dutch Caribbean - Air Navigation Service Provider), specify the national standards, requirements and procedures pertaining to the provision of aeronautical information services for the air navigation services within the Curaçao Flight Information Region and Sint Maarten's Terminal Maneuvering Area.

The processes and procedures in this Manual are based on those stipulated in the above mentioned ICAO Annexes, Documents and other relevant documents, determined by DC-ANSP AIM unit to provide guidance to the Dutch Caribbean AIS for proper execution of AIS related tasks for the Dutch Caribbean territory islands, namely: Curaçao, Aruba, Sint Maarten, and Bonaire, Saba and St. Eustatius (BES-Islands).

Responsibility for the content of this Manual of Standards belongs to DC-ANSP AIS department. The AIS department will maintain this document, including appendices, as complete, accurate and up-to-date as possible. Amendments to this Manual of Standards are carried out under the authority of DC-ANSP and the AIS/ARO Manager, and are the responsibility of DC-ANSP's AIS department. Readers should forward advice of errors, inconsistencies or proposals for improvement to this manual to the address stipulated below:

CONTACT INFO

## 0.3 Definitions and Abbreviations

### 0.3.1 Definitions

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### 0.3.2 Abbreviations

A	
AAR	Air Navigation and Aerodrome Services Regulation
AFS	Aeronautical Fixed Services
AIC	Aeronautical Information Circular
AIP	Aeronautical Information Publication
AIRAC	Aeronautical Information Regulation and Control
AIRMET	Information concerning en-route weather phenomena which may affect the safety of low-level aircraft operations
ARO	Air Traffic Services Reporting Office
AIS	Aeronautical Information Services
ATC	Air Traffic Control
ATS	Air Traffic Service
ATM	Air Traffic Management
ATIS	Automatic Terminal Information Service
AUA	Aruba IATA Code
B	
BES Islands	Bonaire, St. Eustatius and Saba
C	
CAA	Civil aviation authority
CRC	Cyclic Redundancy Check
CTA	Control area
CUR	Curaçao (IATA code)
D	
DC-ANSP	Dutch Caribbean - Navigation Service Provider
E	
eAIP	Electronic Aeronautical Information Publication
EUX	St. Eustatius (IATA code)
F	
FPL	Flight information region
FIR	Flight information region
I	
IAC	Instrument approach chart
IAIP	Integrated Aeronautical Information Package
ICAO	International Civil Aviation Organization
IMC	Instrument meteorological conditions
NOF	International NOTAM Office
NOTAM	Notice to Airmen
P	
PIB	Pre-flight information bulletin
Q	
QA	Quality Assurance

**QMS**            Quality Management System

**R**

**RPL**            Repetitive flight plan

**S**

**SARPS**        Standards and Recommended Practices

**SMS**            Safety Management System

**SXM**            St. Maarten (IATA code)

**SUP**            Supplement (AIP Supplement)

**T**

**TMA**            Terminal control area

**TNCA**            Aruba International

Airport- Reina Beatrix

**TNCB**            Bonaire International Airport - FLAMINGO

**TNCC**            Curaçao International  
Airport - HATO

**TNCE**            ST.Eustatius Airport-F.D Roosevelt

**TNCM**            St. Maarten Princess Juliana- International Airport  
Airport

**TNCS**            Saba Juancho E. Yrausquin- Airport

**TWR**            Aerodrome control tower or aerodrome control

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## 0.4 Manual Structure, Layout and Control

### 0.4.1 Manual structure

The MoS is divided into 11 chapters and 8 Appendices. Each chapter is divided into sections and each section is divided into paragraphs, which may be further divided into subparagraphs, see *Example 1* below.

#### Example 1:

0 Administration and control	→	chapter
0.4 Manual Structure, Layout and Control	→	section
0.4.1 Manual structure	→	paragraph
Ad1. Example	→	subparagraph

### 0.4.2 Layout

Each page header contains:

→ On the left side:

- a company logo of DC-ANSP; and
- the words “AIM - MoS” written above the logo, which refers to the title of the document (AERONAUTICAL INFORMATION MANAGEMENT - MANUAL of STANDARDS).

→ On the right side:

- a rectangle with blue outline, including a center aligned text stating the Version and Effective Date (*ddMMMyyyy*) of the corresponding page.  
*Each page can have a different Version and Effective Date from another page. The mentioned Version and Effective Date on each page is correspondent to the amendment carried out on that page only.*

Each page footer contains:

- The chapter and page number;
- The first number states the chapter number, followed by a -dash (-), and followed by the page sequence number that is reset to 0 for each chapter.

The AIS/ARO manager, ARO Supervisor or assigned officer(s) are authorized to alter chapters, sections, paragraphs, subparagraphs, header and footer, for the sake of the document's continuing effectiveness and proper functioning. The document template automatically handles all numbering.

### 0.4.3 Editing rules

The typeface to be used for the MoS is **Trebuchet MS**. The standard text body size is 11 pt.

The use of capitals should be avoided, except for the first character of a sentence, abbreviations and proper names.

For conciseness, the pronoun 'he' is used throughout the MoS. Where appropriate, the pronoun 'she' should be assumed.

All dates shall be formatted (*Example 2*) as 'dd MMM yyyy' to prevent confusion between American and European dating formats. 'dd' is the 2-digit day of the month, 'MMM' is the three-letter English abbreviation of the month, 'yyyy' is the 4-digit year.

**Example 2:**

08 OCT 2017 or 21 MAY 2017.

#### **0.4.4 Amendment control**

Changes in procedures, department structure, AIS/ARO contact information or other details, requires the issue of an amendment.

There is no amendment scheduled for the MoS; instead, amendments are issued on an 'as necessary' basis. Amendments are made on a page level. Amendments are numbered and shown in [paragraph 0.1 Records of Amendments on page 0-2](#). Amendments can be identified by the Version number and effective date of the page on the right side in the header of each page.

With each amendment and/or new addition, the Records of Amendment, cover page and amended page(s) is(are) updated. The cover page states the date of the amendment, in order to aid in identifying the effectiveness of the current copy version.

Proposals to amend the MoS may be initiated by any department or person within DC-ANSP, and must be submitted to the AIS department, which will evaluate the proposal for compliance with the relevant section of the MoS and applicable regulations. All amendments to the MoS will be discussed and pre-approved by the AIS/ARO Department.

The AIS Manager whom is responsible for the MoS, will send the relevant amendment(s) to the DC-ANSP's Quality Assurance and Safety department, which will review the amendment(s) submitted. Once an overall approval has been given, the AIS Manager will ensure that the revision of the master copy of the MoS is carried out accordingly. All registered copy holders will be required to sign and return a receipt confirming incorporation of the amendment in their copy of the MoS.

The amendments or changes made will be indicated by a black vertical bar (left side of the page) next to the revised item.

Deleted sections will be indicated by a black left pointing arrow (←) on the left side of the page.

Inserted sections will be indicated by a black right pointing arrow (→) on the left side of the page.

#### **0.4.5 Insertion of amendments**

Upon receipt of a printed amendment or digital copy thereof, the holder of the MoS copy is responsible for correct insertion in the manual. Amendments are to be inserted per page at the first opportunity, but no later than the effective date. Old pages shall be destroyed (shredded if possible) and disposed of immediately.

## 0.6 Copy Holders

The following shall receive amendments and revisions.

Copy No.	Hard Copy Holder	Electronic version
01 (MASTER)		✓
02		✓
03		✓
04		✓
05		✓
06		✓
07		✓
08		✓
09		✓
10		✓
11		✓

The electronic version of the MoS shall contain diagonally as a watermark the words "OFFICIAL COPY" in the background of each page.

