

# **ANSA POLICY 2023**

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## 1. ABBREVIATIONS

ADS-B : Automatic Dependent Surveillance – Broadcast

AIA : Aeronautical Information Affairs

AIM : Aeronautical Information Management
AIO : Aeronautical Information Officer
AIP : Aeronautical Information Publication
AIS : Aeronautical Information Services

AMHS : Air Traffic Services Message Handling System

ANS : Air Navigation Services

ANSA : Air Navigation Services Aruba N.V.

ATC : Air Traffic Control
ATCO : Air Traffic Controller

ATFM : Air Traffic Flow Management

ATIS : Automatic Terminal Information System

ATM : Air Traffic Management
ATS : Air Traffic Services
CEO : Chief Executive Officer
CGC : Corporate Governance Code

CNS : Communication, Navigation, Surveillance DCAA : Department of Civil Aviation of Aruba

DC-ANSP : Dutch Caribbean Air Navigation Service Provider

DME : Distance Measuring Equipment

EFS : Electronic Flight Strip
EPL : English Proficiency Level
ETA : Estimated Time of Arrival
FIR : Flight Information Region

HR : Human Resources

ICAO : International Civil Aviation Organization

ILS : Instrument Landing System

IMC : Instrument Meteorological Conditions

KPA : Key Performance AreaKPI : Key Performance Indicator

LOA : Letter of Agreement

MEVA : Mejoras a los Enlaces de Voz ATS

OJT : On-the-Job Training

OPS : Operations

QMS : Quality Management System RTS : Remote Transmitting Sites

SID : Standard Instrument Departure Route

SMS : Safety Management System SOP : Standard Operating Procedure

STAR : Standard Arrival Route

UPS : Uninterruptible Power Supply VCS : Voice Communication System

VOR : Verry high frequency Omnidirectional Range

VMC : Visual Meteorological Conditions VRRS : Voice Recording & Replay System

# 2. ACTIVIY REPORT 2022

ANSA (Aruba) experienced declining flights during the years 2018, 2019 and the first months of 2020, which subsequently materialized into a steady declining revenue stream, whereas the operational expenses kept increasing. Slowly but surely, we saw our profit slinking. Since March 2020, our revenues were badly affected by the COVID-19 pandemic, resulting in a huge loss for our company. This was on top of the closing of the borders with Venezuela since February 2019. In 2020 ANSA had to implement an investment stop and was forced to cut in the personnel's and other operational expenses in order to safeguard our cash flow. We succeeded in this and managed to survive the year 2020, although seriously weakened by the pandemic.

ANSA closed the year 2020 with a deep loss of Awg. 2.7 million, however the year 2021 showed a small profit of Awg. 429,250. This improvement of the financial situation of ANSA was mainly due to a significant increase in our revenues. On the one hand our ANSA Charge was increased with 10% as of January 1, 2021, and on the other hand the year 2021 was characterized by a remarkable recovery of commercial flights.

The improvement in private and commercial flights during the second year of recovery after the pandemic, namely 2022, also translated itself in increasing revenues. Total flights in 2022 (13.567) went up with 2202 flights compared to 2021. However, this is still 2131 less flights compared to 2019 (15.698), which was the last pre-pandemic year and certainly not the best year of ANSA. Total revenues in 2022 went up with Awg. 1.3 million compared to 2021 (excluding wage subsidy received in 2021 of Awg. 100,000).

These same figures for 2022 compare themselves to 2019 with 1.80% (recovery of 101.80%) increase in total revenues (Awg. 9.4 million for 2022 versus Awg. 9.2 million for 2019), however, when excluding the increase in ANS charge of 10% as of 2021, this percentage is -7.84% (recovery of 92.16%). The total revenues for 2022 compared 101.85% to our Budget 2022, a positive difference of Awg. 171,000.

As to the total expenses compared to 2021, the figures were Awg. 841,000 higher. Primarily the difference lies in the General Expenses +Awg. 237,000 (Surveillance training & Thales support contract) and in the Personnel Expenses +Awg. 544,000 (revocation of the Governmental wage cuts). Compared to the Budget 2022, the total expenses were Awg. 4,000 less.

The year 2022 closed with a profit of approximately Awg. 772,000 (un-audited). This is an improvement of Awg. 342,000 compared to 2021. Compared to the Budget 2022 the profit is Awg. 175,000 higher. Thus, the year 2022 went better than expected.

