

December 12, 2023

# ANSA QUALITY MANUAL

Second Edition



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# 1 INTRODUCTION

It is ANSA's goal that all operational units (ATC unit, AIA unit and CNS/ATM Systems unit) be ISO certified by the end of 2024. The ANSA Quality Manual (AQM) describes all steps, projects and activities ANSA is planning to execute to achieve this goal.

The Aruba air traffic state decree ("Landsbesluit luchtverkeer") par. 15.1 requires ANSA at all times to have a quality and safety management system in place to achieve an acceptable level of quality and safety with regard to air traffic services.

ICAO mandates that states require air navigation service providers under their authority to implement a safety management system. The same requirement, however, does not exist for a quality management system (QMS). ICAO ANNEX 15 par. 3.6.1 nevertheless does require that a QMS be implemented and maintained encompassing all functions of an AIS. The execution of such QMS shall be made demonstrable for each function stage. ICAO ANNEX 15 par. 3.6.3 recommends that the QMS follow the ISO 9000 series of quality assurance standards and be certified by an accredited certification body.

Considering the recommendation of ICAO and the fact that the ISO 9001 standard is the most used set of requirements for designing a QMS and, that ISO 9001 is the only standard in the family that can be certified to, has convinced ANSA to adopt the ISO 9001 standard.

Additionally, ANSA considered the potential benefits of implementing a QMS based on this International Standard, namely:

1. the ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements;
2. facilitating opportunities to enhance customer satisfaction;
3. addressing risks and opportunities associated with its context and objectives;
4. the ability to demonstrate conformity to specified QMS requirements.

ANSA aims to provide the highest degree of quality of service at the lowest possible cost to its customers and other interested parties.

The first edition of the AQM was published on August 8, 2022. Since the publication thereof, ANSA's QMS was further developed and numerous QMS activities were implemented. According to requirement 9.3.1 of the ISO 9001: 2015 standard, top management shall review the organization's QMS, at planned intervals, to ensure its continuing suitability, adequacy, effectiveness and alignment with the strategic direction of the organization.

In line herewith, it was deemed appropriate to review and evaluate ANSA's QMS after one year of implementation to determine how far we have come and what still needs to be done. Based on the findings of said review and evaluation, several improvements to the ANSA QMS and thus amendments to the AQM were identified. This second edition of the AQM incorporates all the amendments identified in the ANSA QMS Management Review 2022-2023, dated September 6, 2023, as well as an updated timeline (see Appendix 1).

## 2 REFERENCES

AVIATION ORDINANCE

STATE DECREE AIR TRAFFIC SERVICES

STATE DECREE PROOF OF COMPETENCE AVIATION PERSONNEL

MINISTERIAL DECREE PROOF OF COMPETENCE AIR TRAFFIC CONTROLLERS

MINISTERIAL DECREE NAVIGATION AND TELECOMMUNICATIONS

ICAO ANNEX 10 AERONAUTICAL TELECOMMUNICATIONS

ICAO ANNEX 11 AIR TRAFFIC SERVICES

ICAO ANNEX 15 AERONAUTICAL INFORMATION SERVICES

ICAO ANNEX 19 SAFETY MANAGEMENT

ICAO DOC 4444 AIR TRAFFIC MANAGEMENT

ICAO DOC 8126 AERONAUTICAL INFORMATION SERVICES MANUAL

ICAO DOC 9839 MANUAL ON THE QUALITY MANAGEMENT SYSTEM FOR  
AERONAUTICAL INFORMATION SERVICES

ICAO DOC 9859 SAFETY MANAGEMENT MANUAL

ICAO DOC 9868 PROCEDURES FOR AIR NAVIGATION SERVICES - TRAINING

ICAO DOC 9991 MANUAL ON AERONAUTICAL INFORMATION SERVICES TRAINING

ICAO DOC 10056 MANUAL ON AIR TRAFFIC CONTROLLER COMPETENCY-BASED  
TRAINING AND ASSESSMENT, VOLUME I - AIR TRAFFIC CONTROL (ATC)

ICAO DOC 10056 MANUAL ON AIR TRAFFIC CONTROLLER COMPETENCY-BASED  
TRAINING AND ASSESSMENT, VOLUME II - ON-THE-JOB TRAINING INSTRUCTOR (OJTI)

ICAO DOC 10057 MANUAL ON AIR TRAFFIC SAFETY ELECTRONICS PERSONNEL  
COMPETENCY-BASED TRAINING AND ASSESSMENT

ICAO DOC 10066 PROCEDURES FOR AIR NAVIGATION SERVICES - AERONAUTICAL  
INFORMATION MANAGEMENT

ISO 9000: 2015 QUALITY MANAGEMENT SYSTEMS – FUNDAMENTALS AND  
VOCABULARY

ISO 9001: 2015 QUALITY MANAGEMENT SYSTEMS – REQUIREMENTS

## 3 DEFINITIONS AND ABBREVIATIONS

### 3.1 DEFINITIONS

For the purposes of this document, the terms and definitions given in ISO 9000:2015 and ICAO annexes apply.

### 3.2 ABBREVIATIONS

AAA	: Aruba Airport Authority N.V.
ACC	: Area Control Centre
AQM	: ANSA Quality Manual
ADS-B	: Automatic Dependent Surveillance – Broadcast
AI	: Aeronautical information
AIA	: Aeronautical Information Affairs
AIM	: Aeronautical Information Management
AIO	: Aeronautical Information Officer
AIP	: Aeronautical Information Publication
AIS	: Aeronautical Information Service
AMHS	: Air Traffic Services Message Handling System
AMU	: Apron Management Unit
ANSA	: Air Navigation Services Aruba N.V.
APA	: Aruba Ports Authority N.V.
ATC	: Air Traffic Control
ATCO	: Air Traffic Controller
ATFM	: Air Traffic Flow Management
ATM	: Air Traffic Management
ATS	: Air Traffic Services
CEO	: Chief Executive Officer
CLA	: Collective Labor Agreement
CNS	: Communication, Navigation, Surveillance
D-ATIS	: Digital Automatic Terminal Information System
DCAA	: Department of Civil Aviation of Aruba
DC-ANSP	: Dutch Caribbean Air Navigation Service Provider
DMA	: Departamento Meteorologico Aruba
DTZ	: Department of Telecommunications
EFS	: Electronic Flight Strip
FIR	: Flight Information Region
HR	: Human Resources
IATA	: International Air Transport Association
IFP	: Instrument Flight Procedures
IFR	: Instrument Flight Rules
ICAO	: International Civil Aviation Organization
KPI	: Key Performance Indicator
LOA	: Letter of Agreement
MAIA	: Manager Aeronautical Information Affairs
MATC	: Manager Air Traffic Control
MCA	: Royal Dutch Marine Corps of Aruba
MCAS	: Manager CNS/ATM Systems
MEVA	: Mejoras a los Enlaces de Voz ATS
MSC	: Maintenance Support Contract
MSLA	: Multilateral Service Level Agreement

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OPS : Operations  
PANS : Procedures for Air Navigation Service  
PBN : Performance Based Navigation  
QMS : Quality Management System  
QMT : Quality Management Team  
SARPS : Standards and Recommended Practices  
SATC : Supervisor ATC  
SID : Standard Instrument Departure Route  
SLA : Service Level Agreement  
SMS : Safety Management System  
SOP : Standard Operating Procedure  
SQ : Safety & Quality Officer  
S&Q : SMS & QMS  
STAR : Standard Arrival Route  
SWOT : Strengths, Weaknesses, Opportunities, and Threats.  
TIB : Technical Instruction Book  
VCS : Voice Communication System  
VFR : Visual Flight Rules  
VHF : Very High Frequency  
VRRS : Voice Recording & Replay System  
WAM : Wide Area Multilateration



## 4 ABOUT OUR ORGANIZATION

### 4.0.1 GENERAL

ANSA started the year 2023 with 41 employees because of the resignation of one (1) ATCO in October 2022. In April 2023 ANSA hired one (1) AIO to replace one (1) AIO who will retire in October 2023. Due to resignation (3x) or dismissal (1x) of several ATCOs during the last 4 years, considering the fact that 3 ATCO's have reached or are about to reach the age of 60 and taking also into account that it takes approximately 6-7 years to become a surveillance controller, ANSA intended to hire five (5) ATCOs in August 2023. However, due to circumstances beyond our control, in the end only two (2) ATCOs were hired.

### 4.0.2 ORGANIZATIONAL STRUCTURE AND MANPOWER RESOURCES

The operational organizational structure is provided in Figure 1 below.

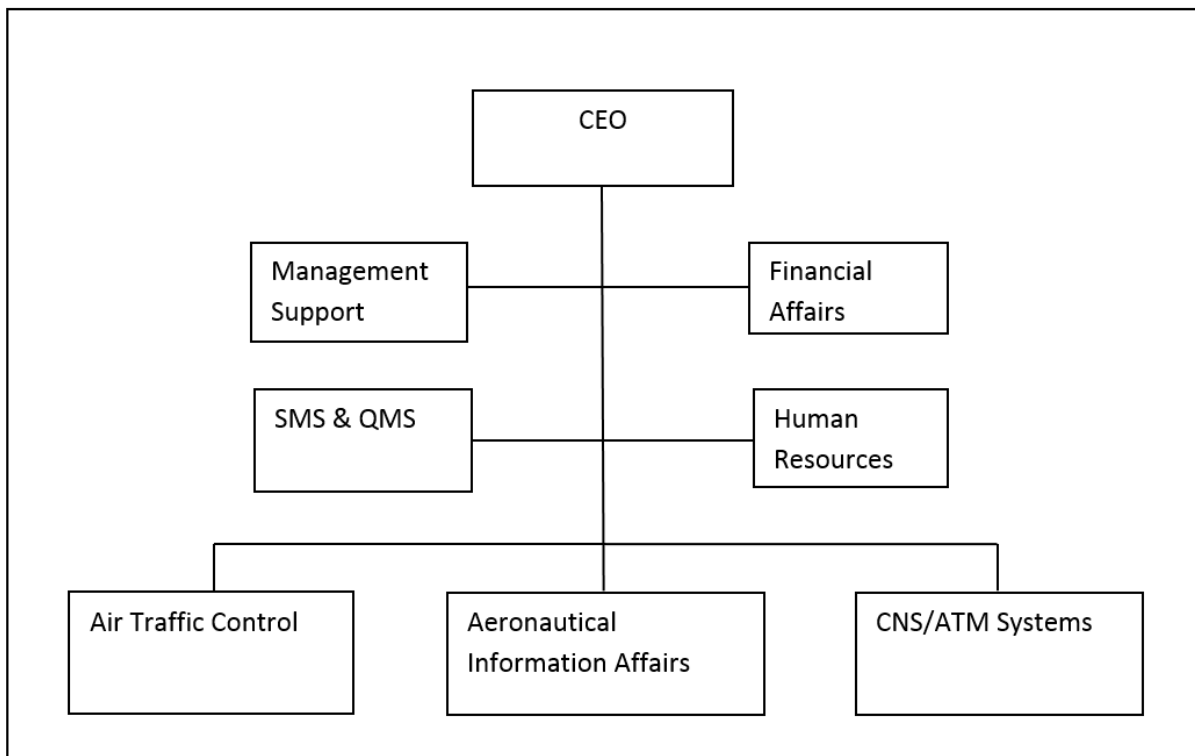


Figure 1: Organizational Structure ANSA

The CEO is the head of the ANSA organization and there is a Management Support consisting of a Management Assistant and an Administrative Assistant (2 staff). Other supporting staff units are the Financial Affairs (1 staff), HR (1 staff) and S&Q (1 staff). Compared with the previous ATS structure within the DCAA, an S & Q unit was added to comply with the requirements for safety and quality management. The three operational units are headed by their own managers:

- Air Traffic Control (ATC);
- Aeronautical Information Affairs (AIA);
- CNS/ATM Systems.

The manpower resources available to ANSA are provided in Table 1 below. The information includes a comparison between January 1 of 2019, 2020, 2021, 2022 and 2023. Staffing is kept to a minimum in order to maintain cost-effectiveness.

<b>Unit/position</b>	<b>FTEs 1-1-19</b>	<b>FTEs 1-1-20</b>	<b>FTEs 1-1-21</b>	<b>FTEs 1-1-22</b>	<b>FTEs 1-1-23</b>
CEO	1	1	1	1	1
Management Support	2	2	2	2	2
Financial Affairs	1	1	1	1	1
S&Q	1	1	1	1	1
HR	1	1	1	1	1
ATC	21	24	23	22	21
AIA	11	10	10	10	10
CNS/ATM Systems	4	4	4	4	4
Air Traffic Controller trainee	4	0	0	0	0
<b>Total</b>	<b>46</b>	<b>44</b>	<b>43</b>	<b>42</b>	<b>41</b>

Table 1: Manpower Resources ANSA

#### 4.0.3 MISSION, VISION AND CORE VALUES

##### Mission

To make the best possible contribution to the economic development of Aruba by providing safe, efficient, and reliable Air Navigation Services to the aviation industry within the Beatrix Control Zone.

##### Vision

To become one of the best providers of Air Navigation Services with the highest standards of safety and quality.

##### Core values

- **Safety first:** ANSA promotes a strong safety culture and pursues the highest safety standards.
- **Service excellence:** Works to satisfy its customers and partners by delivering on commitments and always looking for the best possible outcome.
- **Involvement and motivation:** Fosters a welcoming, diverse, and stable working environment where everyone has the opportunity to contribute in an open and transparent way to the decisions that affect them and where everyone is willing to go the extra mile to achieve excellence.
- **Courage and innovation:** Fosters innovation; we challenge ourselves, others, and the status quo.
- **Excellent professionals:** Continual investment in upgrading and development of its personnel.
- **Pioneering technology:** Keeps track of technological developments and invests in new/state-of-the-art equipment.
- **Partnership:** Fosters networks and/or joint efforts on national, regional, and international level.

## 4.1 ORGANIZATIONAL CONTEXT

### 4.1.1 ATC UNIT

The ATC unit emphasizes quality control as one of the most important factors to ensure a high level of customer satisfaction. Nevertheless, this unit has its own internal strengths and weaknesses and is negatively or positively affected by internal and external factors hereunder grouped in Threats (Risk) and Opportunities (see table 2).

To safeguard a high degree of quality of service, the ATC unit focuses on:

- Maintenance and enhancement of competency of ATC personnel;
- Compliance with LOAs;
- Provision of surveillance service;
- Compliance with national and international regulations.