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**1 Introduction**

# Introduction

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The Manual of Standards - Aeronautical Information Management, contains the standards, requirements and procedures pertaining to the planning and operation of Dutch Caribbean - Air Navigation Service Provider Aeronautical Information Services (further referred to as Dutch Caribbean AIS) and the provision of aeronautical charts.

The MoS contains the safety policies, procedures and practices to allow the department to achieve its objectives. Nothing in this manual is meant to supersede any standard, regulation, order, or instruction of DC-ANSP, the concerned Civil Aviation Authority or ICAO. Discrepancies noted between this manual and the regulator should be brought to the attention of the manager of the AIS/ARO department.

This document is divided into the following chapters:

- 0 Administration and Manual Control
- 1 Introduction
- 2 Operation Requirements
- 3 Quality Management System
- 4 Safety Management System
- 5 Training and Personnel Requirements
- 6 Aeronautical Information Publication
- 7 Aeronautical Information Circular
- 8 Aeronautical Information Regulation and Control
- 9 NOTAM
- 10 Flight Plan

This Manual is based mainly on compliance with the following ICAO documents:

- ICAO Annex 4 - Aeronautical Charts;
- ICAO Annex 11 - Air Traffic Services;
- ICAO Annex 15 - Aeronautical Information Services;
- ICAO Doc 4444 - Air Traffic Management;
- ICAO Doc 7383 - AIS Provided by State Services;
- ICAO Doc 7910 - Location Indicator;
- ICAO Doc 8126 - Aeronautical Information Services Manual;
- ICAO Doc 8400 - ICAO Abbreviations and Codes;
- ICAO Doc 8585 - Designators for Aircraft Operating Agencies, Aeronautical
  - Authorities and Services;
- ICAO Doc 8643 - Aircraft Type Designator;
- ICAO Doc 9674 - World Geodetic System - 1984 (WGS - 84) Manual;
- ICAO Doc 9859 - Safety Management Manual; and
- ICAO Doc 9991 - AIM Training Guidance Manual.

Where there is a difference between a standard in this Manual and that of the above-mentioned ICAO documents, the standard in this Manual shall prevail.

Differences, where they exist, between the standards in this Manual and those contained in the ICAO Annexes shall be published in section GEN 1.7 of the Dutch Caribbean AIP and also notifies differences to ICAO.

In this Manual, standards are preceded by the word “shall”, whereas recommended practices are preceded by the word “should”. An AIS department shall comply with all standards at all times and should endeavor to comply with all recommended practices.

The AIS department shall ensure that the units of measurement as specified in Manual of Standards - Units of Measurement to be used in Air and Ground Operations are used in the provision of aeronautical information services and aeronautical charts.

When the Dutch Caribbean AIS is not able to comply with any standards and/or recommended practices specified or referenced in this Manual, the AIS unit shall apply to the four Dutch Caribbean territory islands its Civil Aviation Authorities for exemption or deviation from the relevant standards. Applications shall be supported in writing with the reasons for such exemption or deviation including any safety assessment or other studies undertaken and where appropriate/applicable, an indication of when compliance with the current standards can be expected.

Any exemption or deviation granted to the Dutch Caribbean AIS shall also be recorded in the Operations Guide ([Chapter 2.3](#)). This chapter also contains the details of the exemption or deviation, such as the reason that the exemption or deviation was requested and any resultant limitations or conditions imposed.

The Appendices to this MoS shall illustrate and provide the personnel of the AIS and ARO department with the unit's common operating procedures, checklists, forms, and emergency response procedures in current use.



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**2 Operation Requirements**

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## 2.1 General AIM Operation Requirements

### 2.1.1 Necessary Data Objective

Dutch Caribbean AIS shall ensure that aeronautical information/data necessary for the safety, regularity or efficiency of air navigation is made available in a form in conformity with ICAO Annex 15 and suitable for the operational requirements of:

- a) those involved in flight operations, including flight crews, flight planning and flight simulators; and
- b) the ATS units responsible for flight information service and the services responsible for pre-flight information.

### 2.1.2 IAIP Publication

The AIS department shall receive, and/or originate, collate, edit, format, publish/store and distribute aeronautical information/data concerning the Curaçao FIR and Sint Maarten TMA, the airspaces and States in which it has the responsibility as an AIS.

Aeronautical information shall be published as an Integrated Aeronautical Information Package (IAIP) consisting of:

- a) AIP / eAIP, including amendment service;
- b) Supplements to the AIP;
- c) NOTAM;
- d) Pre-flight Information Bulletins;
- e) AIC; and
- f) Checklists and lists of valid NOTAM.

All elements of Integrated Aeronautical Information Package and Flight Plans are published by DC-ANSP AIS in English language.

Units of Measurement used in the distribution of aeronautical information/data are conform to the tables contained in the Dutch Caribbean AIP GEN.2.1.

### 2.1.3 WGS-84 Requirements - Charting

The AIS department shall ensure that published geographical coordinates indicating latitude and longitude are expressed in terms of the World Geodetic System - 1984 (WGS-84) geodetic reference datum as in ICAO Doc 9674 - World Geodetic System - 1984 (WGS-84) Manual.

## 2.1.4 Automation

Automation enabling digital data exchange is introduced with the objective of improving the speed, quality, efficiency and cost-effectiveness of aeronautical information services.

Current system in use is AIXM 5.1 ready and complies with the Aeronautical Information Management concept.

Further details on the system program can be found in **Appendix**.....

## 2.1.5 Human Factors

The AIS department shall ensure that the organization of the aeronautical information services as well as the design, contents, processing and distribution of aeronautical information/data shall take into consideration human factors principles which facilitate their optimum utilization.

Due consideration shall be given to the integrity of information where human interaction is required and mitigating steps taken where risks are identified.

## 2.1.6 Metadata Collection

Metadata shall be collected for aeronautical data processing and exchange points. This metadata collection shall be applied throughout the aeronautical information data chain, from survey/data originator, for the distribution to the next intended user.

The metadata to be collected shall include, as a minimum:

- a) the name of the organization or entity performing the function;
- b) the function performed; and
- c) the data and time of operation.

*Note. - The function performed indicates any action of originating, transmitting or manipulating the data.*

## 2.2 Manual of Standards Requirements

### 2.2.1 Compliance

The AIS department shall submit the complete MoS to the corresponding Civil Aviation Authorities. The information presented in the Appendices of the MoS shall serve to demonstrate how the AIS department will comply with the requirements of this Manual.

It also serves as a reference document agreed between the AIS department and the corresponding Civil Aviation Authorities, with respect to the standards, conditions and level of service to be maintained for the provision of aeronautical information services.

### 2.2.2 MoS Contents

The contents of the MoS shall contain:

- a) the information required of the AIS department as mentioned in this Manual;
- b) an organization chart of the AIS department that shows the position of each personnel and the name, qualification, experience, duties and responsibilities of personnel who are responsible for ensuring the compliance of the organization with the requirements in subparagraph (a);
- c) an operation plan for the aeronautical information services; and
- d) information on the compliance of the AIS with the applicable requirements of ICAO Annex 4 and 15 and this Manual of Standards - Aeronautical Information Services.

### 2.2.3 MoS Sections

The MoS may consist of a main manual section, covering the main areas that need to be addressed, as well as a separate section supporting documents and manuals (Appendices).

### 2.2.4 Issuance of the MoS

The MoS is an important document and shall be issued under the authority of the DC-ANSP AIS department, in collaboration with the DC-ANSP Quality Assurance and Safety Department.

The AIS department shall control the distribution of the operations manual and ensure that it is amended whenever necessary to maintain the accuracy of the information in the operations manual and to keep its contents up to date.

## 2.3 Service Level Agreement

Service Level Agreement (*SLA*): is a written formal agreement / contract between a service provider and its customer to define the agreed level of quality of that service. The “customer” is considered to be the data originator, and the “service provider” is considered to be the Aeronautical Information Service.