Same as for 2021, our aim for 2022 was to reach a cashflow position of at least Awg. 2.6 million (level of cashflow at the end of 2019) at the end of the year. ANSA closed the year 2022 with a liquidity position of Awg. 2.9 million. Due to delays in the execution of our planned investments during 2022, ANSA invested Awg. 570,000 less than budgeted, which had a positive impact on ANSA's liquidity position at the end of 2022.

By December 31, 2022, our overall collection rate (2015-2022) was 98.54% of all revenues from cash basis airlines and 99.61% of all commercial airlines. The collection rate of the cash

basis airlines is a bit lower due to write-offs of, amongst other, Insel Air Aruba (in 2017) and Insel Air International (in 2019).

The new billing software (Aviony) was implemented by the end of 2022. ANSA has now a software, which extracts the flight information from the Electronic Flight Strip (EFS) system and exports the flights data with corresponding ANS charges into our accounting program, ready to bill our airline customers. Prior to this software, ANSA was billing manually.

ANSA incorporated in its planning for 2022 to create its own Corporate Governance Code (CGC) in anticipation of possible regulation by the government in the near future. The Government of Aruba issued and published a report in December 2020 called Corporate Governance in Aruba ("Onderzoek naar de naleving van de basisprincipes van corporate governance in entiteiten in de publieke- en semipublieke sector in Aruba") based on interviews with stakeholders in the various entities to determine the "Nulmeting". This first step was highly important for any other comparison or benchmarking in the future. Most of the government entities indicated already to have started the process to create their own CGC.

With the support of Themis Institute, ANSA participated in the pilot project "Corporate Governance Manual" with the aim to centralize and digitalize the information provision and improve availability/accessibility of information and documents necessary to implement corporate governance. ANSA is still in the process of completing this web-based manual. In September and November 2022 ANSA also attended 2 conferences organized by the Government of Aruba to further strengthen the commitment of the government entities to corporate governance and its fundamental principles of accountability, transparency and integrity. The laws regarding CGC will become effective on January 1, 2024.

As to our HR activities, the training plan 2022 was implemented and covered all ANSA units. The training plan was in accordance with the training needs as indicated by the unit managers. Due to the financial situation, ANSA continued to make use of the possibilities of online training and self-study. Furthermore, as part of our efforts to continuously motivate and improve the performance of all the employees, the yearly personnel performance evaluations were carried out. 88% of the employees received a positive evaluation.

The ANSA website was revamped. This included the following: it was made mobile/tablet-friendly, a backup system was implemented, and a new user-friendly editing tool (Elementor) was purchased.

The development of the document management procedures that started in 2020 was finalized in October 2022. These procedures are described clearly and in detail, which ensures consistent and efficient implementation thereof. This was an important step in ANSA's vision to go paperless.

The ANSA Handbook Employment Regulations includes a clear and detailed description of the rights and obligations of the ANSA employees. This handbook was further developed in 2022 and special attention was given to the description of the relevant procedures. The Collective Labor Agreement (CLA) 2019-2021 was prolonged with one (1) year and expired on December 31, 2022.

The Aruba air traffic state decree ("Landsbesluit luchtverkeer") paragraph 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.

In 2022 SMS training was provided to all ARO personnel. This training had the objective to make everyone aware of their role within the SMS and the many factors affecting safety. This was finalized on February 23, 2022.

During 2022 the ANSA Incident Investigation Team investigated 3 incidents. One serious incident and 2 incidents without any safety affect. All investigations resulted in a report containing recommendations to prevent reoccurrence. The controller who was involved in the serious incident was provided with both theoretical and practical remedial training.

The ANSA fatigue risk management system (FRMS) was updated to comply with ICAO Standards and Recommended Practices (SARPs). In this update ANSA used the scientific principles of fatigue management<sup>1</sup> to establish the following:

- the maximum:
- a. number of hours in any duty period;
- b. number of consecutive workdays;
- c. number of hours worked in a defined period; and
- d. time-in-position;
- the minimum:
- a. duration of non-duty periods;
- b. number of non-duty days required in a defined period; and
- c. duration of breaks between periods of time-in-position in a duty period.

The FRMS is designed to mitigate the risk of reduced mental or physical performance capability resulting from sleep loss, extended wakefulness, circadian phase, and/or workload (mental and/or physical activity) that can impair a person's alertness and ability to perform safety-related operational duties. The updated FRMS Manual was finalized on March 25, 2022, and submitted to the DCAA for approval.