	<b>Description</b>	<b>Remarks</b>
<b>STRENGTHS</b>	<ul style="list-style-type: none"> <li>• LOA with DC-ANSP, AAA, MCA, APA and DMA</li> <li>• High level of automation (e.g., TopSky ATM system and D-ATIS)</li> <li>• WAM/ADS-B surveillance system</li> <li>• ANSA Contingency plans</li> <li>• Tower Manual and ATC Training Manual are regularly reviewed and updated</li> <li>• PBN procedures including SIDs and STARs</li> <li>• Visual Flight Rules (VFR) procedures</li> <li>• Yearly voice recording reviews</li> </ul>	<ul style="list-style-type: none"> <li>• External</li> <li>• Internal</li> <li>• Internal</li> <li>• Internal</li> <li>• Internal</li> <li>• Internal</li> <li>• Internal</li> <li>• Internal</li> </ul>
<b>WEAKNESSES</b>	<ul style="list-style-type: none"> <li>• Absence of Letter of Agreement with DCAA</li> <li>• Tower Manual and ATC Training Manual pending approval</li> <li>• Nonsupport of some ATCOs of ANSA’s core values</li> <li>• Some SATCs not performing as required by Management</li> </ul>	<ul style="list-style-type: none"> <li>• External</li> <li>• External</li> <li>• Internal</li> <li>• Internal</li> </ul>
<b>OPPORTUNITIES</b>	<ul style="list-style-type: none"> <li>• Continual monitoring and improvement of the ATCOs competency</li> <li>• Improve coordination with AIA and CNS/ATM Systems</li> <li>• Improve coordination with APA</li> <li>• Minimize verbal coordination with AMU and Curacao ACC</li> <li>• Update national regulations by DCAA</li> <li>• Monitor and ensure compliance of LOA with interested parties</li> </ul>	<ul style="list-style-type: none"> <li>• Internal</li> <li>• Internal</li> <li>• External</li> <li>• External</li> <li>• External</li> <li>• External</li> </ul>
<b>THREATS (RISKS)</b>	<ul style="list-style-type: none"> <li>• Human errors of ATCOs</li> <li>• Missing or erroneous flight-plans can cause delay of flights</li> <li>• Malfunction of equipment can hamper ATS</li> <li>• Interested parties’ noncompliance with agreements</li> <li>• DCAA tardiness in decision making and decision making without prior consultation</li> <li>• DC-ANSP decision making without prior consultation</li> <li>• Outdated or incomplete national regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Internal</li> <li>• Internal/External</li> <li>• Internal</li> <li>• External</li> <li>• External</li> <li>• External</li> <li>• External</li> </ul>

Table 2: ATC SWOT analysis

#### 4.1.2 AIA UNIT

The AIA unit emphasizes data quality<sup>1</sup> as one of the most important factors in order to ensure a high level of customer satisfaction. Nevertheless, this unit has its own internal strengths and weaknesses and is negatively or positively affected by internal and external factors hereunder grouped in Threats (Risk) and Opportunities (see table 3).

To guarantee compliance with ICAO Annex 15 Aeronautical Information Services, ANSA has an agreement for the provision of AIS with DC-ANSP. ANSA remains responsible for the data quality of AI products provided to DC-ANSP for publication.

To safeguard a high degree of quality of service, the AIA unit focuses on:

- Maintenance and enhancement of competency of AIA personnel;
- Compliance with national/international regulations;
- Compliance of data originators with Annex 15.

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<sup>1</sup> A degree or level of confidence that the data provided meet the requirements of the data user in terms of accuracy, resolution and integrity.

	Description	Remarks
<b>STRENGTHS</b>	<ul style="list-style-type: none"> <li>• Agreement with DC-ANSP for the provision of AIS</li> <li>• High level of automation (e.g., TopSky-AMHS/ TopSky-AIS)</li> <li>• Agreements with aircraft operators regarding digital flight plans</li> <li>• AIA manual approved by DCAA</li> <li>• ANSA contingency plans</li> </ul>	<ul style="list-style-type: none"> <li>• External</li> <li>• Internal</li> <li>• External</li> <li>• Internal</li> <li>• Internal</li> </ul>
<b>WEAKNESSES</b>	<ul style="list-style-type: none"> <li>• Absence of an MSLA AIS with data originators                             <ul style="list-style-type: none"> <li>▪ Internal: ATC unit and CNS/ATM Systems unit</li> <li>▪ External: DCAA, AAA and DMA</li> </ul> </li> <li>• AIS Training Manual to be developed</li> </ul>	<ul style="list-style-type: none"> <li>• Internal/External</li> <li>• Internal</li> </ul>
<b>OPPORTUNITIES</b>	<ul style="list-style-type: none"> <li>• Continual monitoring and improvement of the AIA personnel competency</li> <li>• Agreement with JET-TNCA regarding digital flight plans</li> <li>• New procedures to mitigate flight plan errors</li> <li>• Digitalization of processes</li> <li>• Enhance aeronautical data quality</li> <li>• MSLA AIS with data originators</li> </ul>	<ul style="list-style-type: none"> <li>• Internal</li> <li>• External</li> <li>• Internal</li> <li>• Internal</li> <li>• Internal</li> <li>• Internal/External</li> </ul>
<b>THREATS (RISKS)</b>	<ul style="list-style-type: none"> <li>• Human error AIA personnel</li> <li>• Inaccurate aeronautical data/info</li> <li>• Lack of flight plan competency of flight operations officers (airline representatives)</li> <li>• Possible understaffing in the near future</li> <li>• Missing, erroneous and duplicate flight plans</li> <li>• Not updating the AIA manual periodically</li> <li>• Interested parties' noncompliance with agreements</li> </ul>	<ul style="list-style-type: none"> <li>• Internal</li> <li>• Internal/External</li> <li>• External</li> <li>• Internal</li> <li>• External</li> <li>• Internal</li> <li>• Internal/External</li> </ul>

Table 3: AIA SWOT analysis.

#### 4.1.3 CNS/ATM UNIT

CNS/ATM Systems unit emphasizes a high degree of availability of CNS/ATM systems to ensure a high level of customer satisfaction. This requires the procurement of high quality (durable, state of the art and proven technology and ICAO compliant) CNS/ATM systems and effective maintenance of these systems.

Nevertheless, this unit has its own internal strengths and weaknesses and is negatively or positively affected by internal and external factors hereunder grouped in Threats (Risk) and Opportunities (see table 4 below).

To safeguard a high degree of quality of service, the CNS/ATM Systems unit focuses on:

- Maintenance and enhancement of competency of CNS/ATM Systems personnel;
- Compliance with national/international regulations;
- Maintenance and enhancement of robustness and resilience of CNS/ATM systems.

	<b>Description</b>	<b>Remarks</b>
<b>STRENGTHS</b>	<ul style="list-style-type: none"> <li>• State of the art and proven technology</li> <li>• Reliable vendor support for most CNS/ATM systems</li> <li>• Most CNS/ATM systems are installed in single redundancy</li> <li>• Most critical spare parts in stock</li> <li>• Effective preventive and corrective maintenance of CNS/ATM systems</li> <li>• Well trained technicians with a broad knowledge of CNS/ATM systems</li> <li>• CNS/ATM Systems manual has been developed</li> </ul>	<ul style="list-style-type: none"> <li>• Internal</li> <li>• External</li> <li>• Internal</li> <li>• Internal</li> <li>• Internal</li> <li>• Internal</li> <li>• Internal</li> </ul>
<b>WEAKNESSES</b>	<ul style="list-style-type: none"> <li>• Procurement procedures are not documented in the CNS/ATM Systems Manual</li> <li>• Not all equipment is installed in redundancy</li> <li>• Detailed maintenance procedures for CNS/ATM systems are not documented</li> <li>• Lack of specialized knowledge of some CNS/ATM systems</li> <li>• CNS/ATM Systems Training Manual has yet to be developed</li> </ul>	<ul style="list-style-type: none"> <li>• Internal</li> <li>• Internal</li> <li>• Internal</li> <li>• Internal</li> <li>• Internal</li> </ul>
<b>OPPORTUNITIES</b>	<ul style="list-style-type: none"> <li>• Document CNS/ATM systems procurement procedures</li> <li>• Improve CNS/ATM systems support and spare parts availability from vendors</li> <li>• Expand equipment redundancy</li> <li>• Develop maintenance procedures for CNS/ATM systems and include these in the TIBs</li> <li>• Develop training manual</li> </ul>	<ul style="list-style-type: none"> <li>• Internal</li> <li>• External</li> <li>• Internal</li> <li>• Internal</li> <li>• Internal</li> </ul>
<b>THREATS (RISK)</b>	<ul style="list-style-type: none"> <li>• Costly maintenance support and spare parts</li> <li>• Continuity of the maintenance support from Thales</li> <li>• Not all critical spare parts in stock</li> <li>• Human error CNS/ATM Systems personnel</li> <li>• Non-compliance with CNS/ATM Systems manual</li> <li>• Some old equipment that are more susceptible to failure</li> <li>• Continuity of service due to small size of staff</li> </ul>	<ul style="list-style-type: none"> <li>• External</li> <li>• External</li> <li>• Internal/External</li> <li>• Internal</li> <li>• Internal</li> <li>• Internal</li> <li>• Internal</li> </ul>

Table 4: CNS/ATM Systems SWOT analysis.



## 4.2 RELEVANT INTERESTED PARTIES

### 4.2.1 ATC UNIT

In order to fulfil its duties efficiently, the ATC unit is dependent on several external parties for the provision of ATS (see table 5 below).

<b>External parties</b>	<b>Role</b>	<b>Needs and expectations</b>
DCAA	Regulator/Oversight	Compliance with national and international regulation
DC-ANSP	Coordination of ATS with Aruba	Compliance with LOA
AAA (AMU)	Coordination (startup and taxi) with the Tower	Compliance with LOA
DMA	Provide meteorological information	Compliance with LOA
MCA	Military training which can affect ATS	Compliance with LOA
APA	Provide information of port activity which can affect ATS	Compliance with LOA
ICAO	Advisory/Training	Compliance with ICAO SARPS
Aircraft operators	Customers	Safe, expeditious, orderly, and cost effective ATS

*Table 5: ATC unit interested parties.*

#### 4.2.2 AIA UNIT

The AIA unit does not originate the information it processes and issues. The “raw data” is provided by the data originators for the distribution of all AI products.

In order to fulfil efficiently the dual role of collecting and distributing aeronautical data from and to all concerned, AIA maintains direct and continual communication with different interested parties (see table 6 below).

<b>External parties</b>	<b>Role</b>	<b>Needs and expectations</b>
DCAA	- Regulator/Oversight - AIS data originator	- Compliance with national and international regulation - Publish accurate/timely aeronautical data
DC-ANSP	Publication of Aruba AI products	Compliance with SLA and Annex 15
AAA	AIS data originator	Publish accurate/timely aeronautical data
DMA	AIS data originator	Publish accurate/timely aeronautical data
Aircraft operators	Customers (user of aeronautical data and submitter of flight plans)	- Publish accurate/timely aeronautical data - Accurate/timely validation of flight plan data
ICAO	Advisory/Training	Compliance with ICAO SARPS
<b>Internal parties</b>		
ATC unit	Customer (AIS data originator)	- Accurate/timely validation of flight plans - Publish accurate/timely aeronautical data
CNS/ATM Systems unit	Customer (AIS data originator)	Publish accurate/timely aeronautical data

Table 6: AIA unit interested parties.

### 4.2.3 CNS/ATM SYSTEMS UNIT

The CNS/ATM Systems unit ensures the availability and reliability of the CNS/ATM facilities for a safe and efficient provision of Air Traffic Services in our air space.

Interested parties for this unit are:

<b>External parties</b>	<b>Role</b>	<b>Needs and expectations</b>
DCAA	Regulator/Oversight	Compliance with national and international regulation
DTZ	Regulator Frequency management	Use of frequencies conform DTZ regulation
AAA (AMU)	Customer (user of VCS, flight strip printer and replay VRRS)	-High degree of availability of CNS/ATM systems -Compliance with MOUs between ANSA and AAA
Aircraft operators	Customers (user CNS/ATM systems)	Availability and reliability CNS/ATM systems
ICAO	Advisory/Training	Compliance with ICAO SARPS
<b>Internal parties</b>		
ATC unit	Customer (User CNS/ATM systems)	Availability and reliability CNS/ATM systems
AIA unit	Customer (User CNS/ATM systems)	Availability and reliability CNS/ATM systems

Table 7: CNS/ATM Systems unit interested parties.

## 4.3 QMS SCOPE

The ANSA QMS addresses ANSA's air traffic services provided within the Beatrix control zone and the Reina Beatrix international airport of Aruba. This includes all services provided by the following units:

- ATC unit.
- AIA unit;
- CNS/ATM Systems unit;

### 4.3.1 ATC UNIT

ANSA provides ATC service within Beatrix control zone for the purpose of:

- a) preventing collisions:
  1. between aircraft,
  2. on the maneuvering area between aircraft and obstructions;
- b) expediting and maintaining an orderly flow of air traffic, and
- c) ensuring cost effective ATC service to all aircraft operators.

Within the Beatrix control zone, the following services are provided (see figure 2):

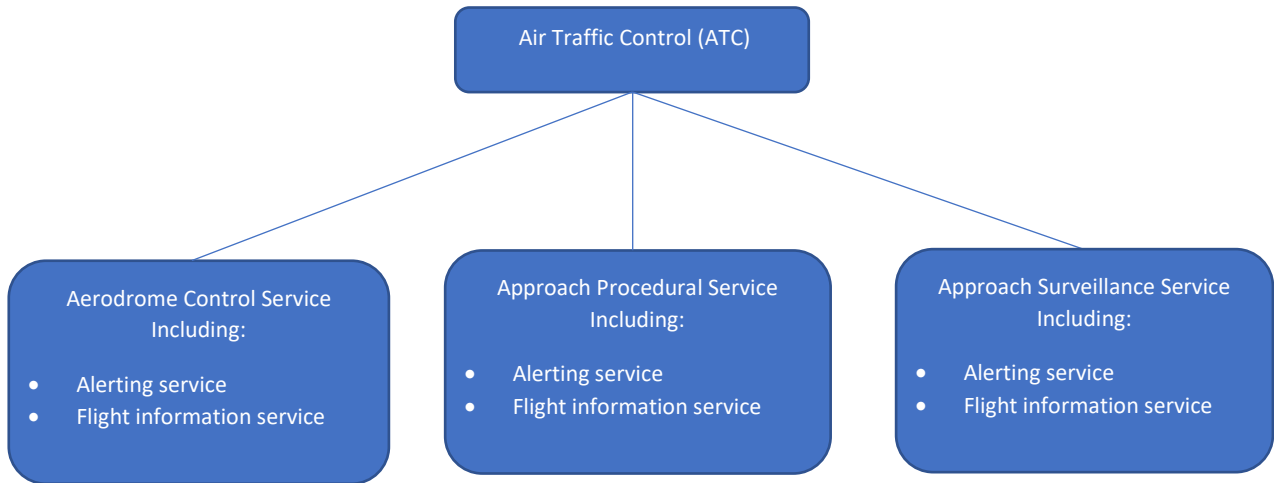
1. Aerodrome control service;
2. Approach Procedural service;
3. Approach Surveillance service;
4. Alerting service;
5. Flight information service.