It defines the services provided, the indicators associated to said services, acceptable and non acceptable levels, the responsibility of the data originator and the Aeronautical Information Service, and the measures to be adopted under specific circumstances.

Since most of the data is part of the Integrated Aeronautical Information Package (*IAIP*) and is disseminated to all the aeronautical community and registered clients, both national and international, the Agreement ensures that both parties have a clear understanding of the bases on which data shall be provided, received and used.

The SLA’s characteristics is based on the fact that ICAO Annex 15 section 3.2, states the need to implement a Quality Management System in AIS which, in turn, means that data entering the system must have a level of quality that meets the requirements contained in that Annex.

The SLA describes the data which has to be delivered by the Data Originator including the:

- Metadata: Information about data (which shall be submitted to AIS whenever an amendment or new information regarding operational data is to be published in the AIP, an AIC or AIP SUP), or the set of features associated to any data. Therefore, metadata describe the content, quality, format, and other characteristics of a resource. In general, they respond to the following questions:
  - **What:** Title and description of a data set or service
  - **When:** When the data set or service, and the various updates, if any, were created. It may also indicate until when this data set is reliable.
  - **How:** How data was obtained and processed and how can it be accessed. In the case of service metadata, it must indicate how to access or use the service.
  - **Where:** The geographical area or extension covered by the data, based on latitude/longitude, x and y coordinates, or an administrative area described by its name.
  
- Accuracy: A degree of conformance between the estimated or measures value and the true value.
  
- Data accuracy: The smallest difference that can be reliably distinguished by a measurement process.
  
- Data resolution: Number of units or digits with which a measured or estimated value is expressed or used.

→ Integrity (aeronautical data): The classification is based on the potential risk resulting from the use of altered data. Aeronautical data are classified as:

- a) Ordinary data: very low probability that the use of altered ordinary data will seriously jeopardize the safe continuation of the flight and landing of an aircraft to such an extent as to cause a catastrophe;
- b) Essential data: low probability that the use of altered essential data will seriously jeopardize the safe continuation of the flight and landing of an aircraft to such an extent as to cause a catastrophe; and
- c) Critical data: high probability that the use of altered critical data will seriously jeopardize the safe continuation of the flight and landing of an aircraft to such an extent as to cause a catastrophe.

The basic objectives of the SLA are as follow:

- Improve communication.
- Protect against excessive expectations.
- Define mutually agreed standards.
- Measure service effectiveness.

The description of the services follows of a set of rights and obligations of both the data originator and the AIS Unit shall comply with in relation to the provision and handling, respectively, of the data involved.

The applicable regulations to the data originator include their rights and obligations.

## 2.4 Organization of AIS

The objective of AIS is to ensure the flow of information necessary for the safety, regularity and efficiency of international civil aviation.

### 2.4.1 Establishment of the AIS

As stated in ICAO Doc 8126 chapter 3.1.2.3 of the ICAO AIS Manual, The AIS should be established as a separate entity within a civil aviation administration. This could be as an entity with direct responsibility to the head of the civil aviation administration or as an entity at the same level of other Air Navigation Services, such as the Aerodrome Services or Air Traffic Services (*ATS*). It should not be established as a part of any of these services.

In addition, AIS officers should be remunerated at least at the same level as personnel in the AGA, COM and ATS divisions.

### 2.4.2 Technical orientation and status

The main user of aeronautical information is the pilot. Another category of user represents those engaged in airline operational control, aeronautical charts provider, document producing agencies, air traffic services, military divisions and the civil aviation authorities.

The aeronautical information service is technically oriented in the nature of the services it provides.

In this connection it must be emphasized that:

- a) Dutch Caribbean - AIR Navigation Service Provider is responsible for the aeronautical information provided by the AIS department, under the authority of the Civil Aviation Authorities of the Dutch Caribbean territory islands;
- b) the role and the importance of aeronautical information changed significantly with the implementation of area navigation (RNAV), required navigation performance (RNP) and airborne computer-based navigation systems; and
- c) corrupt or erroneous aeronautical information can potentially affect the safety of air navigation;
- d) The AIS shall undergo the transition from AIS to AIM, compliant to the Port of Spain declaration.

Consequently, it is essential to establish a high level of technical proficiency within the AIS department. In addition, the AIS should be given the appropriate status in accordance with the important role it has in the provision of accurate aeronautical information.



### 2.4.3 Organization - Size and scope of the AIS department

The volume of aircraft operations and the extent to which civil aviation facilities are provided with aeronautical information and aeronautical data will determine the size and scope of the AIS department.

While the amount of information to be processed will vary from State to State, the nature of the responsibilities remains basically the same.

### 2.4.4 Working arrangements

Efficient working arrangements within DC-ANSP have underlined a number of common factors which contribute to a sound organizational base. The main considerations are the coordination of AIS department with:

- a) related technical services (ATC, CNS, Automation);
- b) the international NOTAM office (NOF);
- c) aerodrome/heliport operators;
- d) cartographic services, even if provided by separate entity;
- e) printing and distribution services; and
- f) efficient communication facilities, particularly AFTN links, connection to the Internet (e-mail)

For this coordination to function effectively the proper DC-ANPS AIS Organizational chart is designed.

*Fig. 01 - Location AIS within DC-ANSP*

*Fig. 02 - AIS Department Organization Chart*

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**3 Safety Management System**

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## 3.1 Quality System Introduction

Quality Management System (*QMS*) shall be implemented and maintained by the AIS department including all functions of an AIS.

Quality management should be applicable to the whole aeronautical information data chain from data origination to distribution to the next intended user, taking into consideration the intended use of data.

*Note 1 - Quality management may be provided by a single quality management system or serial quality management systems.*

*Note 2, - Service level agreement concerning data quality between data originator and distributor, and between distributor and next intended user may be used to manage the aeronautical information data chain.*

## 3.2 QMS Certification

The QMS implemented in paragraph 3.3.1 shall follow the International Organization for Standardization (ISO) 9001-2015 quality assurance standards.

The DC-ANSP AIS department shall be certified by an approved organization, in order to comply with the ICAO AIS to AIM transition and related Standards and Requirements.

## 3.3 QMS Policies, processes and procedures

The QMS established by the AIS department shall include the necessary policies, processes and procedures, including those for the use of metadata, to ensure and verify that aeronautical data is traceable throughout the aeronautical information data chain so as to allow any data anomalies or errors detected in use to be identified by root cause, corrected and communicated to affected users.

### **3.4 Quality for accuracy, resolution and integrity**

The QMS established by the AIS department shall provide users with the necessary assurance and confidence that the aeronautical information/data satisfy the aeronautical data quality for accuracy, resolution and integrity as specified in Appendix 7 of ICAO Annex 15, and the data traceability requirements through the provision of appropriate metadata as specific in 2.1.5.

The system shall also provide assurance of the applicability period of intended use of aeronautical information/data as well as that the agreed distribution dates will be met.

The AIS department shall comply with the order of accuracy for aeronautical information/data as specified in ICAO Annex 11, Chapter 2, paragraph 2.19 and Annex 14, Volumes I and II, Chapter 2.

The order of publication resolution and data integrity of aeronautical information/data shall comply with Annex 15, paragraph 3.2.9 and Appendices 1 and 7.

### **3.5 32-bit Cyclic Redundancy Check**

The AIS department shall ensure that electronic aeronautical data sets, shall be protected by the inclusion in the data sets of a 32-bit cyclic redundancy check (CRC) implemented by the application dealing with the data sets, when applicable.

### **3.6 QMS Documentation Requirements**

Documentation for a Quality Management System must include:

1. documented procedures; and
2. documents required by the organization to ensure the effective operation and control of its processes.

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**4 Safety Management System**

# Index Chapter 4

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## 4.1 Introduction

The AIS department shall establish a Safety Management System (*SMS*), the requirements of which are stipulated in ICAO Annex 11, Chapter 2, paragraphs 2.27.3 and 2.27.4.

As a minimum, the SMS shall:

- a) identify safety hazards;
- b) ensure the implementation of remedial action necessary to maintain
- c) agreed safety performance;
- d) provide for continuous monitoring and regular assessment of the
- e) safety performance; and
- f) aim at a continuous improvement of the overall performance of the
- g) safety management system.

## 4.2 SMS Framework

The SMS to be established shall comply with a SMS framework consisting of the following components:

1. Safety Policy and Objectives;
2. Safety Risk Management; and
3. Safety Assurance.

### 4.2.1 Safety Policy and Objectives

#### 4.2.1.1 Management commitment and responsibility

The SMS shall have a clear definition of the philosophy and fundamental approach the service provider will adopt for the management of safety within its organization. This includes setting the safety policies and how they relate to the operation and maintenance processes of the service provider. The policies shall also clearly encapsulate the senior management's commitment to improve safety in the organization as a top priority, with the provision of the necessary human and financial resources for its implementation.

The safety policy shall be periodically reviewed to ensure it remains relevant.



#### 4.2.1.2 Safety accountabilities

The SMS shall have clear lines of safety accountabilities within the organization, including a direct accountability for safety on the part of senior management. Safety accountabilities shall be documented and communicated throughout the organization.

#### 4.2.1.3 Appointment of key safety personnel

The AIS department's Chief AIS/ARO and ARO Supervisor shall serve as the focal point and driving force for the implementation and maintenance of SMS activities. However, the AIS department's Chief AIS/ARO and ARO Supervisor should not be held solely responsible for safety.

Specific safety activities and the functional or operational safety performance and outcome are the responsibility of the relevant operational or functional managers and staff.

#### 4.2.1.4 SMS implementation plan

The AIS department shall develop and maintain an SMS implementation plan that defines DC-ANSP's approach to manage safety in a manner that meets the organization's safety needs. The SMS implementation plan shall be endorsed by management of the organization.

A DC-ANSP Safety Committee is formed to set safety policies, direct and oversee SMS implementation and promotion and review safety performance. It should also serve as a forum to discuss any safety-related issues. The committee should be well represented to include key operational staff.

#### 4.2.1.5 Documentation

A SMS manual is produced by the DC-ANSP's QA&SM department, as this is the key instrument for guiding and communicating DC-ANSP's SMS approach and methodology to the whole organization.

Operating an SMS generates large amount of data, document and records. A systematic record of these documents should be maintained and kept up to date. Such records would also be required as evidence of ongoing SMS processes including hazard identification and risk assessment.

## 4.2.2 Safety Risk Management

The AIS/ARO's activities which form part of the core of the Safety Management System (SMS) of DC-ANSP and in order to meet the company's policy and the ICAO SARPS and regulatory requirements.

### 4.2.2.1 Hazard identification

The AIS department shall develop and maintain a formal process for effectively collecting, recording, acting on and generating feedback about hazards in operations, based on a combination of reactive, proactive and predictive methods of safety data collection.

### 4.2.2.2 Safety risk assessment and mitigation process

The AIS department shall develop and maintain a formal risk management process that ensures analysis (in terms of probability and severity of occurrence), assessment (in terms of tolerability) and control (in terms of mitigation) of risks to an acceptable level.

## 4.2.3 Safety Assurance

The AIS/ARO's Safety assurance includes organizational arrangements and systematic processes for continuous surveillance and recording of Safety performance monitoring and measurement (4.2.3.1) of the safety management processes and practices. Safety assurance is the means to demonstrate the Management of change (4.2.3.2) to ensure that the objectives of safety is properly applied and achieved. Safety Assurance is an intrusive and enquiring procedure for the constant improvement of the SMS (4.2.3.3).

### 4.2.3.1 Safety performance monitoring and measurement

Regulatory requirements related to safety management and implementation of SMS mandates the development and maintains of verification of the safety performance of the organization.

(1) The Dutch Caribbean AIS shall develop and maintain the means to verify the safety performance of the organization compared to the safety policy and objectives, and validate the effectiveness of safety risks controls.

(2) The Dutch Caribbean AIS shall establish and submit the safety performance indicators and targets of its SMS to the Quality Assurance and Safety Management (QASM) department for agreement. Details on the establishment of the safety performance indicators and targets can be found in ICAO Doc 9859. The safety performance indicators and targets should be periodically reviewed by the *Safety Committee* to ensure they remain relevant.

#### 4.2.3.2 Management of change

A change can introduce new hazards, impact the appropriateness of existing safety risk mitigation strategies and/or impact the effectiveness of existing safety risk mitigation means. Changes may be external or internal to the organization, such as: changes in regulatory requirements and reorganization of AIM, or management changes, new equipment and new procedures. Management of change is needed in order to have a formal process for systematic and proactive identification of hazards. In addition, this allows appropriate mitigation strategies and measures to be applied to all changes concerning the safety of services provided by AIM.

The Dutch Caribbean AIS shall develop and maintain a formal process to identify changes within the organization which may affect established processes and services. Working together with QASM, a risk assessment should be carried out before the implementation of such changes.

#### 4.2.3.3 Continuous improvement of the SMS

The Dutch Caribbean AIS shall develop and maintain a formal process to identify the causes of sub-standard performance of the SMS, determining the implications of sub-standard performance in operations, and eliminating or mitigating such causes, in order to ensure the continual improvement of the SMS.

#### 4.2.3.4 Safety audit

Safety auditing is a core SMS activity, providing a means of identifying potential problems before they have an impact on safety. Regular internal safety audits should be conducted by QASM to assure the effectiveness of its SMS.

The safety audit should be conducted by a team of trained auditors who are familiar with the operation of the AIS. Nevertheless, this team should also be independent and not involved with the day to day operation of the AIM service.

Records of such safety audits, corrective actions, and follow up should be kept for a period of three years.

#### 4.2.3.5 Safety Surveys

To examine procedures or processes related to a specific operation and provide a flexible and cost-effective method to identify areas for safety improvement within AIM, safety surveys will be conducted by the AIM, focusing on internal and external clients, as well as on AIM personnel.

### **4.2.4 Safety Promotion**

Safety promotion plays a supporting, yet important, role in achieving effective control of safety risks during service delivery. To promote safety, training and education on this area is required **(a)**, including a well set communication culture **(b)**.

#### **a. Safety training and education**

The Dutch Caribbean AIS shall follow the DC-ANSP developed safety training programs, to ensure that the AIM personnel are trained and competent to perform the SMS duties. The scope of the safety training shall be appropriate to each individual's involvement in the SMS.

**b. Safety communication**

The Dutch Caribbean AIS shall communicate and promote the organization's SMS processes and activities to its entire staff, to ensure that staff is fully aware of the SMS via the AIM Bulletin and information provided by DC-ANSP.

**c. AIM Bulletin**

The Dutch Caribbean AIS publishes internally a bulletin which serves as a contribution to the promotion of Safety in the department.

This AIM bulletin shall be published by the AIS/ARO department two (2) to three (3) times a year. It shall be written by the whole department.

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**5 Training and Personnel Requirements**

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## 5.1 Training and Development Policy

Procedures which ensure that all its personnel obtain the correct skills and competencies required in the provision of AIS and ARO are a priority. The Dutch Caribbean AIS developed a suitable training program and policy together with the DC-ANSP Training Center.

DC-ANSP recognizes that to maintain a committed and competent workforce, it needs to ensure that there is adequate training and development provided for all personnel. The purpose of training (5.1.1) is to equip personnel (5.1.2) with the necessary skills, knowledge, attitude and fundamentals (5.1.3), in order to meet the organization's needs in relation to its objectives.