**Aerodrome control service** is air traffic control service for aerodrome traffic provided during operational hours.

Approach control service is air traffic control service for arriving or departing controlled flights. ANSA provides two types of approach control service. During morning and evening hours **approach procedural service** is provided. During afternoon hours, when traffic density is high, **approach surveillance service** is provided.

**Alerting service** is a service provided to notify appropriate organizations regarding aircraft in need of search and rescue aid, and assist such organizations as required.

**Flight information service** is a service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.



*Figure 2: ATC services*

### 4.3.2 AIA UNIT

The AIA unit is responsible for the provision of the following services (see figure 3):

1. Validation of flight plans<sup>2</sup>, ensuring accurate validation and the timely distribution thereof.
2. The distribution and reception of air traffic services messages on the aeronautical telecommunication network, providing accurate and timely distribution of these messages.
3. Aeronautical Information Services (AIS)<sup>3</sup>, safeguarding accurate validation and timely publication of aeronautical data.

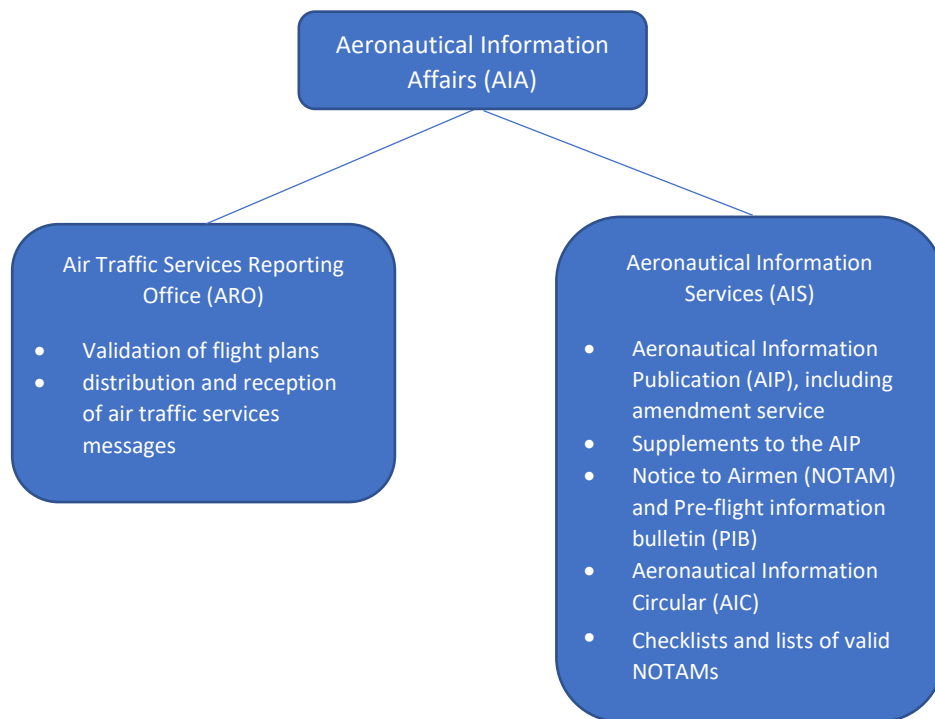


Figure 3: AIA services

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<sup>2</sup> DOC 4444 par 4.4.3

<sup>3</sup> A service established within the defined area of coverage responsible for the provision of aeronautical data and aeronautical information necessary for the safety, regularity and efficiency of air navigation.

### 4.3.3 CNS/ATM SYSTEMS UNIT

The CNS/ATM Systems unit is responsible for the procurement and maintenance of CNS/ATM systems for the provision of safe and efficient air traffic services in the Beatrix control zone. State-of-the-art equipment is acquired and maintained to the highest standards to achieve a high degree of availability.

Scope of the procurement activities for these systems are project preparation and management, development of request for information (RFI) and request for proposal (RFP), proposal evaluation, project awarding, monitoring of project implementation (installation, validation, integration, test and acceptance, calibration, certification).

Scope of maintenance activities for these systems are preventive maintenance, corrective maintenance, modification, and updates, monitoring and control, and status reporting.

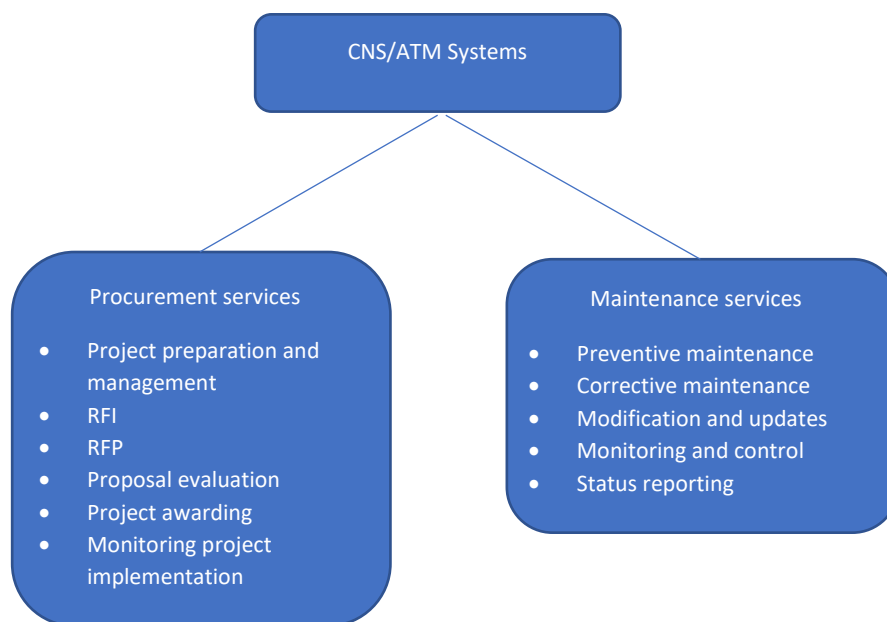


Figure 4: CNS/ATM Systems services

## 4.4 QMS PROCESSES

The QMS processes of the three ANSA operational units are (or shall be) described in this manual and the following documents:

### ATC UNIT

- The Tower Manual: is still pending DCAA approval since November 2, 2018. On May 21, 2021, an updated version was forwarded to the DCAA as per their request. ANSA received feedback from the DCAA on February 17, 2022, and submitted a revised manual to the DCAA on June 16, 2023. Additionally, in Q4 2024 a complete and thorough review will be performed to verify that all information contained in the Tower Manual is compliant with relevant ICAO annexes and Doc 4444.
- LOA between ANSA and AAA: was updated in Q4 2022. In 2023 there were two incident reports submitted regarding the coordination between Tower and AMU. The incident investigations concluded that the incidents were caused by AMU non-compliance and in extension thereof, it can be concluded that at this moment there is no need to revise this LOA.
- LOA between ANSA and DC-ANSP: will be updated in Q4 2023 and Q1 2024. This update will include standard departure procedures and contingency plan within the Curacao FIR. Standard departure procedures will minimize the verbal coordination between Beatrix Tower and Curacao ACC. The contingency plan within the Curacao FIR will incorporate procedures and routes in the event of surveillance failure, communication failure, or power outage at DC-ANSP, to minimize the impact on the continuity of the service provided by Beatrix Tower.
- SOP between Beatrix Tower and Beatrix Approach: will be updated in Q1 2024 to incorporate new VFR procedures, which will contribute to efficient flow of traffic.
- SOP between ANSA and MCA: will be updated in Q1 2024. ANSA will pursue changing the way the military training activities at Vader Piet is “notamised”. When this is completed, the SOP will be revised, and pilots will have more up to date information on Vader Piet activities.
- LOA between ANSA and APA: will be updated in Q2 2024. Due to several reports on missed approaches of aircraft (which can lead to delays), it was obvious that the cause was the uncertainty of the number of minutes required for when a ship is released from the harbor until it crosses the approach path. Additionally, the current LOA permits APA to release ships at its own discretion, and this undermines effective coordination. ANSA will conduct a study to determine the number of minutes required and this will be incorporated in the LOA.
- LOA between ANSA and DMA: will be updated in Q3 2024 to include the weather information required for the DMA to update the weather report prior to the specified time. This was indicated in a general report which was filed to indicate the unwillingness of DMA to update the weather report (for example change in visibility, clouds, weather condition) prior to the specified time. With this change the ATCOs and pilots will have more accurate and up to date weather information at all times.
- The ATC Training Manual: is still pending DCAA approval since October 24, 2018. Refresher training procedures were forwarded to the DCAA on February 11, 2021, as an amendment to the training manual. Based on the Ministerial Decree Proof of Competence Air Traffic Controllers, the manual will be updated in Q1 2024.

### AIA UNIT

- The AIA Manual: has been approved by the DCAA on June 28, 2019. A revision was originally planned for Q4 2022 but was put on hold pending the update of the ICAO Doc 8126 Aeronautical Information Services Manual. The review and update of the AIA Manual is now planned for Q1 2024.
- The AIA Training Manual: its development was originally planned for Q2 2023 but there was a short delay caused by the publication of the ICAO Doc 9991 Manual on Aeronautical Information Services Training in April 2023. This manual is being developed and will be finalized in January 2024.



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#### CNS/ATM SYSTEMS UNIT

- The CNS/ATM Systems Manual: is still pending DCAA approval since September 26, 2018. Revision of this manual was not completed in Q3 2022 as originally planned, due to sick leave, high workload, and other priorities. However, it was completed and sent to the DCAA for review/approval in April 2023.
- The TIBs: development thereof was not completed as originally planned (from July 2022 to November 2023) or is behind schedule, due to sick leave, high workload, and other priorities. Most of the TIBs should have been completed by now according to the original schedule. The development of the TIB ILS/DME and the TIB VOR/DME are in an advanced stage, whereas all other TIBs are still to be developed. After completion of the first TIB, all the CNS/ATM Technicians will be actively involved in the development of the remaining TIBs to have them finalized by March 2024.
- The CNS/ATM Systems Training Manual: was originally planned for Q2 2023. As the development of the TIBs will be given priority over the development of the training manual, the latter is now proposed for Q2 2024. In the meantime, ANSA will continue to adhere to the ICAO Doc 10057 Manual on Air Traffic Safety Electronics Personnel Competency-Based Training and Assessment, as indicated in the CNS/ATM Systems Manual.

The development or update of process flow charts for the 3 operational units were originally planned for Q1 2023, but due high workload and other priorities, this action was completed with some delay (ATC unit: development completed in May 2023) or is still pending (CNS/ATM unit: development planned to be completed in Q1 2024 and AIA unit: update to be completed in Q1 2024).

On a yearly basis during Q1 the managers make an assessment for their respective operational units of all documented information that is required to:

- be maintained to support the operation of the QMS processes.
- be retained to have confidence that the processes are being carried out as planned.

## 5 LEADERSHIP

### 5.1 LEADERSHIP & COMMITMENT

#### 5.1.1 GENERAL

The CEO demonstrates leadership and commitment with respect to the QMS by:

- taking accountability for the effectiveness of the ANSA QMS;
- ensuring that the quality policy and quality objectives are established for the QMS and are compatible with the context and strategic direction of ANSA;
- ensuring the integration of the QMS requirements into ANSA's business processes;
- promoting the use of the process approach and risk-based thinking;
- ensuring that the resources needed for the QMS are available;
- communicating the importance of effective quality management and of conforming to the QMS requirements;
- ensuring that the QMS achieves its intended results;
- engaging, directing, and supporting persons to contribute to the effectiveness of the QMS;
- promoting improvement;
- supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.

The CEO of ANSA is committed to implementing a QMS at ANSA which is ISO 9001 compliant and to be ISO certified by the end of 2024. To achieve this, the CEO has set up a QMT which consists of all unit managers, the SQ and with the CEO as the chairperson.

The primary task of the QMT is:

- The development of the QMS.
- The development and maintenance of the AQM.
- The monitoring and coordination of the implementation of the QMS.
- Evaluation and continual improvement of the QMS.

#### 5.1.2 CUSTOMER FOCUS

The CEO demonstrates leadership and commitment with respect to customer focus by ensuring that:

- customer and applicable statutory and regulatory requirements are determined, understood, and consistently met.
- the risks and opportunities that can affect conformity of products and services and the ability to enhance customer satisfaction are determined and addressed.
- the focus on enhancing customer satisfaction is maintained.

The CEO has made a thorough analysis of the mentioned requirements. See paragraph 4.2. and paragraph 4.3. The risks and opportunities as well as actions to address these have been added to this analysis. A SWOT analysis has been performed for each unit. See subparagraph 4.1.1, 4.1.2, 4.1.3 and subparagraph 6.1.1, 6.1.2, and 6.1.3.

As mentioned in the introduction, ANSA aims to provide the highest degree of quality of service at the lowest possible cost to its customers and other interested parties. Through this ANSA demonstrates the importance of customer focus and satisfaction for the QMS.

In this context reference is made to subparagraph 5.1.1. regarding the QMT and the role of the CEO within the QMT, and subparagraph 5.2.1. With regard to customer satisfaction, see also subparagraph 9.1.2.

## **5.2 POLICY**

### **5.2.1 ESTABLISHING THE QUALITY POLICY**

The CEO has established the following quality policy:

- ANSA aims to provide the highest degree of quality of service at the lowest possible cost to its customers and other interested parties.
- Our commitment is to meet or exceed the requirements of ISO 9001.
- Our commitment is to the safety, efficiency, and quality of air traffic services. If safety conflicts with efficiency or service quality, safety will prevail.
- ANSA strives to become one of the best providers of air traffic services with the highest standards of safety and quality, guided and driven by our mission and core values.
- Our commitment is to ensure compliance with all applicable regulations and requirements and to continually improve the effectiveness of the QMS.
- At all levels of our organization ANSA is committed to continually monitoring, evaluating and improving the competencies and motivation of our personnel, CNS/ATM systems, processes and QMS in order to anticipate, meet, and exceed the needs of our customers.