By investing in people and corporate training programs (5.1.4) through their training, DC-ANSP ensures a personnel's full potential to cope with the company needs (5.1.5), while fulfilling personal development and job satisfaction. Making sure Training processes and procedures are stated and met with it (5.1.6) is how the AIS Department plans to accomplish the above mentioned.

### 5.1.1 Policy brief & purpose

The Dutch Caribbean AIS Training and Development Policy, refers to the company's learning and development programs and activities. In the modern competitive environment, Personnel need to replenish their knowledge and acquire new skills to do their jobs better. This will benefit both them, the department and DC-ANSP. Personnel need to be confident about improving efficiency and productivity, as well as finding new ways towards personal development and success.

### 5.1.2 Scope

This policy applies to all permanent, full-time or part-time, Personnel of Dutch DC-ANSP within the AIS/ARO Department.

This policy doesn't cover supplementary Personnel like contractors or consultants.

### 5.1.3 Policy fundamentals

It's the responsibility of the AIS/ARO Manager, ARO Supervisor and the employee, to seek new learning opportunities. It's the manager's and/or supervisor's responsibility to coach the personnel and identify development needs.

The DC-ANSP HR Department and/or Training Center shall facilitate any personnel development activities and processes needed.

Personnel trainings may include the following examples:

- Formal training sessions (individual or corporate)
- Employee Coaching and Mentoring
- Participating in conferences
- On-the-job training
- Job shadowing
- Job rotation
- Specific skilled required training

As part of the AIS/ARO Department's development provisions, subscriptions or educational material, in order for its personnel to have access to news, articles and other material that can aid in becoming better at their duties, shall be provided. There is one condition, which must be taken into account: Subscription/Material should be job-related.

#### **5.1.4 Corporate training programs**

We might occasionally engage experts to train our Personnel. The company will cover the entire cost in this case. Examples of this kind of training and development are:

- Equal employment opportunity training
- Diversity training
- Leadership training for managers
- Conflict resolution training for Personnel

This category also includes training conducted by internal experts and managers. Examples are:

- Training new Personnel
- Training teams in company-related issues (e.g. new systems or policy changes)
- Training Personnel to prepare them for promotions, transfers or new responsibilities
- Personnel won't have to pay or use their leave for these types of trainings. Attendance records may be part of the process.

#### **5.1.5 Other types of training**

The AIS/ARO personnel should show willingness to improve by asking the department's manager/supervisor for direction and advice. Personnel should try to make the most out of the trainings by studying and finding ways to apply knowledge to the related work.

#### **5.1.6 Procedures**

These procedures should be followed when an AIS/ARO Personnel want to attend external training sessions or conferences:

1. Personnel (or their team leaders) shall identify and inform of the need for training;
2. Personnel and team leaders shall discuss potential training programs or methods and come up with suggestions;
3. The Manager shall contact HR and briefly present the proposal;
4. HR researches the proposal, with attention to budget and training content;
5. HR approves or rejects the proposal. If they reject it, they should provide Personnel with reasons in writing;
6. If HR and/or Management approve the request, arrangements will be made by the HR department or the manager for dates, accommodation, reserving places etc.;
7. If an employee decides to drop or cancel a training, they'll have to inform the manager and HR immediately;
8. In cases where training ends with examination, Personnel are obliged to submit the results.

Generally, the company will cover any training fees including registration examination (one time), and if applicable the transportation, accommodation and daily allowance.



Any other covered expense that a personnel has will be reimbursed, after the personnel brings all relevant receipts and invoices.

If a personnel wants subscriptions, they should contact the department's manager to do so, informing of the cost and any other details in writing.

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## 5.2 Training Requirements

The Dutch Caribbean AIS shall provide to its new personnel an initial training (5.2.1), which includes an On the Job Training (5.2.2), in order to complete the Basic Initial Training for AIS or ARO. As a continuance improvement, keeping its personnel up-to-date and properly qualified, recurring refresher training is needed (5.2.3).

### 5.2.1 Initial training

The AIS/ARO job description depicts the job purpose, key responsibilities, and outcome to be achieved of each personnel. The developed program for the AIS/ARO course illustrates the various modules and training topics all personnel have to undergo to perform their duties accordingly.

The AIS/ARO course outline consists of a wide variety of subjects for this function, in order to give high quality of service to all its clients. The following courses/subjects are to be followed by each AIS ❖ or ARO▲ personnel:

- Aviation Law; ❖▲
- Principles of Navigation; ❖▲
- Basic Air Traffic Management; ❖▲
- Aircraft Basics; ❖▲
- Quality and Safety Management System; ❖▲
- Human Performance; ❖▲
- Equipment and Systems; ❖▲
- ARO Unit; ❖▲
- ARO Functions; ❖▲
- Radio (Written & Oral); ▲
- Meteorology; ❖▲
- Aerodromes; ❖▲
- Aeronautical Information Services (AIS); ❖
- SPATIA (AIM/IDS) → NOTAMs, FPL, PIB; ❖▲
- AMHS (AFTN/NOTAM) Ubitech/IDS; ❖▲
- IAS Suite (IDS)❖:
  - Dynamic Data Operations;
  - AIP & eAIP;
  - AICM/AIXM Training.
- IAS Suite AeroDB IDS; ❖
- FrameMaker; ❖
- Cartography ❖

The Initial AIS course has a duration of +/- 9 months for the theory part.  
The Initial ARO course has a duration of +/- 5 months for the theory part.

During the Basic Initial Training for AIS/ARO progress tests are taken, which must be passed with a minimum of 75%. This theoretical part of the Basic Initial Training shall be completed by all new personnel with theoretical exams, with minimum of 75% to pass.

### 5.2.2 On the Job Training

The Dutch Caribbean AIS shall ensure that its personnel undergo a suitable period of supervised On the Job Training (OJT) before being deployed for duties. The individual

training records for each of personnel, includes a training plan detailing the courses completed. The OJT form can be found in **appendix #####**.

During the OJT period the trainee AIS officer practices all the duties of an AIS Officer, under close supervision of the AIS Manager or a qualified AIS Officer.

During the OJT period the trainee ARO officer is scheduled on the roster, and practices all the duties of an ARO Officer, under close supervision of a qualified ARO Officer or the ARO Supervisor.

The OJT form shall be filled out daily by the on-duty AIS/ARO Officer supervising the trainee at the end of each shift of the trainee. At the end of each roster cycle/work week, the ARO Supervisor / Department Manager executes a verbal review with the trainee.

The OJT has a duration of +/- 2 months.

A final review is carried out with the trainee, together with the ARO Supervisor and/or Department Manager for approval of the OJT period.

Final acceptance of the trainee within the AIS/ARO department lies with DC-ANPS's Management and Department Manager.

### **5.2.3 Refresher Training**

The Dutch Caribbean AIS shall continuously conduct a review of the training plan for each personnel, in order to identify any gaps in competency, changes in training requirement and prioritize the type of training required for the scheduled Refresher training period.

Refresher training shall be provided by DC-ANSP to the AIS/ARO personnel at least every two years.

## 5.3 Personnel Requirements

One of the most important factors in developing and maintaining the AIS/ARO service on a high level lies on the personnel executing the duties. In order to provide a high quality of service it is recommended that the evaluating and supporting personnel of AIS/ARO exhibit certain characteristics, such as flexibility, professionalism, proactive attitude, assertiveness, thorough training, and good communication skills.

Sufficient number of competent personnel to perform the operation of the service, and an analysis of the number of personnel required in order to perform the AIS/ARO duties and workload required, shall be established and regularly reviewed.

### AIS Competency:

- Have a minimum of a HBO-degree with English and Math as primary subjects;
- Languages, English, Dutch and Spanish are essential for the region;
- Be skilled in computer usage of:
  - MS Word, Excel, Outlook
- Geography knowledge;
- Background of operational aviation industry is essential.

### ARO Competency:

- Have a minimum of a MBO/HAVO-degree with English and Math as primary subjects
- Languages, English, Dutch and Spanish are essential for the region
- Be skilled in computer usage of:
  - MS Word,
  - Excel, and
  - Outlook.
- Geography knowledge;
- Background of operational aviation industry is essential.

### AIS/ARO Officer Selection:

During the selection of an AIS- or ARO Officer candidate the following steps are carried out:

- A pre-selection test;
- Interview(s) with the selection team (HR, Department head(s), Training Center);
- A basic (aero)medical examination;
- A psychological assessment;
- A background check (screening);
- On the job training.

## 5.4 AIS/ARO Personnel Licensing

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**6 Aeronautical Information Publication**

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## 6.1 AIP Requirements

The AIP forms the basic element of the Integrated Aeronautical Information Package (*IAIP*). It contains aeronautical information of a permanent nature and temporary changes to this information of long duration. It is the task of the AIS provider to provide a comprehensive document, to maintain it up-to-date and to make it simple to use.

The **Dutch Caribbean AIS department** shall publish an Aeronautical Information Publication (*AIP*) containing current information, data and aeronautical charts, related to the airspaces in which the States of Curaçao, Aruba, Sint Maarten and the BES Islands pertain. The contents of the AIP shall be in accordance with Chapter 4 and Appendix 1 of Annex 15.

The AIS department shall ensure that the AIP to be published is self-contained and includes:

- a) a statement of the competent authority responsible for the air navigation facilities, services or procedures covered by the AIP;
- b) the general condition under which the services or facilities are available for international use;
- c) A Contracting State shall record in its AIP any significant differences between its national regulations and practices and the related ICAO provisions. A list of the significant differences with the ICAO SARPS that the States of Curaçao, Aruba, Sint Maarten and the BES Islands have filed with ICAO with regards to its own regulations and practices.

The primary purpose of reporting differences in the AIP is to promote safety and efficiency in air navigation by ensuring that governmental and other agencies, including operators, concerned with international civil aviation are made aware of all national rules and practices in so far as they differ from those prescribed in the ICAO Annexes, Procedures for Air Navigation Services and Regional Supplementary Procedures.

If identified in AIP, significant differences would not only provide a clear picture of the operational significance of the differences to users of that document, but facilitate the process of isolating and eliminating those that do not have an important bearing on the safety of air navigation or are inconsistent with the objectives of the ICAO provisions.

It is intended that any such differences be included in GEN 1.7 of the AIP. Any deviation from SARPs that needs to be taken into account in aircraft operations, as indicated below, constitutes a “significant difference”.

All significant differences notified to ICAO must also be included in the AIP in a form that will enable a user to differentiate easily between the national rules and practices of CAAP and the related ICAO provisions. They comprise differences from:

- a) any of the International Standards;
- b) Recommended Practices that are important for the safety of air navigation or, in the case of facilitation, for the speedy handling and clearance through customs, immigration, etc. of aircraft and the loads they carry;



- c) Procedures for Air Navigation Services (PANS) that are important for the safety of air navigation; and
- d) Regional Supplementary Procedures that are important for the safety of air navigation.

The AIS department shall establish a system to disseminate and make the AIP (including electronic version [*eAIP*]), AIP Amendment, AIC (*chapter 7*) and AIP Supplement available upon request.

### **Content and Format**

The AIP must be self-contained and include a table of contents. It should be published in loose-leaf form, unless the complete publication is re-issued at frequent intervals.

The Dutch Caribbean AIP is divided into three (3) parts:

- PART 1 – GENERAL (*GEN*), consisting of five (5) sections, contains information of an administrative and explanatory nature which is not of such significance/importance that NOTAM need be issued;
- PART 2 – EN-ROUTE (*ENR*), consisting of seven (7) sections, contains information concerning airspace and its use; and
- PART 3 – AERODROMES (*AD*), consisting of three (3) sections, contains information concerning aerodromes/heliports and their use.

The AIP must be dated. The Dutch Caribbean AIP is not issued in loose-leaf form, nevertheless, each page is dated. The date, consisting of the day, month (by name) and year, is the effective date (AIRAC) of the information, and is placed on the upper right corner.

### **Charts to be included in the AIP**

The following charts, if applicable/available, for aerodromes/heliports listed in Part 3 – Aerodromes (AD) – of the AIP, must, when available, form part of the AIP.

These charts in Part 3 – Aerodromes (AD), Section 2, Subsection 24 for aerodromes, or Section 3, Subsection 23 for heliports, include the tabulations for each aerodrome or heliport concerned.

The charts, as appropriate and if applicable/available, should be included in the following sequence, for each aerodrome:

1. Aerodrome/Heliport Chart – ICAO
2. Aircraft Parking/Docking Chart – ICAO
3. Aerodrome Ground Movement Chart – ICAO
4. Aerodrome Obstacle Chart – ICAO Type A (for each runway)
5. Precision Approach Terrain Chart – ICAO (precision approach Cat II and III runways)
6. Area Chart – ICAO (departure and transit routes)
7. Radar Minimum Altitude Chart – ICAO
8. Standard Departure Chart – Instrument (SID) – ICAO

9. Area Chart – ICAO (arrival and transit routes)
10. Standard Arrival Chart – Instrument (STAR) – ICAO
11. Instrument Approach Chart – ICAO (for each runway and procedure type)
12. Visual Approach Chart – ICAO
13. Bird concentrations in the vicinity of the aerodrome.

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## 6.2 AIP Amendment

The AIS department shall ensure that permanent changes to the AIP are published as AIP AIRAC Amendments. Each AIP AIRAC Amendment shall be allocated a serial number, which shall be consecutive. Each AIP Amendment page, including the coversheet, shall display a publication date. A brief indication of the subjects affected by the amendment shall be given on the cover sheet.

The AIS department should establish and publish the publication dates for its AIP AIRAC Amendments in the AIP. The AIP is amended or re-issued at regular intervals, to ensure the information contained in the AIP is complete and up to date.

In accordance with the DC ANSP stakeholders it is agreed on that the AIP AIRAC Amendments shall occur on even AIRAC Cycles. Please refer to *page ###* for the AIRAC calendar.

The AIS department creates amendments by means of the IDS Aerodatabase Suite (IAS) software. Procedures which are needed to compile the amendment are given in *Appendices I*.

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## 6.3 AIP Supplement

The AIS department shall ensure that temporary changes of long duration (three [3] months or longer) and information of short duration which contains extensive text and/or graphics are published as AIP Supplement.

Each AIP Supplement shall be allocated a serial number which shall be consecutive and based on the calendar year. All AIP Supplement pages shall be kept in the AIP as long as all or some of their contents remain valid.

The AIS provider shall issue a checklist of valid AIP Supplements at intervals of not more than one month. This information shall be issued through the medium of the monthly printed plain language list of valid NOTAM (*chapter 9*).

Distribution of (AIRAC) Supplements occur at AIS/ARO department via several channels. Distribution take place electronically only via email, DVD and DC ANSP eAIS website: <http://dc-ansp.org/eAIS>.

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## 6.4 Electronic AIP

The AIS department should publish the AIP, AIP Amendment, AIP Supplement and AIC in a format that allows for displaying on a computer screen and printing on paper.

*Note 1. - This composite electronic document is named “Electronic AIP” (eAIP) and may be based on a format that allows for digital data exchange.*

The provided eAIP, the information content of the eAIP and the structure of chapters, sections and sub-sections shall follow the content and structure of the paper AIP.

When provided, the eAIP should be available on a physical distribution medium (CD, DVD, etc.) and/or online on the Internet. The Dutch Caribbean eAIP is provided upon client request/specific registration on a DVD.