### **5.2.2 COMMUNICATING THE QUALITY POLICY**

The quality policy is part of the quality manual and as such it will be available and maintained as documented information. The quality manual will be published on ANSA's website and will therefore be available to all ANSA's interested parties.

The quality policy will be communicated, understood and applied within ANSA through proper training of all personnel concerned and an awareness program. A QMS training and awareness program as well as an internal communication plan will be developed and implemented in Q4 2023 to promote awareness among ANSA's personnel of the QMS and their contribution to the effectiveness thereof.

## **5.3 ROLES, RESPONSIBILITIES & AUTHORITIES**

The following responsibilities and authorities for relevant roles have been assigned:

### **5.3.1 CEO**

The CEO of ANSA is responsible:

- to promote a quality culture;
- to ensure a formal QMS is developed, documented, implemented, maintained and continually improved;
- to manage and coordinate activities of the QMT;

- to establish and maintain a close working relationship with ANSA's Supervisory Board in formulating and implementing the QMS;
- for reviewing and analyzing activities, costs, operations, and forecast data to determine ANSA's progress towards the quality objectives;
- to ensure that the resources to support the QMS are available;
- for supporting the unit managers to demonstrate their leadership as it applies to their responsibilities;
- communicating the importance of effective quality management and of conforming to the QMS requirements.

### 5.3.2 QMT

The QMT is responsible:

- for the development, documentation, maintenance and continual improvement of the QMS;
- for development and maintenance of the QMS manual;
- to communicate to ANSA the importance of meeting customer as well as ICAO and national regulatory requirements;
- to support the CEO regarding his QMS responsibilities.

### 5.3.3 SQ

The SQ is accountable to the CEO. He is the QMS project manager and as such responsible:

- to ensure that processes needed for the QMS are established, implemented, maintained and improved;
- to report to the CEO on the performance of the QMS;
- to ensure the promotion of awareness of customer requirements;
- for QMT meeting scheduling, agenda, and minutes;
- to ensure ICAO SARPS and Aruba state law compliance;
- to conduct QMS review and internal audits;
- for developing corrective & preventive action plans;
- to support the unit managers regarding their QMS responsibilities.

### 5.3.4 UNIT MANAGERS

The unit managers are accountable to the CEO for all QMS activities related to their respective units, and as such the unit managers are responsible:

- for the quality of the provided services of each respective unit;
- to ensure application of and compliance with ANSA's QMS policy, processes and procedures, including all work instructions;
- to ensure that all personnel are aware of and held accountable for their quality performance;
- to ensure that all personnel are trained, qualified and competent to discharge their QMS obligations;
- to determine the resources needed for QMS processes of each respective unit;
- to develop, monitor and evaluate the QMS processes of their respective units and implement any changes needed to ensure that these processes achieve their intended results.
- to support their operational personnel regarding their QMS responsibilities.

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- to determine the knowledge necessary for the operation of processes and to achieve conformity of products and services of their respective units.

### 5.3.5 OPERATIONAL PERSONNEL

All operational employees are accountable to their respective unit managers, and as such are responsible:

- for providing quality service;
- for applying and complying with ANSA's QMS policy, processes and procedures, including all work instructions.

## 6 QMS PLANNING

### 6.1 ADDRESSING RISKS & OPPORTUNITIES

#### 6.1.1 ATC UNIT

Description of risks	1. Actions to address risks	2. How to integrate/ implement actions into QMS processes	3. How to evaluate effectiveness
<p><b>A. Missing or erroneous flight plans can cause delay and or hazard of flights:</b></p> <p>Inbound flights without a flight plan in the TopSKy ATC or flight plans that are erroneous create extra workload for the controller.</p> <p>For outbound flights, when Tower and/or Curacao ACC do not have the flight plan, this will have to be resent by ARO and this can cause delay for departure. For inbound flights, the flight plan will have to be created or modified in the system prior to printing a strip for the D-position. This can cause a safety hazard also during busy periods.</p>	<p>A1a. Ensure missing or erroneous flight plan information is reported via ANSA’s general reporting program and addressed accordingly.</p>	<p>A2a. Develop and implement procedures for the monitoring of compliance, notification of noncompliance and corrective actions.</p> <p>A2b. All reports shall be forwarded to MAIA.</p>	<p>A3a. Yearly evaluation of the effectiveness of the actions identified in 1 and 2.</p> <p>A3b. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.</p> <p>A3c. Objective is that all missing and erroneous flight plans are reported and forwarded to MAIA.</p>

<p><b>B. Human errors:</b></p> <p>Human errors which could affect achievement of the quality objectives. No data available regarding human errors in the Tower.</p>	<p>B1a. Conduct a survey amongst the ATCOs of human errors in the Tower which can affect the quality objectives.</p>	<p>B2a. Develop and implement procedures for the monitoring of compliance, notification of noncompliance and corrective actions.</p>	<p>B3a. Yearly evaluation of the effectiveness of the actions identified in 1 and 2.</p> <p>B3b. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.</p> <p>B3c. Objective is to mitigate the occurrence and impact of human errors.</p>
<p><b>C. DCAA’s tardiness in decision making and without prior consultation:</b></p> <p>Making decisions without consultation leads to uninformed decisions that do not take into consideration the (potential) negative impact on ANSA’s operations. Tardiness in decision making can delay the process of implementation of projects and/or procedures which are aimed at achieving the quality objectives.</p>	<p>C1a. Sign and implement a collaboration agreement with DCAA regarding timeframe approval of documents and procedures to involve ANSA prior decision making that will affect ANSA’s operations.</p>	<p>C2a. Develop and implement procedures for the monitoring of compliance, notification of noncompliance and corrective actions.</p>	<p>C3a. Yearly evaluation of the effectiveness of the actions identified in 1 and 2.</p> <p>C3b. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.</p> <p>C3c. Objective is to mitigate the tardiness and ensure involvement in decision making.</p>
<p><b>D. DC-ANSP’s strategic decision making without coordination:</b></p> <p>Making strategic decisions without proper coordination leads to suboptimal decisions that can have a negative impact on ANSA’s operations.</p>	<p>D1a. Implement collaboration agreement with DC-ANSP.</p>	<p>D2a. Develop and implement procedures for the monitoring of compliance, notification of noncompliance and corrective actions.</p>	<p>D3a. Yearly evaluation of the effectiveness of the actions identified in 1 and 2.</p> <p>D3b. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.</p> <p>D3c. Objective is to ensure involvement in decision making.</p>
<p><b>E. Miscommunication during verbal coordination with Curacao ACC and AMU:</b></p>	<p>E1a. Include procedures in the LOA between DC-ANSP and ANSA to</p>	<p>E2a. Develop and implement procedures for the monitoring of compliance, notification of</p>	<p>E3a. Yearly evaluation of the effectiveness of the actions identified in 1 and 2.</p>

<p>Coordination between Beatrix Tower and Curacao ACC and AMU is performed verbally. Verbal coordination can create miscommunication and human errors.</p>	<p>minimize the verbal coordination such as standard clearance and release.</p> <p>E1b. Complete the interface between SITA and TopSky ATC (AMU and Tower) to minimize the verbal coordination.</p>	<p>noncompliance and corrective actions.</p>	<p>E3b. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.</p> <p>E3c. Objective: to minimize verbal coordination.</p>
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*Table 8: Actions to address risks and opportunities ATC unit*



6.1.2 AIA UNIT

Description of risks	1. Actions to address risks	2. How to integrate/ implement actions into QMS processes	3. How to evaluate effectiveness
<p><b>A. Inaccurate aeronautical data/info:</b></p> <p>AIS/AIM does not normally originate the information it processes and publishes. The “raw data” must be provided by those responsible for the operation of the various air navigation facilities and services. This, in turn, is necessary to ensure timely distribution of all significant information both within the State and to other States as required.</p>	<p>A1a. MSLA to establish the responsibilities of each data originator (DCAA, MDA, AAA, ANSA) to comply with Annex 15 data quality<sup>4</sup>.</p> <p>A1b. ANSA to provide AIS/AIM training to data originators.</p>	<p>A2a. Develop and implement procedures for continual data quality check, monitoring of compliance, notification of noncompliance and corrective actions.</p> <p>A2b. Develop and implement procedures for the AIS/AIM training to data originators.</p>	<p>A3a. Yearly evaluation of the effectiveness of the actions identified in 1 and 2.</p> <p>A3b. Yearly AIS/AIM competency assessment of data originators.</p> <p>A3c. Objective: to ensure compliance with Annex 15 data quality.</p>
<p><b>B. Missing, erroneous and duplicate flight plans:</b></p> <p>The Flight Plan filing process has shown several problems from missing information, erroneous data in the flight plan and duplication of flight plans which leads to unnecessary ATC workload. Furthermore, this issue entails noncompliance with ICAO standards and/or national regulation. Moreover, missing, or erroneous flight plans could lead to delays.</p>	<p>B1a. Perform an analysis to determine the cause of errors per airline/aircraft operators (root cause analysis).</p> <p>B1b. Develop and implement an action plan to mitigate the errors.</p>	<p>B2a. Develop and implement procedures for the monitoring of missing, erroneous and duplicate flight plans, notification of noncompliance and corrective actions.</p>	<p>B3a. Yearly evaluation of the effectiveness of the actions identified in 1 and 2.</p> <p>B3b. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.</p> <p>B3c. Objective: to reduce unnecessary ATC workload due to missing, erroneous and duplicate flight plans.</p>

<sup>4</sup> **Data quality.** A degree or level of confidence that the data provided meets the requirements of the data user in terms of accuracy, resolution, integrity (or equivalent assurance level), traceability, timeliness, completeness, and format.

<p><b>C. Human Error:</b></p> <p>Human errors could affect the achievement of the quality objectives. No data available regarding human errors in the unit AIA.</p>	<p>C1a. Conduct a survey regarding potential human errors in the unit AIA.</p>	<p>C2a. Based on the results of the survey, a corrective action plan will be developed and implemented.</p>	<p>C3a. Yearly evaluation of the effectiveness of the actions identified in 1 and 2.</p> <p>C3b. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.</p> <p>C3c. Objective: to mitigate the occurrence and impact of human errors.</p>
<p><b>D. Understaffing in the near future:</b></p> <p>Continuity of service of the AIA unit is at risk when minimum staffing cannot be maintained. The ARO team is currently on minimum (8 AIO's).</p>	<p>D1a. Develop and implement a contingency plan to ensure continuity of unit AIA.</p> <p>D1b. Evaluate scheduling possibilities.</p>		<p>D3a. Yearly evaluation of the effectiveness of the actions identified in one.</p> <p>D3b. Based on the findings of the yearly evaluation, improve or modify contingency plan.</p> <p>D3c. Objective: to mitigate the risk of not being able to guarantee the continuity of service of the AIA unit due to understaffing.</p>

*Table 9: Actions to address risks and opportunities AIA unit*

6.1.3 CNS/ATM SYSTEMS UNIT

Description of risks	1. Actions to address risks	2. How to integrate/ implement actions into QMS processes	3. How to evaluate effectiveness
<p><b>A. No maintenance support:</b></p> <p>Availability of CNS/ATM systems may be at risk without a maintenance support contract (MSC).</p>	<p>A1a. Reach a MSC with vendors for most critical CNS/ATM systems.</p>	<p>A2a. Identify CNS/ATM systems that require an MSC.</p> <p>A2b. Describe the process related to MSC.</p> <p>A2c. Negotiate and finalize MSCs.</p> <p>A2d. Monitor compliance with MSCs.</p>	<p>A3a. Yearly evaluation of the effectiveness of the actions identified in 1 and 2.</p> <p>A3b. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.</p> <p>A3c. Objective: to ensure timely maintenance support at a reasonable cost.</p>
<p><b>B. Lack of critical spare parts in stock:</b></p> <p>When a critical part of a CNS/ATM system breaks down and a spare part is not available on site, the consequence thereof is that the spare part must be ordered from abroad. This can lead to a lengthy <b>period</b> of non-availability of the CNS/ATM system.</p>	<p>B1a. Spare parts management</p>	<p>B2a. Develop and implement spare parts management procedures, including procedures for the monitoring of compliance, notification of noncompliance and corrective actions.</p>	<p>B3a. Yearly evaluation of the effectiveness of the actions identified in 1 and 2.</p> <p>B3b. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.</p> <p>B3c. Objective: to ensure that the critical spare parts of all CNS/ATM systems are available on site and that other parts are provided to ANSA in the right quantity, at the right time, with the right level of quality, and at the least total cost.</p>
<p><b>C. Human Error:</b></p> <p>Human errors could affect the achievement of the quality objectives.</p>	<p>C1a. Conduct a survey amongst the TCAS of (potential) human errors in</p>	<p>C2a. Based on the results of the survey, a corrective action plan will be developed and implemented.</p>	<p>C3a. Yearly evaluation of the effectiveness of the actions identified in 1 and 2.</p>

<p>No data available regarding human errors in the unit CNS/ATM systems.</p>	<p>the unit CNS/ATM systems.</p>		<p>C3b. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.</p> <p>C3c. Objective: to mitigate the occurrence and impact of human errors.</p>
<p><b>D. Some old equipment that are more susceptible to failure:</b></p> <p>Old components getting beyond their lifetime can fail at any moment and it is difficult to get spares or support for repair. The consequences can be severe if it is critical equipment.</p>	<p>D1a. Perform Technical assessment of old CNS/ATM systems.</p>	<p>D2a. Develop and implement the technical assessment procedures to determine the degree of failure risk of old CNS/ATM systems.</p> <p>D2b. Based on the results of the technical assessment, develop, and implement a corrective action plan to eliminate or mitigate the risk.</p>	<p>D3a. Yearly evaluation of the effectiveness of the actions identified in 1 and 2.</p> <p>D3b. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.</p> <p>D3c. Objective: to mitigate the risk of non-availability or non-reliability of old CNS/ATM systems.</p>
<p><b>E. Small size of staff:</b></p> <p>Continuity of service of CNS/ATM Systems is at risk when minimum staffing cannot be maintained. This is the case when at the same time 2 TCAS cannot perform their duties for an extended period.</p>	<p>E1a. Develop and implement a contingency plan to ensure continuity of service of CNS/ATM systems.</p> <p>E1b. When the financial situation of ANSA permits, an additional TCAS will be hired.</p>		<p>E3a. Yearly evaluation of the effectiveness of the actions identified in one.</p> <p>E3b. Based on the findings of the yearly evaluation, improve or modify contingency plan.</p> <p>E3c. Objective: to mitigate the risk of not being able to guarantee the continuity of service of CNS/ATM systems due to small staff.</p>

Table 10: Actions to address risks and opportunities CNS/ATM Systems unit

## 6.2 QUALITY OBJECTIVES

In this paragraph ANSA establishes its quality objectives on two levels:

1. The quality objective of the joint operational and S&Q units (the final objective).
2. The quality objectives that are specific to each operational unit and the S&Q unit (the intermediate objectives).

ANSA's final quality objective is to provide the highest degree of quality of service at the lowest possible cost to its customers and other interested parties. The actions described in subparagraph 6.2.1., 6.2.2, 6.2.3 and 6.2.4 intend to contribute to the intermediate objectives and by extension contribute to the realization of the final objective.



*Figure 5: the relation between actions and quality objectives*

6.2.1 ATC UNIT

<b>1. Description of quality objective #1</b>	<b>Facilitate efficient aircraft operations</b>	
<b>2. Actions to achieve quality objective</b>	2.1 Improve coordination with Curacao ACC (see quality objective #4). 2.2 Implement competency-based training and assessment (see quality objective #2). 2.3 Implement ATFM. 2.4 Continually review and update the published IFP <sup>5</sup> and VFR procedures. In this context, a survey will be conducted among ANSA's controllers and the airlines regarding the efficiency of these flight procedures. 2.5 Improve the data quality of Aruba in the Dutch Caribbean AIP (see subparagraph 6.2.2 quality objective #3). 2.6 Maintain a high level of equipment availability (see subparagraph 6.2.3 quality objective #1).	
<b>3. How to evaluate the effectiveness of these actions</b>	Ad 2.3 and 2.4 The effectiveness of these actions will be evaluated yearly. Based on the findings of this yearly evaluation, an improvement plan may be developed and implemented.	
<b>4. Required resources</b>	Ad 2.3 No costs are foreseen at this stage since this action will be addressed internally. Ad 2.4 Cost related to the update of the flight procedures will be budgeted in the corresponding year.	
<b>5. Who is responsible</b>	Ad 2.3 and 2.4 MATC.	
<b>6. Timeline</b>	Ad 2.3 ATFM Ad 2.4 Flight procedures update Ad 2.3 and 2.4 Evaluation	Pending the restart of air traffic between Aruba and Venezuela.  Q1 2024  Yearly Q1

Table 11: Quality objective #1 ATC unit

<sup>5</sup> IFP are used by aircraft flying in accordance with IFR.

1. Description of quality objective #2	Maintain and enhance level of competency for ATC	
2. Actions to achieve quality objective	2.1 Implement competency-based training by providing refresher training (simulator and theoretical) on a yearly basis, as well as remedial training and training regarding new equipment/procedures when required. Based on the new ATCO regulation, a refresher course for procedural service must be provided every 3 years for OJTIs. At the end of each training a survey will be conducted among the ATCOs. 2.2 Implement competency-based assessment through yearly reviews of voice recordings, proficiency checks and performance evaluations. 2.3 Review and update ATC Training Manual.	
3. How to evaluate the effectiveness of these actions	Ad 2.1, 2.2 and 2.3 The effectiveness of these actions will be evaluated yearly. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.	
4. Required resources	Ad 2.1, 2.2 and 2.3 No costs are foreseen at this stage since these actions will be addressed internally, and if there are costs, they will be budgeted in the corresponding year.	
5. Who is responsible	Ad 2.1, 2.2 and 2.3 MATC.	
6. Timeline	Ad 2.1 - Refresher training - Remedial training - Training regarding new equipment/procedures - Refresher training OJTIs - Training survey Ad 2.2 - Voice recording reviews - Proficiency checks - Performance evaluations Ad 2.3 Update ATC Training Manual Ad 2.1, 2.2 and 2.3 Evaluation	Yearly Q2 When required When required  Q1 2024 At the end of each training  Yearly Q1 Yearly Q1 Yearly in October  Q1 2024  Yearly Q1

Table 12: Quality objective #2 ATC unit

<b>1. Description of quality objective #3</b>	<b>Promote collaboration between ANSA and DC-ANSP</b>	
<b>2. Actions to achieve quality objective</b>	Implement the collaboration agreement between ANSA and DC-ANSP.	
<b>3. How to evaluate the effectiveness of these actions</b>	The effectiveness of this action will be evaluated yearly. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.	
<b>4. Required resources</b>	No costs are foreseen at this stage since this action will be addressed internally, and if there are costs, they will be budgeted in the corresponding year.	
<b>5. Who is responsible</b>	MCAS and MATC.	
<b>6. Timeline</b>	Implement agreement Evaluation (MCAS)	Q4 2023 - Q4 2024 Yearly Q1

Table 13: Quality objective #3 ATC unit



<b>1. Description of quality objective #4</b>	<b>Improve coordination with Curacao ACC</b>	
<b>2. Actions to achieve quality objective</b>	2.1 Minimize verbal coordination between ANSA and DC-ANSP by: a. Including standard clearances and standard releases <sup>6</sup> in the LOA between ANSA and DC-ANSP. b. Implement the interface of the Flight Data Processing Systems (FDPS). 2.2 Mitigate non-compliance of the LOA between ANSA and DC-ANSP by both parties by: a. Enforcing the procedures for the monitoring of compliance, notification of noncompliance and corrective actions. b. Monitoring compliance via voice recording reviews. 2.3 Conduct a survey among the ATCOs of human errors in the Tower which can affect the coordination with DC-ANSP.	
<b>3. How to evaluate the effectiveness of these actions</b>	Ad 2.1 and 2.2 The effectiveness of these actions will be evaluated yearly. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented. Ad 2.3 Will be determined after survey is conducted.	
<b>4. Required resources</b>	Ad 2.1a No costs are foreseen at this stage since this action will be addressed internally by both parties. Ad 2.1b Costs will be budgeted in the corresponding year. Ad 2.2 and 2.3 No costs are foreseen at this stage since these actions will be addressed internally by both parties.	
<b>5. Who is responsible</b>	Ad 2.1, 2.2 and 2.3 MATC	
<b>6. Timeline</b>	Ad 2.1a Update LOA Ad 2.1b FDPS Interface Ad 2.2 LOA compliance monitoring Ad 2.3 ATC Human Errors Survey Ad 2.1 and 2.2 Evaluation	Q1 2024  Q1 2025  Yearly Q1  Q4 2023 - Q1 2024  Yearly Q1

Table 14: Quality objective #4 ATC unit

<sup>6</sup> Standard releases will be implemented in 2025.

<b>1. Description of quality objective #5</b>	<b>Promote collaboration between ANSA and DCAA</b>	
<b>2. Actions to achieve quality objective</b>	Negotiate and implement a collaboration agreement that shall include: a. Timeframe for expeditious approval of documents. b. Procedures to involve ANSA prior to decision-making that will affect ANSA’s operations. c. Procedures for the monitoring of compliance, notification of noncompliance, and corrective actions. d. Periodical meetings with DCAA.	
<b>3. How to evaluate the effectiveness of these actions</b>	The effectiveness of these actions will be evaluated yearly. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.	
<b>4. Required resources</b>	No costs are foreseen at this stage since these actions will be addressed internally.	
<b>5. Who is responsible</b>	MATC.	
<b>6. Timeline</b>	Collaboration agreement Evaluation	Q1 2024 Yearly Q1

Table 15: Quality objective #5 ATC

6.2.2 AIA UNIT

1. Description of quality objective #1	Maintain and enhance level of competency for AIA unit	
2. Actions to achieve quality objective	2.1 Implement competency-based training by providing refresher training on a yearly basis, OJTI training as well as remedial and training regarding new equipment and procedures when required. At the end of each training a survey will be conducted among the Aeronautical Information Officers (AIOs). 2.2 Implement competency-based assessment through yearly data reviews (flight plans and system database), proficiency checks and performance evaluations. 2.3 Develop an AIA Training Manual.	
3. How to evaluate the effectiveness of these actions	Ad 2.1, 2.2 and 2.3 The effectiveness of these actions will be evaluated yearly. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.	
4. Required recourses	Ad 2.1, 2.2 and 2.3 No costs are foreseen at this stage since these actions will be addressed internally, and if there are costs, they will be budgeted in the corresponding year.	
5. Who is responsible	Ad 2.1, 2.2 and 2.3 MAIA.	
6. Timeline	Ad 2.1 - Refresher training - Remedial training - Training regarding new equipment/procedures - Refresher training OJTIs - Training survey Ad 2.2 Data reviews Proficiency checks Performance evaluations Ad 2.3 Develop AIA Training Manual Ad 2.1, 2.2 and 2.3 Evaluation	Yearly Q3 When required When required  Q1 2024 At the end of each training  Yearly Q2 Yearly Q3 Yearly in October  October 2023 - January 2024  Yearly Q1

Table 16: Quality objective #1 AIA unit

<b>1. Description of quality objective #2</b>	<b>Mitigate flight plan errors (missing, erroneous and duplicate flight plans)</b>	
<b>2. Actions to achieve quality objective</b>	2.1 Implement cutting of the TopSky ATC line. 2.2 Make an analysis to determine the cause and extent of flight plan errors per aircraft operator (root cause analysis). 2.3 Develop and implement an action plan to mitigate flight plan errors. 2.4 Develop and implement procedures for the monitoring of flight plan errors. 2.5 Develop a survey form, conduct a survey among Aeronautical Information Officers (AIOs) of human errors that might contribute to flight plan errors and analyze the results.	
<b>3. How to evaluate the effectiveness of these actions</b>	Ad 2.1, 2.2, 2.3, 2.4 and 2.5 The effectiveness of these actions will be evaluated yearly. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.	
<b>4. Required recourses</b>	Ad 2.1, 2.2, 2.3, 2.4 and 2.5 No costs are foreseen at this stage since these actions will be addressed internally, and if there are costs, they will be budgeted in the corresponding year. Ad 2.5 Cost will be budgeted in the corresponding year.	
<b>5. Who is responsible</b>	Ad 2.1, 2.2, 2.3, 2.4 and 2.5 MAIA.	
<b>6. Timeline</b>	Ad 2.1 TopSky ATC line-cut Ad 2.2 Root cause analysis Ad 2.3 Action plan Ad 2.4 Monitoring Procedures Ad 2.5 AIA human errors survey Ad 2.1, 2.2, 2.3, 2.4 and 2.5 Evaluation	Q1 2024  Q2 2024  Q2 2024  Q2 2024  Q4 2023 - Q1 2024  Yearly Q1

Table 17: Quality objective #2 AIA unit

<b>1. Description of quality objective #3</b>	<b>Ensure a high degree of aeronautical information and data quality<sup>7</sup> in compliance with ICAO Annex 15, through the Aeronautical information products<sup>8</sup> being provided:</b> <ul style="list-style-type: none"> <li>• <b>Aeronautical Information Publication (AIP), including Amendments and Supplements;</b></li> <li>• <b>Aeronautical Information Circulars (AIC);</b></li> <li>• <b>aeronautical charts;</b></li> <li>• <b>NOTAM; and</b></li> <li>• <b>digital data sets.</b></li> </ul>	
<b>2. Actions to achieve quality objective</b>	2.1 Prepare, sign and implement an MSLA to establish the responsibilities of each data originator in accordance with ICAO Annex 15, Doc 10066 PANS-AIM and Doc 8126 AIS Manual. 2.2 Review and update the quality control procedures included in the AIA manual. 2.3 Maintain and enhance level of competency for AIS Officer (see quality objective #1).	
<b>3. How to evaluate the effectiveness of these actions</b>	Ad 2.1 and 2.2 The effectiveness of these actions will be evaluated yearly. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.	
<b>4. Required recourses</b>	Ad 2.1 and 2.2 No costs are foreseen at this stage since these actions will be addressed internally, and if there are costs, they will be budgeted in the corresponding year.	
<b>5. Who is responsible</b>	Ad 2.1 and 2.2 MAIA.	
<b>6. Timeline</b>	Ad 2.1 MSLA Ad 2.2 Update quality control procedures Ad 2.1 and 2.2 Evaluation	Q1 2024  Q4 2023  Yearly Q1

Table 18: *Quality objective #3 AIA unit*

<sup>7</sup> **Data quality.** A degree or level of confidence that the data provided meet the requirements of the data user in terms of accuracy, resolution, integrity (or equivalent assurance level), traceability, timeliness, completeness and format.

<sup>8</sup> **Aeronautical information product.** Aeronautical data and aeronautical information provided either as digital data sets or as a standardized presentation in paper or electronic media.