The eAIP for the Dutch Caribbean territory islands is found on the DC-ANSP’s AIS website in the publications tab. The direct link is as follow:

<http://dc-ansp.org/eAIS/eAIP-Publications/history-en-GB.html>.

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**7 Aeronautical Information Circular**

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**8 Aeronautical Information Regulation & Control**



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**9 NOTAM**

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**10 Flight Plan**

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## 10.1 General Flight Plan Requirements

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**11 Documentation and Records**



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10.1 GENERAL FLIGHT PLAN REQUIREMENTS..... 2

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## 11.1 Documents and Records to be maintained

The AIS department shall maintain all documents and records which are necessary for the operation of the service. Copies of these documents shall also be made available to personnel when needed. These documents shall include but not limited to:

1. the MoS for Aeronautical Information Services;
2. CAR-ANS Part 4 and Part 15, Doc 8126, Doc 9859 and other relevant ICAO documents;
3. records of all incoming and outgoing aeronautical information to be identified by serial number and date;
4. records of each person who is authorized to check, edit and publish aeronautical information;
5. records of internal quality and safety audit reports;
6. records of reporting, investigation and correction of error.

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## 11.2 Document Control

The AIS department shall establish a process for the authorization and amendment of the documents stipulated in paragraph 11.1.1 to ensure that they are constantly updated.

The AIS department shall establish a system to ensure that:

1. the current version of the documents can be readily determined;
2. amendments to the MoS and other related documents are controlled in accordance with established quality management principles; and
3. only current versions of documents are available.

The AIS department shall ensure that where documents are held as computer based records and where paper copies of computer based records are made, they are subjected to the same control as paper documents.

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## 11.3 Retention of documentation and

The AIS department shall establish a system for the recording and retention of data.

Records shall include but are not limited to:

1. ATS data;
2. procedure design documentation;
3. NOTAM error report;
4. Retention of NOTAM requests and publications;
5. Flight Plan error report;
6. Retention of Flight Plan envelopes;
7. Customer Service report.

The AIS department shall establish process that ensures reports are maintained and updated and shall include:

1. internal and external audit reports; and
2. management review meetings and reports.

The DC-ANSP HR and Training Center departments are responsible for the maintenance of the records of the following documents for the AIS department:

1. job descriptions;
2. details of personnel qualification and experience;
3. training reports; and
4. training records.

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## 11.4 Documented Procedures

ISO requirements of the Quality System calls for six (6) Quality Management System procedures to be in place. These are mandatory written procedures that describe how your organization performs the activities described in each of the six Quality Management System procedures described below:

1. Control of Documents;
2. Control of Quality Records;
3. Internal Audit;
4. Control of Non-conformity;
5. Corrective Action; and
6. Preventative Action.

Documented Procedures should indicate who does what, where and when they do it, why they do it, and how. It is up to the organization itself to decide the level of detail that is included in the Documented Procedures. Largely, this will depend on:

1. methods used;
2. skills needed;
3. training; and
4. extent of supervision required.

Documented Procedures should not contain what you would like to happen in the organization, but rather an accurate description of what really happens. A robust Quality Management System will involve staff, to the extent that they can contribute, in the writing of Documented Procedures. The earlier and the more staff that are involved will lead to greater staff involvement, understanding and “buy-in” to the procedures and practices.

## 11.5 Control of Quality Records

### 11.5.1 Quality Records

Quality Records are required to provide evidence of conformance with requirements and of effective operation of the quality management system. Procedures must be documented for the identification, storage, retrieval, protection, retention time and disposition of quality records.

A Quality Record is a record produced following a procedure in a Quality System document. This record provides a reference when reviewing progress and/or performance, and is often a form.

Each Quality System document must include definitions of the Quality Records to be produced and kept.

Quality records will provide AIS with information to help manage the business better. This is the part that enables you to “show how you did it”.

In some instances, retention periods will be dictated by legal or regulatory requirements, financial requirements or customer’s specifications. Details about specific retention periods should be recorded in the documented procedures.

#### Examples of Quality Records

Examples of Quality Records include:

1. customer orders, specifications and requirements;
2. meeting notes, e.g. Management review;
3. audit reports;
4. non-conformance records (service failure reports, customer complaints);
5. corrective action records;
6. files on suppliers, e.g. evaluation of suppliers and their performance history;
7. process control records;
8. inspection and testing reports;
9. training records; and
10. records of goods received and delivered.

### 11.5.2 Records: indexing, filing and storage

Records, indexing and filing can be in any appropriate form; hard copy, or electronic.

Storage needs to be appropriate to the circumstances and the medium and should be such that the risk of deterioration, damage or loss is minimized.

Records shall be storage for a specific period of time, defined as follow:

- 1.

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**12 Automated AIS System**

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10.1 GENERAL FLIGHT PLAN REQUIREMENTS..... 2

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## 12.1 General Flight Plan Requirements

### 11.1 Basic Principles

11.1.1 The principal objective of developing an automated AIS system is to improve, through automation, the overall speed, efficiency, accuracy and cost-effectiveness of the AIS.

11.1.2 For an automated or computer-based AIS system, the following material focuses on the advantages and flexibility to be derived from such an application. Essentially, an automated AIS system should be capable of providing a more flexible pre-flight information service by tailoring its automation processes to cater to a wider spectrum of users. As such, the tailoring/selection functions required for this service should be performed by the automated AIS system with a minimum of manual intervention so that duplication of work can be reduced if not eliminated entirely. For reasons of cost-effectiveness, such a service must strike a balance between the degree of sophistication of the system required and the amount of information to be accepted in the various categories of bulletins. It is necessary therefore to:

- 1) select a simple, flexible and efficient system for storage and retrieval of information; and
- 2) develop methods of providing a greater selectivity of information in accordance with user requirements.

11.1.3 As such, the system should be designed with the intent of avoiding incompatibilities, divergences and unnecessary duplication of effort thereby ensuring standardization of procedures, products and services to end-users. It is highly desirable that all AIS systems be automated along the same or similar lines in order to ensure compatibility.

### 11.2 User's operational requirements in an automated AIS system

11.2.1 The overall system should provide a service that is capable of satisfying users' operational requirements, which include:

- 1) availability of the latest PIB of the specific type needed (e.g. route or area);
- 2) provision of information on specific items for given areas required by flight planning services, ATS, AIS or other users;
- 3) availability of NOTAM entered into the system after a specific date-time group, to facilitate briefing; and
- 4) provision of immediate notification capability for items of urgent operational significance.

11.2.2 Automated pre-flight information systems for the supply of aeronautical information/data for self-briefing, flight planning and flight information service should:

- 1) provide for continuous and timely updating of the system database and monitoring of the validity and quality of the aeronautical information stored;
- 2) permit access to the system by flight operations personnel, including flight crew members, aeronautical personnel concerned and other aeronautical users, through a suitable means of telecommunications;
- 3) ensure provision, in paper copy form, of the aeronautical information/data accessed, as required;
- 4) use access and interrogation procedures based on abbreviated plain language and ICAO location indicators, as appropriate, or based on a menu-driven interface or other appropriate mechanism as agreed between the civil aviation authority and operator(s) concerned; and
- 5) provide for rapid responses to user requests for information.

11.2.3 On the basis of the foregoing, an automated AIS system should be able to provide end-users, such as pilots, ATS and military, with PIB geared to meet their specific requirements.

### 11.3 Types of information to be provided

11.3.1 The system should provide NOTAM covering the area of service, the area of responsibility and the area of coverage. The system should additionally provide the following PIB and lists:

- a) route type bulletin containing NOTAM relevant to the aerodrome/heliport of departure, the planned route based on FIR crossed, the aerodrome/heliport of destination, and alternate aerodromes/heliports;
- b) area type bulletin containing NOTAM relevant to FIR;
- c) aerodrome type bulletin containing NOTAM concerning any aerodrome/heliport or group of aerodromes/heliports;
- d) immediate notification items;
- e) checklists of NOTAM, FIR and aerodrome/heliport; and
- f) list of NOTAM for a specific period or NOTAM entered into the system after a specific date-time group.

11.3.2 The updating of PIB should be covered by the items listed in 11.3.1 d), e) and f), or by request for a new PIB. The system features described in 11.2 should permit PIB to be tailored to the needs of users and should provide flexible options for information content ranging from full system data coverage to data of urgent operational significance. PIB should be provided in a standard format.

#### **11.4 Database contents**

11.4.1 The following lists the types of data which can be made available in an automated AIS system centre database. These data are divided into three categories:

a) ***Static data***

Data common to civil aviation and documented in AIP or other related documents. Such data include FIR, aerodromes, nav aids, areas, maps, rules, and NOTAM related to these subjects;

b) ***Basic data***

Data required by an AIS system to enable NOTAM processing, i.e. reference lists, standard routes, distribution files, the NOTAM Selection Criteria, association criteria as well some static data.

c) ***Dynamic data***

National and foreign (worldwide NOTAMN, NOTAMC, NOTAMR, ASHTAM, all checklists received, all system messages exchanged, and other aeronautical information such as AIC).

AERONAUTICAL INFORMATION MANAGEMENT

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# Manual of Standards Appendices

AERONAUTICAL INFORMATION MANAGEMENT DC-ANSP

## Manual of Standards

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### Appendices

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***Appendix 1:  
Department Operating Procedures***

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## ***A1.1 COMMON PROCEDURES***

The AIS/ARO department has numerous procedures which are common for both departments. These procedures are as follow:

- Customer Service:
  - Telephone Etiquette
  - Voicemail Procedures
  - Email Correspondence
  - Client Briefing:
    - Phone
    - Email
    - Personal
- ARO Roster
- Watch log AIS
- Watch log ARO
- Archiving
  - AIP
  - International AIPs
- MET Briefing
- AIM Instant Messaging Workgroup Application
- Company Phone

### ***A1.1.1 Customer Service***

Customer service is the provision of service to customers before, during and after the service which has to be delivered.

#### ***Ad1. Telephone Etiquette***

One of the main AIS/ARO's activities is to broadcast aeronautical information. The telephone is one of the tools used in the daily AIS/ARO's activities. The telephone is a link to communicate with the rest of the world. The amount of professionalism and proper phone use, matters on the phone.

The following ***RULES OF ETIQUETTE*** shall be applied by all AIS/ARO personnel when addressing a client on the phone:

- Speak directly into the mouthpiece.
- Do not eat or chew gum while talking on the telephone
- If someone walks into your office while you're talking on the telephone, ask the caller if you may put him/her on hold briefly. Refer to "PLACING CALLERS ON HOLD" procedures below.
- Don't place the handset in the cradle until you've pressed the HOLD button.
- Don't lay the receiver on the desk, without placing the caller on hold.
- Return to caller and complete the call as soon as possible.



The following method to **ANSWERING THE TELEPHONE/GREETING** shall be applied by all AIS/ARO personnel when addressing a client on the phone:

- 
- Answer the telephone whenever possible and answer within 2 to 3 rings.
- Identify yourself and your organization:
- i.e. "DC-ANSP ARO Office, with John Doe, may I help you?"
- Use a greeting that is going to give the caller the impression that you are professional and pleasant.

The following method shall be used for **PLACING CALLERS ON HOLD** by all AIS/ARO personnel:

- Remember to ask your caller *"May I please place you on hold?"* or *"May I put you on hold?"* **before** doing so.
- If you take the time to ask your caller to hold, be sure to listen to the response.
- After placing your caller on hold, check back periodically (between 30 to 45 seconds). Give them the option to continue to hold if it will take longer to find information **OR** offer to call them back, confirm call back number.
- When returning to your caller, remember to thank them for waiting.
- If your caller cannot hold, offer to take a message; transfer to another party; **OR** arrange with the caller to return the call at a specific time.
- If you are not in a position to ask your caller to hold, tell the caller, "Please Hold" **before** pressing the hold button.

The following method shall be used for **TRANSFERRING CALLS** by all AIS/ARO personnel:

- Tell the caller the REASON you are transferring the call before you do so. Then ASK if it is all right to transfer their call.
- Call the department or person where you are transferring a call and make sure that they can take the call.
  - If they are able to take the call, give them the person's name, their request, and any other relevant information.
- When you're not sure to whom a call should be transferred, take their name and number and find out where the call needs to be directed. Also give them your name and number as a reference in case the appropriate party does not contact them.

The following method shall be used for **TAKING PHONE MESSAGES** by all AIS/ARO personnel:

- A good phone message includes:
- Caller's name (get the correct spelling),
- Company or department
  - Phone number
  - Date and time of call
  - Message

- Action to be taken (i.e., “Please Call,” “Will call back,” or “URGENT”)

Maintain confidentiality with all messages. Either turn the message over or fold them in half, so there is no danger that they can be read by other staff or visitors.

AIS/ARO personnel shall provide correct information to a client for **RETURNING PHONE CALLS**, in order to avoid clients to call back when there is no one available:

- Establish specific call-back times.
- When taking calls for another individual, schedule return calls during specific blocks of time (i.e., “I expect him to return by 2:00 p.m. You can reach him between 2 and 5”).

### **PROPER TELEPHONE LANGUAGE:**

Each AIS/ARO personnel must be aware of the language being used during a phone call.

- Instead of saying “You have to...You need to...Why didn’t you?” the following should be used;
- “Will you please ... Would you please?”; “Your problem” or “Your complaint,” is better phrased as “Your question,” “Your concern,” or “this situation.”
- Phrases such as “I can’t do that” or “it’s not my job.” Should be avoided completely. It is suggested to use i.e. “While I’m not able to establish policy on this matter, I will speak to my manager about your concern.”
- Sounding abrupt shall be avoided by all personnel. The following are examples which shall be avoided:
  - --“Hang on.”
  - “Hold on.”
  - “Who’s calling?”
  - “I can’t hear you, speak up!”
  - “I can’t help you. You’ll have to speak to someone else.”
- The following would be more appropriate:
  - “May I put you on hold?”
  - “May I say who is calling please?”
  - “I am having a little difficulty hearing you. Can you please speak up?”
  - “I need to transfer your call to (dept.) so that they can answer your question. May I do so?”

When ending a call, the following phrases should and may be used:


- “Thank you for calling us today and have a great day”
- “Have a pleasant day”
- “I will get back to you as soon as possible, good bye”

### **Ad2. Voicemail Procedures**

- Check on top of the office phone if red light is on, indicating a voicemail has been received.
  - **Light ON (#1)** → Voicemail in inbox. Follow step 2.

- Light OFF → No voicemail in inbox. NO further steps required

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- Press the envelope icon  on the phone.
- *If applicable: enter password to play messages followed by # sign.*
- To play message(s) PRESS 1
- Listen to voicemail and take action. To **Repeat**, **Save** or **Delete** a message after listening, take the following steps. Listen carefully to message received and:
  - To repeat message PRESS 1
  - To save message PRESS 2
  - To delete message PRESS 3
- When voicemail checking is complete, hang up.

#### Ad3. Email Correspondence

#### Ad4. Client Briefing:

- Phone
- Email
- Personal

## ***A1.2 AIS PROCEDURES***

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## ***A1.3 ARO PROCEDURES***

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***Appendix 2:  
Detailed NOTAM Procedures***

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## A2.1 Records of Amendments

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***Appendix 3:  
Detailed Fight Plan Procedures***



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## ***A4.1 RECORDS OF AMENDMENTS***

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***Appendix 6:  
Emergency Response***

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## ***A6.1 RECORDS OF AMENDMENTS***

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