6.2.3 CNS/ATM SYSTEMS UNIT

<b>1. Description of quality objective #1</b>	<b>Maintain a high level of availability of CNS/ATM Systems as recommended by ICAO</b>	
<b>2. Actions to achieve quality objective</b>	2.1 Ensure that maintenance of CNS/ATM Systems are performed conform the procedures set forth in the CNS/ATM Systems Manual and TIBs. - Review and update the CNS/ATM Systems Manual. - Develop Facility TIBs. - Develop CNS/ATM Systems Training Manual. 2.2 Extend the 40-hours maintenance support agreement with Thales. 2.3 Critical Spare Parts. - Develop spare parts management procedures. - Update spare parts list. - Update the Robust ATS Report. - Procure critical spare parts. 2.4 Purchase and install parts to put VOR back into service. 2.5 Develop investment program to ensure safe and efficient ATS.	
<b>3. How to evaluate the effectiveness of these actions</b>	Ad 2.1, 2.2, 2.3, 2.4 and 2.5 The effectiveness of these actions will be evaluated yearly. Based on the findings of the yearly evaluation, an improvement plan may be developed and implemented.	
<b>4. Required recourses</b>	Ad 2.1 No costs are foreseen at this stage since these actions will be addressed internally, and if there are costs, they will be budgeted in the corresponding year. Ad 2.2, 2.3, 2.4 and 2.5 Costs are unknown at this stage, but will be budgeted in the corresponding year.	
<b>5. Who is responsible</b>	Ad 2.1, 2.2, 2.3, 2.4 and 2.5 MCAS.	
<b>6. Timeline</b>	Ad 2.1 - Review and update CNS/ATM Manual - Develop TIBs: - ILS/DME - VCS/VRRS - WAM/ADS-B - TOPSKY ATC - VOR/DME - VHF TX/RX Radios	- Yearly Q1  - December 2023 - February 2024 - January 2024 - January 20243 - December 2023 - February 2024

December 12, 2023

	<ul style="list-style-type: none"> <li>- AMHS/AIS</li> <li>- D-ATIS</li> <li>- Supporting facilities</li> </ul>	<ul style="list-style-type: none"> <li>- March 2024</li> <li>- March 2024</li> <li>- March 2024</li> <li>- Q2 2024</li> </ul>
	<ul style="list-style-type: none"> <li>- Develop CNS/ATM Training Manual</li> </ul>	
	<ul style="list-style-type: none"> <li>Ad 2.2</li> </ul>	December 2023
	<ul style="list-style-type: none"> <li>Extend maintenance support agreement</li> </ul>	
	<ul style="list-style-type: none"> <li>Ad 2.3</li> </ul>	
	<ul style="list-style-type: none"> <li>Critical spare parts</li> </ul>	
	<ul style="list-style-type: none"> <li>- Develop spare parts management procedures</li> </ul>	- April 2024
	<ul style="list-style-type: none"> <li>- Update spare parts list</li> </ul>	- April 2024
	<ul style="list-style-type: none"> <li>- Update the Robust ATS Report</li> </ul>	- April 2024
	<ul style="list-style-type: none"> <li>- Procure critical spare parts</li> </ul>	- Q2 2024
	<ul style="list-style-type: none"> <li>Ad 2.4</li> </ul>	
	<ul style="list-style-type: none"> <li>Put VOR back into service</li> </ul>	May 2024
	<ul style="list-style-type: none"> <li>Ad 2.5</li> </ul>	
	<ul style="list-style-type: none"> <li>Develop investment program</li> </ul>	Yearly Q4
	<ul style="list-style-type: none"> <li>Ad 2.1, 2.2, 2.3, 2.4 and 2.5</li> </ul>	
	<ul style="list-style-type: none"> <li>Evaluation</li> </ul>	Yearly Q1

Table 19: Quality objective #1 CNS/ATM Systems unit

6.2.4 S&Q UNIT

<b>1. Description of quality objective #1</b>	<b>Improve customer satisfaction.</b>	
<b>2. Actions to achieve quality objective</b>	2.1 Develop and implement an external QMS communication plan. 2.2 Develop and implement procedures to monitor and measure customer satisfaction. 2.3 Implement all actions to achieve the quality objectives described in paragraph 6.2 of the AQM.	
<b>3. How to evaluate the effectiveness of these actions</b>	Ad 2.1 and 2.2 The effectiveness of these actions will be evaluated yearly. Based on the findings of this yearly evaluation, an improvement plan may be developed and implemented.	
<b>4. Required resources</b>	Ad 2.1 and 2.2 No costs are foreseen at this stage since the actions will be addressed internally, and if there are costs, they will be budgeted in the corresponding year.	
<b>5. Who is responsible</b>	SQ.	
<b>6. Timeline</b>	Ad 2.1 External QMS communication plan	December 2023 – January 2024
	Ad 2.2 Procedures to monitor and measure customer satisfaction	December 2023 – January 2024
	Ad 2.1 and 2.2 Evaluation	Yearly Q1

Table 20: Quality objective #1 S&Q unit



<b>1. Description of quality objective #2</b>	<b>Ensure that documented information required by QMS is available, suitable for use, where and when it is needed, and adequately protected.</b>	
<b>2. Actions to achieve quality objective</b>	Develop and implement document control procedures.	
<b>3. How to evaluate the effectiveness of these actions</b>	The effectiveness of these actions will be evaluated yearly. Based on the findings of this yearly evaluation, an improvement plan may be developed and implemented.	
<b>4. Required resources</b>	No costs are foreseen at this stage since the actions will be addressed internally, and if there are costs, they will be budgeted in the corresponding year.	
<b>5. Who is responsible</b>	SQ.	
<b>6. Timeline</b>	Document control procedures Evaluation	October 2023 - January 2024 Yearly Q1

Table 21: Quality objective #2 S&Q unit

<b>1. Description of quality objective #3</b>	<b>Promote awareness among ANSA’s operational personnel of the QMS and their contribution to the effectiveness thereof.</b>	
<b>2. Actions to achieve quality objective</b>	2.1 Develop and implement QMS training and awareness program. 2.2 Develop and implement internal communication plan. 2.3 Conduct QMS survey among personnel.	
<b>3. How to evaluate the effectiveness of these actions</b>	Ad 2.1, 2.2 and 2.3 The effectiveness of these actions will be evaluated yearly. Based on the findings of this yearly evaluation, an improvement plan may be developed and implemented.	
<b>4. Required resources</b>	Ad 2.1, 2.2 and 2.3 No costs are foreseen at this stage since the actions will be addressed internally, and if there are costs, they will be budgeted in the corresponding year.	
<b>5. Who is responsible</b>	SQ.	
<b>6. Timeline</b>	Ad 2.1 QMS training and awareness program Ad 2.2 Internal QMS communication plan Ad 2.3 QMS personnel survey Ad 2.1, 2.2 and 2.3 Evaluation	November 2023 - January 2024  January 2024  January 2024  Yearly Q1

Table 22: Quality objective #3 S&Q unit

<b>1. Description of quality objective #4</b>	<b>Ensure that the received products and services from the external providers are of the required quality standard.</b>	
<b>2. Actions to achieve quality objective</b>	Conduct performance evaluation of: <ul style="list-style-type: none"> <li>• MovingDot</li> <li>• DC-ANSP</li> <li>• DMA</li> </ul>	
<b>3. How to evaluate the effectiveness of these actions</b>	The effectiveness of these actions will be evaluated yearly. Based on the findings of this yearly evaluation, an improvement plan may be developed and implemented.	
<b>4. Required resources</b>	No costs are foreseen at this stage since the actions will be addressed internally, and if there are costs, they will be budgeted in the corresponding year.	
<b>5. Who is responsible</b>	SQ in coordination with MATC and or MAIA.	
<b>6. Timeline</b>	Performance evaluation	Yearly Q1

Table 23: Quality objective #4 S&Q unit

<b>1. Description of quality objective #5</b>	<b>Ensure that information is provided on whether the QMS conforms to the requirements of the ISO 9001 standard and is effectively implemented and maintained.</b>	
<b>2. Actions to achieve quality objective</b>	2.1 Provide ISO 9001:2015 Internal Auditor Training to the CEO, unit managers and S&Q unit. 2.2 Develop internal audit program and procedures. 2.3 Conduct internal audits at planned intervals. 2.4 Conduct management review at planned intervals. 2.5 Update AQM at planned intervals. 2.6 ISO certification.	
<b>3. How to evaluate the effectiveness of these actions</b>	Ad 2.1, 2.2, 2.3, 2.4 and 2.5 The effectiveness of these actions will be evaluated yearly. Based on the findings of this yearly evaluation, an improvement plan may be developed and implemented.	
<b>4. Required resources</b>	Ad 2.1, 2.2, 2.3, 2.4 and 2.5 No costs are foreseen at this stage since the actions will be addressed internally, and if there are costs, they will be budgeted in the corresponding year. Ad 2.6 Costs have been budgeted.	
<b>5. Who is responsible</b>	Ad 2.1 and 2.2 SQ. Ad 2.3 SQ in coordination with MATC, MAIA and MCAS. Ad 2.4, 2.5 and 2.6 CEO in coordination with SQ, MATC, MAIA and MCAS.	
<b>6. Timeline</b>	Ad 2.1 Internal Auditor Training Ad 2.2 Internal audit program Ad 2.3 Internal audits Ad 2.4 Management review Ad 2.5 Update AQM Ad 2.6 ISO certification Ad 2.1, 2.2, 2.3, 2.4 and 2.5 Evaluation	Q1 2024  Q1 2024  Yearly Q1  Yearly Q2  Yearly Q3  Q4 2024  Yearly Q1

Table 24: Quality objective #5 S&Q unit

## **6.3 PLANNING OF CHANGES**

ANSA determines the need for changes to the QMS based on e.g., monitoring, evaluation, reviews, and audits of the QMS as well as new customer and legal requirements. These changes shall be carried out in a planned manner.

As part of this planning process ANSA considers:

- a) the purpose of the changes and their potential consequences;
- b) the integrity of the QMS;
- c) the availability of resources (see sub paragraph 5.1.1 and chapter 7);
- d) the allocation or reallocation of responsibilities and authorities (see paragraph 5.3).

## 7 SUPPORT

### 7.1 RESOURCES

#### 7.1.1 GENERAL

Considering the high priority of quality of service, ANSA determines and provides the resources needed for the establishment, implementation, maintenance, and continual improvement of our QMS. The unit managers determine on a yearly basis the resources needed to accomplish the above and the CEO ensures that these resources are budgeted (see paragraph 5.1).

Taking the above into account ANSA also considers:

- a) the capabilities of, and constraints on, existing internal resources;
- b) what needs to be obtained from external providers.

#### 7.1.2 PEOPLE

ANSA determines and provides the persons necessary for the effective implementation of its QMS and for the operation and control of its processes. ANSA's staff is responsible for the effective implementation of its QMS (see paragraph 5.3). When deemed necessary, ANSA will attract external expertise for the purpose of training.

#### 7.1.3 INFRASTRUCTURE

ANSA determines, provides, and maintains the infrastructure necessary for the operation of our processes and to achieve conformity of products and services. To accomplish this, ANSA has a yearly investment budget and a yearly updated three-year investment plan. The CEO ensures that the necessary funds are allocated.

Infrastructure includes:

- a) buildings and associated utilities;
- b) equipment, including hardware and software;
- c) transportation resources;
- d) information and communication technology.

#### 7.1.4 OPERATIONAL ENVIRONMENT

ANSA determines, provides, and maintains the environment necessary for the operation of our processes and to achieve conformity of products and services. In this context ANSA focuses primarily on the following factors:

- a) social (e.g., non-discriminatory, calm, non-confrontational);
- b) psychological (e.g., stress-reducing, burnout prevention, emotionally protective);
- c) physical (e.g., temperature, heat, humidity, light, airflow, hygiene, noise).

ANSA has an agreement with MedWork for occupational physician consulting services. When it is determined by MedWork that the reason a staff member calls in sick is work related (e.g., stress, emotional), they will inform ANSA. If needed MedWork has a psychologist available to help the staff

member reintegrate into regular duty. The abovementioned social factors are an essential part of the organizational culture that ANSA promotes.

## 7.1.5 MONITORING AND MEASURING TOOLS

### 7.1.5.1 GENERAL

ANSA determines and provides the resources needed to ensure valid and reliable results when monitoring or measuring is used to verify the conformity of products and services to requirements.

ANSA ensures that the resources provided:

- a) are suitable for the specific type of monitoring and measurement activities being undertaken;
- b) are maintained to ensure their continuing fitness for their purpose.

ANSA will use in-house staff to perform all monitoring and measuring activities.

ANSA shall retain appropriate documented information as evidence of fitness for the purpose of monitoring and measurement resources.

### 7.1.5.2 MEASUREMENT TRACEABILITY

ANSA considers measurement traceability to be an essential part of providing confidence in the validity of measurement results. Measurement traceability procedures are included in the CNS/ATM Systems Manual. The measuring equipment owned by ANSA are:

- a) calibrated or verified, or both, at specified intervals, according to or prior to use, against measurement standards traceable to international or national measurement standards; when no such standards exist, the basis used for calibration or verification is retained as documented information;
- b) identified in order to determine their status;
- c) safeguarded from adjustments, damage or deterioration that would invalidate the calibration status and subsequent measurement results.

When measuring equipment is found to be unfit for its intended purpose, ANSA:

- determines if the validity of previous measurement results has been adversely affected;
- takes appropriate action as necessary.

## 7.1.6 ORGANIZATIONAL KNOWLEDGE

Unit managers determine the knowledge necessary for the operation of processes and to achieve conformity of products and services (see subparagraph 5.3.4). This knowledge is maintained and made available to the extent necessary. When addressing changing needs and trends, the unit managers consider the current knowledge base and determine how to acquire or access any necessary additional knowledge and required updates.

The abovementioned considerations are part of the yearly training plan of ANSA. The yearly training plan is developed in consultation with the unit managers. When approved by the CEO the funds are made available through the budget. ANSA endeavors to provide most training in-house or online to maintain costs as low as possible.

## 7.2 COMPETENCE

ANSA:

- determines the necessary competence of person(s) doing work that affects the performance and effectiveness of the QMS;
- ensures that staff members are competent on the basis of appropriate education, training, or experience;
- where applicable, takes actions to acquire the necessary competence, and evaluate the effectiveness of the actions taken;
- retains appropriate documented information as evidence of competence.

The above is documented in the ATC Training Manual whereas the AIA and the CNS/ATM Systems training manuals are being developed (see subparagraph 7.1.6 relating to the training plan). All training and assessment provided by ANSA are competency based as recommended by ICAO. Moreover, the importance of staff competency is also emphasized in the ATC quality objective #2 and the AIA quality objective #1.

## 7.3 AWARENESS

ANSA ensures that its staff is aware of:

- a) the quality policy;
- b) relevant objectives;
- c) their contribution to the effectiveness of the QMS, including the benefits of improved performance;
- d) the implications of not conforming with the QMS requirements.

To accomplish the above, ANSA will develop an awareness program and provide QMS training. See subparagraph 6.2.4 quality objective #3.

## 7.4 COMMUNICATION

ANSA determines the internal and external communications relevant to the QMS, including:

- on what it will communicate;
- when to communicate;
- with whom to communicate;
- how to communicate;
- who communicates.

ANSA will develop a QMS communication plan. See subparagraph 6.2.4 quality objective #1 and #3.



## 7.5 DOCUMENTED INFORMATION

### 7.5.1 GENERAL

ANSA's QMS includes:

1. All documented information required by the ISO 9001:2015 standard. Most of that information is included in this manual, whereas the other required documented information is incorporated in documents referred to herein (see paragraph 4.4).
2. Documented information determined by ANSA as being necessary for the effectiveness of the QMS.

### 7.5.2 CREATING AND UPDATING

When creating and updating documented information, ANSA ensures appropriate:

- identification and description (e.g., a title, date, author, or reference number);
- format (e.g., language, software version, graphics) and media (e.g., paper, electronic);
- review and approval for suitability and adequacy.

### 7.5.3 CONTROL OF DOCUMENTED INFORMATION

ANSA controls documented information required by the QMS and ISO 9001:2015 standard, to ensure:

- a) it is available and suitable for use, where and when it is needed;
- b) it is adequately protected.

For the control of documented information, ANSA addresses the following activities:

- a) distribution, access, retrieval and use;
- b) storage and preservation;
- c) revision control;
- d) retention and disposition.

Documented information:

- of external origin determined to be necessary for the planning and operation of the QMS is controlled and retained in folders on the network with limited access;
- retained as evidence of conformity is protected from unintended alterations.

Document control procedures to implement the above stated will be finalized in January 2024. See subparagraph 6.2.4 quality objective #2.

## 8 OPERATION

### 8.1 OPERATIONAL PLANNING AND CONTROL

ANSA plans, implements and controls the processes (see paragraph 4.4) needed to meet the requirements for the provision of services, and to implement the actions determined in chapter 6, by:

- a) determining the requirements for the services;
- b) establishing criteria for:
  1. the processes;
  2. the acceptance of services;
- c) determining the resources needed to achieve conformity to the product and service requirements;
- d) implementing control of the processes in accordance with the criteria;
- e) determining, maintaining and retaining documented information to the extent necessary:
  1. to have confidence that the processes have been carried out as planned;
  2. to demonstrate the conformity of services to their requirements.

The output of this planning is suitable for ANSA's operations. ANSA controls planned changes and reviews the consequences of unintended changes, taking action to mitigate any adverse effects, as necessary.

### 8.2 REQUIREMENTS FOR PRODUCTS AND SERVICES

#### 8.2.1 CUSTOMER COMMUNICATION

Communication with customers includes<sup>9</sup>:

- a) providing information relating to products and services;
- b) obtaining customer feedback relating to products and services, including customer complaints;
- c) establishing specific requirements for contingency actions, when relevant.

These actions will be included in ANSA's external communication plan. See subparagraph 6.2.4 quality objective #1 and paragraph 7.4.

#### 8.2.2 DETERMINING THE REQUIREMENTS FOR PRODUCTS SERVICES.

When determining the requirements for the products and services to be offered to customers, ANSA ensures that:

- a) the requirements for products and services are defined, including:
  - 1) any applicable statutory and regulatory requirements;
  - 2) those considered necessary by ANSA;
- b) ANSA can meet the claims for the products and services it offers.

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<sup>9</sup> The products and services provided by ANSA that are included in the scope of the QMS (paragraph 4.3) do not include communication with customers relating to handling enquiries, contracts or orders, including changes nor do they include the handling or controlling customer property. Therefore, the requirements specified in subclause 8.2.1 b) and d) of ISO 9001: 2015 do not apply.

### 8.2.3 REVIEW OF THE REQUIREMENTS FOR PRODUCTS AND SERVICES

ANSA ensures it has the ability to meet the requirements for products and services offered to its customers. Most of these customers are organized through the International Air Transport Association (IATA). Through IATA these customers express their needs and requirements to ICAO, which in turn includes these in its standards and recommended practices. ICAO has published its Global Air Navigation Plan (GANP) which focusses on the quality requirements of aircraft operators. Based on the GANP, ANSA has specified the requirements of its customers (see paragraph 4.2). ANSA has only one type of external customer, which is aircraft operators.

ANSA provides only one type of product to its customers which is AI products, and one type of service which is air traffic services. The nature of the products and services provided by ANSA does not allow for ANSA to review the requirements for these products and services before committing to supply to a customer<sup>10</sup>. ANSA ensures that this service complies with all applicable statutory and regulatory requirements (see chapter 2 for the regulatory framework).

### 8.2.4 CHANGES TO REQUIREMENTS FOR SERVICES

ANSA ensures that relevant documented information is amended, and that relevant persons are made aware of the changed requirements, when the requirements for products and services are changed.

## 8.3 DESIGN AND DEVELOPMENT OF PRODUCTS AND SERVICES

The requirements specified in subclause 8.3 of ISO 9001: 2015 do not apply to ANSA, as ANSA does not design nor develop products and services. All products, except aeronautical charts (see paragraph 8.4), and services delivered by ANSA are designed and developed by ICAO. ANSA only designs the processes to comply with ICAO SARPS and regulatory framework (see chapter 2).

## 8.4 CONTROL OF EXTERNALLY PROVIDED PRODUCTS AND SERVICES

### 8.4.1 GENERAL

ANSA ensures that externally provided products and services conform to requirements and determines the controls to be applied<sup>11</sup>.

ANSA has three external providers of products and services:

1. ANSA has outsourced the design and development of aeronautical charts to an external company. These products are incorporated into ANSA's AI products;
2. ANSA has outsourced the publication of its AI products to DC-ANSP. This service is provided directly to ANSA's customers.
3. DMA provides ANSA with meteorological data. This product is incorporated into ANSA's air traffic services. This data is disseminated via AIP, D-ATIS or verbally by the air traffic controller.

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<sup>10</sup> For this reason, the requirements specified in subclause 8.2.3.1 and 8.2.3.2 of ISO 9001: 2015, relating to the conduct of a review before committing to supply products and services to a customer and the documentation thereof, do not apply to ANSA.

<sup>11</sup> ANSA does not use externally provided processes.

ANSA determines and applies criteria for the evaluation, selection, monitoring of performance, and re-evaluation of external providers, based on their ability to provide products and services in accordance with requirements. ANSA documents information of these activities and any necessary actions arising from the evaluations. Performance evaluation of the external providers is performed yearly Q1.

#### 8.4.2 TYPE AND EXTENT OF CONTROL

ANSA ensures that externally provided products and services do not adversely affect its ability to consistently deliver conforming products and services to its customers<sup>12</sup>.

ANSA:

- a) defines both the controls that it intends to apply to an external provider and those it intends to apply to the resulting output;
- b) takes into consideration:
  - 1) the potential impact of the externally provided products and services on ANSA's ability to consistently meet customer and applicable statutory and regulatory requirements;
  - 2) the effectiveness of the controls applied by the external provider;
- c) determines the verification, or other activities, necessary to ensure that the externally provided products and services meet requirements.

ANSA ensures that the company which designs and develops ANSA's aeronautical charts is ISO certified. All these charts are internally checked for compliance with ICAO SARPS. ANSA and DCAA have an agreement that the DCAA will employ the services of an external subject matter expert to review these charts for compliance prior to approval by the DCAA. In addition, IFP changes included in the aeronautical charts must be flight validated prior to publication.

For the purpose of quality control, DCAA approval is required before ANSA submits an AI product to DC-ANSP for publication. ANSA has an SLA with DC-ANSP which ensures compliance with ICAO SARPS by both ANSA as data originator and DC-ANSP as data publisher. ANSA applies a quality check after the publication of said AI product to ensure that the data was published as requested. Development of quality control procedures regarding AIS data publication will be finalized in December 2023.

ANSA has an LOA with the DMA to ensure that both ANSA and the DMA are in compliance with ICAO SARPS with regard to the provision of meteorological data to ANSA's customers.

#### 8.4.3 INFORMATION FOR EXTERNAL PROVIDERS

ANSA ensures the adequacy of requirements prior to their communication to the external provider and communicates to them its requirements for<sup>13</sup>:

- a) products and services to be provided;
- b) the approval of products and services and the release thereof;

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<sup>12</sup> As ANSA does not use externally provided processes, the requirement specified in subclause 8.4.2 a) of ISO 9001: 2015 does not apply to ANSA.

<sup>13</sup> ANSA does not intend to perform verification nor validation activities at the external providers premises. Therefore, the requirement specified in subclause 8.4.3 f) of ISO 9001: 2015 does not apply.

- c) competence, including any required qualification of persons;
- d) the external providers' interactions with ANSA;
- e) control and monitoring of the external providers' performance to be applied by ANSA.

## 8.5 PRODUCTION AND SERVICE PROVISION

### 8.5.1 CONTROL OF PRODUCTION AND SERVICE PROVISION

ANSA implements production and service provision under controlled conditions, which include<sup>14</sup>:

- a) the availability of documented information that defines<sup>15</sup>:
  - 1) the characteristics of the products to be produced, the services to be provided, or the activities to be performed;
  - 2) the results to be achieved;
- b) the availability and use of suitable monitoring and measuring resources<sup>16</sup>;
- c) the implementation of monitoring and measurement activities at appropriate stages to verify the criteria for control of processes or outputs, and acceptance criteria for products and services have been met<sup>17</sup>;
- d) the use of suitable infrastructure and environment for the operation of processes<sup>18</sup>;
- e) the appointment of competent persons, including any required qualification<sup>19</sup>;
- f) the implementation of actions to prevent human error<sup>20</sup>.

### 8.5.2 IDENTIFICATION AND TRACEABILITY

ANSA:

1. uses suitable means to identify outputs when it is necessary to ensure conformity of products and services;
2. identifies the status of outputs with respect to monitoring and measurement requirements throughout production and service provision;
3. controls the unique identification of the outputs when traceability is a requirement and retains the documented information necessary to enable traceability.

### 8.5.3 PROPERTY BELONGING TO CUSTOMERS OR EXTERNAL PROVIDERS

ANSA does not control nor use any property belonging to customers or external providers. Therefore ISO 9001 requirement subparagraph 8.5.3 does not apply.

### 8.5.4 PRESERVATION

ANSA does not provide outputs that require preservation. Therefore, the requirement specified in subclause 8.5.4 of ISO 9001:2015 does not apply.

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<sup>14</sup> All the resulting output of ANSAs processes for production and service provision can be measured and monitored. Therefore, the requirement specified in subclause 8.5.1 f) of ISO 9001:2015 does not apply. In addition, ANSA does not perform release, delivery, and post-delivery activities for its customers. Hence, the requirement specified in subclause 8.5.1 h) of ISO 9001: 2015 does not apply.

<sup>15</sup> Paragraph 4.4 of this manual lists the respective manuals which contain the required documented information.

<sup>16</sup> See subparagraph 7.1.5 of this manual.

<sup>17</sup> See chapter 9 of this manual.

<sup>18</sup> See subparagraph 7.1.3 and 7.1.4 of this manual.

<sup>19</sup> See subparagraph 7.1.2, 7.1.6 and paragraph 7.2 of this manual.

<sup>20</sup> See paragraph 6.1. of this manual.

### 8.5.5 POST-DELIVERY ACTIVITIES

The nature of the services and products provided by ANSA excludes post-delivery activities. Therefore, the requirement specified in subclause 8.5.5 of ISO 9001:2015 does not apply.

### 8.5.6 CONTROL OF CHANGES

ANSA reviews and controls changes for production or service provision, to the extent necessary to ensure continuing conformity with requirements.

ANSA retains documented information describing the results of the review of changes, the person(s) authorizing the change, and any necessary actions arising from the review.

## 8.6 RELEASE OF SERVICES

The services provided by ANSA are continual and are not subject to release activities. Therefore, the requirement specified in subclause 8.6 of ISO 9001: 2015 does not apply.

## 8.7 CONTROL OF NONCONFORMING OUTPUTS

8.7.1 ANSA ensures that outputs that do not conform to their requirements are identified and controlled to prevent their unintended use or delivery.

ANSA takes appropriate action based on the nature of the nonconformity and its effect on the conformity of services. This also applies to nonconforming services detected during or after the provision of services.

ANSA deals with nonconforming outputs in the following way<sup>21</sup>:

- a) correction;

Conformity to the requirements is verified when nonconforming outputs are corrected.

8.7.2 ANSA retains documented information that<sup>22</sup>:

- a) describes the nonconformity;
- b) describes the actions taken;
- c) identifies the authority deciding the action in respect of the nonconformity.

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<sup>21</sup> The nature of ANSA's outputs excludes the segregation, containment, return or suspension of provision of products and services and obtaining authorization for acceptance under concession. Therefore, the requirements specified in subclause 8.7.1 b), c) and d) of ISO 9001:2015 do not apply.

<sup>22</sup> The requirement specified in subclause 8.7.2 c) of ISO 9001:2015 does not apply. See footnote 20.

## **9 PERFORMANCE EVALUATION**

### **9.1 MONITORING, MEASUREMENT, ANALYSIS AND EVALUATION**

#### **9.1.1 GENERAL**

ANSA has determined<sup>23</sup>:

- a) what needs to be monitored and measured;
  - b) the methods for monitoring, measurement, analysis and evaluation needed to ensure valid results;
  - c) when the monitoring and measuring shall be performed;
  - d) when the results from monitoring and measurement shall be analyzed and evaluated.
- See table 25 below.

ANSA evaluates yearly Q1 the performance and the effectiveness of the QMS and retains appropriate documented information as evidence of the results.

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<sup>23</sup> See paragraphs 6.1 and 6.2.

What needs to be monitored and measured?	Methods for monitoring, measurement, analysis and evaluation	KPI	Quality Performance Objective	When monitored and measured?	When analyzed and evaluated?
Quality objective ATC #1	<p>ANSA collects and monitors EFS data to identify delays related to gate departure, enroute clearance, taxi-out and arrival. With regard to departures and taking into account ANSA’s responsibilities, the scope of the analysis and evaluation is limited to taxi-out delays, which in the case of ANSA are considered “departure delays”.</p> <p>1. A flight is considered to experience a departure delay when the time difference between taxi request and take-off exceeds 10 minutes.</p> <p>2. A flight is considered to experience an arrival delay when the time difference between first contact and actual time of arrival (ATA) exceeds 14 or 15 minutes<sup>24</sup>.</p>	<p>1. The percentage of flights that experience departure delays.</p> <p>2. The percentage of flights that experience arrival delays.</p>	<p>1. Less than 5% of flights experience departure delays.</p> <p>2. Less than 5% of flights experience arrival delays.</p>	<p>1. Monthly</p> <p>2. Monthly.</p>	<p>1. Yearly Q1.</p> <p>2. Yearly Q1.</p>
Quality objective ATC #2	ANSA performs proficiency checks and reviews the voice recording of all ATC personnel.	The percentage of ATC personnel who perform satisfactorily on all subjects.	100%.	Yearly.	Yearly Q1.
Quality objective ATC #3	ANSA collects data regarding the instances that ANSA and DC-ANSP have collaborated with each other in a way that is mutually beneficial.	The number of times that ANSA and DC-ANSP have collaborated in a mutually beneficial way.	At least one instance of collaboration per year.	Yearly.	Yearly Q1.
Quality objective ATC #4	Through incident investigation and or the monitoring of voice recordings ANSA collects data regarding the compliance of the LOA between ANSA and DC-ANSP.	The number of coordination-related reports submitted by both ANSA and DC-ANSP.	Gradually reduce to 0.	Yearly Q1 and when reports are filed.	Yearly Q1.

<sup>24</sup> Depending on arrival route.



Quality objective ATC #5	ANSA collects data regarding the instances that the DCAA has not complied with the collaboration agreement.	The number of times of non-compliance by DCAA.	Yearly reduction.	When non-compliance with the agreement is determined.	Yearly Q1.
Quality objective AIS #1	ANSA performs proficiency checks and reviews flight plans and AI products processed by all AIA personnel.	Percentage of AIA personnel who perform satisfactorily on all subjects.	100%.	Yearly.	Yearly Q1.
Quality objective AIS #2	ANSA collects data about all flight plan errors.	Number of detected flight plan errors	Yearly reduction.	Quarterly.	Yearly Q1.
Quality objective AIS #3	1. ANSA applies a process of checking or proving the validity or accuracy of AI products submitted for publication.  2. This process is repeated after the publication by DC-ANSP.	1. Number of detected non-compliant data and or publication method submitted for publication by data originators.  2. The number of errors introduced by DC-ANSP in published AI products.	1. Yearly reduction.  2. Yearly reduction.	1. When an AI product is requested.  2. After an AI product is published.	1. Yearly Q1.  2. Yearly Q1.
Quality objective CNS/ATM #1	Based on Logbook data ANSA monitors and measures the operational availability of equipment necessary to provide ATM service. Availability is the maximum facility service hours minus outage time divided by the maximum facility service hours.	Percentage of availability of the following equipment: - VHF TX/RX Radios. - AMHS/AIS. - VCS. - VRRS. - D-ATIS. - MEVA. - VOR/DME. - ILS/DME. - WAM/ADS-B. - TopSky ATC.	1. Percentage of availability greater than 99.2% for each equipment.  2. Average percentage of availability greater than 99.2% for all equipment.	1. Monthly.  2. Monthly.	1. Yearly Q1.  2. Yearly Q1.

Quality objective S&Q #1	ANSA conducts an annual QMS customer survey among its clients to measure their satisfaction with the products and services provided by ANSA and get their feedback.	Percentage of customers who are satisfied with ANSAs products and services.	Yearly increase.	Yearly Q4.	Yearly Q1.
Quality objective S&Q #2	ANSA conducts an annual evaluation of compliance with ANSA document control procedures.	Number of non-compliances with the ANSA document control procedures.	Yearly reduction.	Yearly Q1.	Yearly Q1.
Quality objective S&Q #3	ANSA conducts an annual QMS survey amongst its personnel to measure their awareness of the ANSA QMS.	1. Percentage of personnel who are aware of the ANSA quality policy.  2. Percentage of personnel who are aware of their contributions the effectiveness of the QMS.	1. Yearly increase.  2. Yearly increase.	1. Yearly Q4.  2. Yearly Q4.	1. Yearly Q1.  2. Yearly Q1.
Quality objective S&Q #4	ANSA conducts an annual performance evaluation of the external providers.	1. Number of LOA non-compliances by DC-ANSP <sup>25</sup> and DMA.  2. Percentage of ANSA and DCAA approvals of products provided by MovingDot.	1. Yearly decrease.  2. 100% approval and or without any critical non-conformity.	1. When non-compliance reports are filed.  2. When products are provided by MovingDot.	Yearly Q1.  Yearly Q1.
Quality objective S&Q #5	ANSA performs annual internal audits and management review of its QMS.	1. Scope <sup>26</sup> of conducted internal audits.  2. Scope <sup>27</sup> of management review.	1. Yearly increase.  2. Yearly increase.	1. Yearly Q1.  2. Yearly Q2.	1. Yearly Q1.  2. Yearly Q1.

<sup>25</sup> See also Quality objective AIS #3.

<sup>26</sup> I.e., the number of items that are subject of an internal audit.

<sup>27</sup> I.e., the number of audited items that are reviewed by top management.

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Cost-effectiveness <sup>28</sup> .	Based on monthly financial statements ANSA monitors and measures cost-effectiveness of its operations.	1. Operational expenses per aircraft movement.	1. Yearly reduction.	1. Monthly.	1. Yearly Q1.
		2. Operational expenses as percentage of revenues.	2. Yearly reduction.	2. Monthly.	2. Yearly Q1.

*Table 25: KPIs*

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<sup>28</sup> See paragraph 6.2. ANSA's final quality objective is to provide the highest degree of quality of service at the lowest possible cost to its customers and other interested parties. That is the reason cost-effectiveness is included in this table.

### 9.1.2 CUSTOMER SATISFACTION

ANSA monitors customers' perceptions of the degree to which their needs and expectations have been fulfilled and determines the methods for obtaining, monitoring and reviewing this information. Customer surveys will be conducted yearly Q4.

### 9.1.3 ANALYSIS AND EVALUATION

ANSA analyzes and evaluates appropriate data and information arising from monitoring and measurement.

The results of analysis are used to evaluate:

- a) conformity of services;
- b) the degree of customer satisfaction;
- c) the performance and effectiveness of the QMS;
- d) if planning has been implemented effectively;
- e) the effectiveness of actions taken to address risks and opportunities;
- f) the performance of external providers;
- g) the need for improvements to the QMS.

## 9.2 INTERNAL AUDIT

ANSA conducts internal audits yearly Q1 to provide information on whether the QMS:

a) conforms to:

- 1) the organization's own requirements for its QMS;
- 2) the requirements of ISO 9001: 2015;

b) is effectively implemented and maintained

ANSA:

- a) plans, establishes, implements and maintains an audit program including the frequency, methods, responsibilities, planning requirements and reporting, which shall take into consideration the importance of the processes concerned, changes affecting the organization, and the results of previous audits;
- b) defines the audit criteria and scope for each audit;
- c) selects auditors and conducts audits to ensure objectivity and the impartiality of the audit process;
- d) ensures that the results of the audits are reported to relevant management;
- e) take appropriate correction and corrective actions without undue delay; retains documented information as evidence of the implementation of the audit program and the audit results.

Development of the internal audit program and procedures are planned for Q1 2024. See subparagraph 6.2.4 quality objective #5.

## 9.3 MANAGEMENT REVIEW

### 9.3.1 GENERAL

Top management reviews the organization's QMS, at planned intervals, to ensure its continuing suitability, adequacy, effectiveness and alignment with the strategic direction of the organization. These reviews are performed yearly Q2.

### 9.3.2 MANAGEMENT REVIEW INPUTS

The management review is planned and carried out taking into consideration:

- a) the status of actions from previous management reviews;
- b) changes in external and internal issues that are relevant to the QMS;
- c) information on the performance and effectiveness of the QMS, including
- d) trends in:
  - 1) customer satisfaction and feedback from relevant interested parties;
  - 2) the extent to which quality objectives have been met;
  - 3) process performance and conformity of services;
  - 4) nonconformities and corrective actions;
  - 5) monitoring and measurement results;
  - 6) audit results;
  - 7) the adequacy of resources;
  - 8) the effectiveness of actions taken to address risks and opportunities (see par. 6.1);
  - 9) opportunities for improvement.

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### 9.3.3 MANAGEMENT REVIEW OUTPUTS

The outputs of the management review include decisions and actions related to:

- a) opportunities for improvement;
- b) any need for changes to the QMS;
- c) resource needs.

ANSA retains documented information as evidence of the results of management review (see paragraph 7.5).

## **10 IMPROVEMENT**

### **10.1 GENERAL**

ANSA determines and selects opportunities for improvement and implements any necessary actions to meet customer requirements and enhance customer satisfaction.

These include:

- a) improving products and services to meet requirements as well as to address future needs and expectations;
- b) correcting, preventing or reducing undesired effects;
- c) improving the performance and effectiveness of the QMS.

### **10.2 NONCONFORMITY AND CORRECTIVE ACTION**

10.2.1 When a nonconformity occurs, including any arising from complaints, ANSA:

- a) reacts to the nonconformity and takes action to control and correct it;
- b) evaluates the need for action to eliminate the cause(s) of the nonconformity, in order that it does not recur or occur elsewhere, by:
  - 1) reviewing and analyzing the nonconformity;
  - 2) determining the causes of the nonconformity;
  - 3) determining if similar nonconformities exist, or could potentially occur;
- c) implements any action needed;
- d) reviews the effectiveness of any corrective action taken;
- e) updates risks and opportunities determined during planning, if necessary;
- f) makes changes to the QMS, if necessary.

Corrective actions are appropriate to the effects of the nonconformities encountered.

10.2.2 ANSA retains documented information as evidence of:

- a) the nature of the nonconformities and any subsequent actions taken;
- b) the results of any corrective action.

See paragraph 7.5 for required documented information.

### **10.3 CONTINUAL IMPROVEMENT**

ANSA continually improves the suitability, adequacy, and effectiveness of the QMS and considers the results of analysis and evaluation, and the outputs from management review, to determine if there are needs or opportunities that shall be addressed as part of continual improvement.

## APPENDIX 1

QMS ROADMAP					2023		2024								
QMS PROJECT ACTIVITIES ANSA 2023/2024				WHO?	FINALIZED	Q4	Q1	Q2	Q3	Q4					
<b>A</b>	<b>Safety &amp; Quality Officer - Charles Brouwer</b>														
<b>1</b>	Customer satisfaction				SQ										
	1.1	External QMS communication plan (QO #1 S&Q Ad 2.1)			SQ										
	1.2	Procedures to monitor and measure customer satisfaction (QO #1 S&Q Ad 2.2)			SQ										
<b>2</b>	Document control procedures (QO #2 S&Q)				SQ										
<b>3</b>	QMS awareness among ANSA's operational personnel				SQ										
	3.1	QMS training and awareness program (QO #3 S&Q Ad 2.1)			SQ										
	3.2	Internal QMS communication plan (QO #3 S&Q Ad 2.2)			SQ										
	3.3	QMS personnel survey (QO #3 S&Q Ad 2.3)			SQ										
<b>4</b>	Performance evaluation of the external providers (QO #4 S&Q)				SQ										
	4.1	Moving Dot			SQ/MATC/MAIA										
	4.2	DC-ANSP			SQ/MATC/MAIA										
	4.3	DMA			SQ/MATC										
<b>5</b>	Ensure compliance with requirements of ISO 9001:2015				SQ										
	5.1	Internal Auditor Training (QO #5 S&Q Ad 2.1)			SQ										
	5.2	Internal audit program (QO #5 S&Q Ad 2.2)			SQ										
	5.3	Internal audits (QO #5 S&Q Ad 2.3)			SQ										
	5.4	Management review (QO #5 S&Q Ad 2.4)			CEO										
	5.5	Update AQM (QO #5 S&Q Ad 2.5)			CEO										
	5.6	ISO certification (QO #5 S&Q Ad 2.6)			CEO										
<b>6</b>	Yearly evaluation of S&Q unit related QMS activities				SQ										
<b>B</b>	<b>Manager Air Traffic Control - Erika Dedier</b>														
<b>1</b>	Efficient aircraft operations				MATC										
	1.1	ATFM (QO #1 ATC Ad 2.3) (Timeline: TBD)			MATC										
	1.2	Flight procedures update (QO #1 ATC Ad 2.4)			MATC										



<b>2</b>		ATC competency level	<b>MATC</b>																	
	2.1	Competency-based training (QO #2 ATC Ad 2.1)	<b>MATC</b>																	
	2.1.1	Refresher training	<b>MATC</b>																	
	2.1.2	Remedial training (Timeline: when required)	<b>MATC</b>																	
	2.1.3	Training regarding new equipment/procedures (Timeline: when required)	<b>MATC</b>																	
	2.1.4	Refresher training OJTIs	<b>MATC</b>																	
	2.1.5	Training survey (Timeline: at the end of each training)	<b>MATC</b>																	
	2.2	Competency-based assessment (QO #2 ATC Ad 2.2)	<b>MATC</b>																	
	2.2.1	Voice recording reviews	<b>MATC</b>																	
	2.2.2	Proficiency checks	<b>MATC</b>																	
	2.2.3	Performance evaluations	<b>MATC</b>																	
	2.3	Update ATC Training Manual (QO #2 ATC Ad 2.3)	<b>MATC</b>																	
<b>3</b>		Collaboration between ANSA and DC-ANSP (QO #3 ATC)	<b>MCAS/MATC</b>																	
<b>4</b>		Coordination with Curacao ACC	<b>MATC</b>																	
	4.1	Minimize verbal coordination between ANSA and DC-ANSP (QO #4 ATC Ad 2.1)	<b>MATC</b>																	
	4.1.1	Update LOA between ANSA and DC-ANSP	<b>MATC</b>																	
	4.1.2	FDPS Interface (Q1 2025)	<b>MATC</b>																	
	4.2	LOA compliance monitoring (QO #4 ATC Ad 2.2)	<b>MATC</b>																	
	4.3	ATC Human Errors Survey (QO #4 ATC Ad 2.3)	<b>MATC</b>																	
<b>5</b>		Collaboration between ANSA and DCAA (QO #5 ATC)	<b>MATC</b>																	
<b>6</b>		ATC QMS related documentation	<b>MATC</b>																	
	6.1	ICAO compliance check of Tower Manual	<b>MATC</b>																	
	6.2	Update SOP between Beatrix Tower and Beatrix Approach	<b>MATC</b>																	
	6.3	Update SOP between ANSA and MCA	<b>MATC</b>																	
	6.4	Update LOA between ANSA and APA	<b>MATC</b>																	
	6.5	Update LOA between ANSA and DMA	<b>MATC</b>																	
	6.6	Yearly assesment of ATC QMS related documented information	<b>MATC</b>																	
<b>7</b>		Yearly evaluation of ATC related QMS activities	<b>MATC</b>																	
<b>C</b>		<b>Manager Aeronautical Information Affairs - Leonel Jarzagaray</b>																		
<b>1</b>		AIA competency level	<b>MAIA</b>																	
	1.1	Competency-based training (QO #1 AIA Ad 2.1)	<b>MAIA</b>																	
		Refresher training	<b>MAIA</b>																	
		Remedial training (Timeline: when required)	<b>MAIA</b>																	
		Training regarding new equipment/procedures (Timeline: when required)	<b>MAIA</b>																	