The performance of the SMS between 2019-2021 was reviewed and this review was finalized in August 2022. The main conclusion of this review was that, notwithstanding the deficiencies found in the review, the safety performance has improved significantly compared to previous years. Based on the established Safety Performance Objectives (SPOs), 9 of the 12 SPOs were achieved, which gave the ANSA SMS an effectiveness rate of 75%.

The SMS Manual was reviewed and updated based on the feedback received from the DCAA on June 20, 2021. The updated SMS Manual will be finalized in 2023. The investigation procedures were updated to reflect the updated reporting procedures and investigation process. Risk assessment procedures where revised and document control procedures were updated reflecting the AFAS paperless document control process ANSA has in place. Safety promotion procedures were also updated to include yearly safety talks with operational personnel.

A quality management system (QMS) is defined as a formalized system that documents processes, procedures, and responsibilities for achieving quality policies and objectives. The

<sup>&</sup>lt;sup>1</sup> These basic principles relate to: 1) the need for sleep; 2) sleep loss and recovery; 3) circadian effects on sleep and performance; and 4) the influence of workload.

ANSA QMS helps coordinate and direct ANSA's activities to meet customer and regulatory requirements and improve its effectiveness and efficiency on a continuous basis.

With regard to QMS, it is ANSA's goal that all operational units (ATC unit, AIA unit and CNS/ATM Systems unit) be ISO certified<sup>2</sup> by the end of 2024. The ANSA QMS Manual describes all steps, projects and activities ANSA is planning to execute to achieve this goal. This manual was developed, finalized and published on the ANSA website on September 28, 2022.

ANSA strongly believes in cooperation with our partners within the Kingdom of the Netherlands and has actively pursued this since we started operations on January 1, 2015. In the context of implementation of the "Landspakket" with respect to the aviation sector, a Collaboration Agreement with DC-ANSP was signed on July 1, 2022, to improve collaboration on the following areas: joint project preparation and equipment acquisition, training, MEVA network node sharing, ATM systems interface and joint missions for flight Inspection of navaids.

A lot of effort was also put into the development and/or revision of the operating manuals for the operational units. A clean version of the Tower Manual was sent to DCAA on May 21, 2021, and DCAA provided feedback on February 17, 2022. ANSA reviewed the feedback and updated the Tower Manual as suggested. This process is ongoing and will be completed in 2023. Topics reviewed/incorporated in the revised Tower Manual were: emergency phases, NOTAM management in the Tower, FRMS, non-prescribed separation (surveillance), SMS Manual, ANSA house rules, MEVA contingency plan, surveillance expansion hours, separation procedures, new wake turbulence category, JUMP-1 procedure, EFS guide and missing flight plan procedure. The revision of the CNS/ATM Systems Manual started in 2022 and will be finalized in 2023.

To improve the coordination between ANSA and DC-ANSP, special attention was given to the revision of the Letter of Agreement (LOA) between ANSA and DC-ANSP. This process is ongoing and will be finalized in 2023. A trial was implemented and completed in April 2022 regarding inbound releases at 40NM. The main changes in the LOA were contingency procedures for Beatrix CTR (control zone) and Curacao FIR, level restriction for inbound releases (at 40NM) and SSR (Secondary Surveillance Radar) codes allocation.

The EFS project was implemented October 1, 2021, and throughout 2022 various revisions were made to the system. In June 2022 an EFS contingency plan was developed and an EFS ergonomics monitoring was completed. A TopSky EFS guide was also developed and completed in June 2022. An EFS proficiency check was done with each ATCO in August 2022 an all ATCOs passed this check successfully.

Training of ANSA's personnel to maintain and improve their competencies is of the utmost importance. Due to the expiration of the validity of the ICAO English Proficiency Level (EPL), several ATCOs got online EPL refresher training and took the Versant Aviation English exams in April 2022. The training was provided by World Wide Training & Translations. Moreover, various training scenarios were created in the simulator and the surveillance trainees received introduction to surveillance on the simulator in May 2022. Furthermore, surveillance course

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<sup>&</sup>lt;sup>2</sup> ISO 9001:2015, the international standard specifying requirements for quality management systems, is the most prominent approach to quality management systems.

was provided by the Trinidad and Tobago Civil Aviation Authority - Civil Aviation Training Centre (TTCAA-CATC) to 7 ATCOs and 1 DCAA inspector. The theoretical part was given online in May 2022 and the practical in June 2022 at TTCAA-CATC. 2 ATCOs also followed the online supervisor course provided by TTCAA-CATC, which was required by DCAA, and thereafter they were recommended, together with 1 SATC, to become surveillance OJTIs (Onthe-Job Training Instructors). OJT for the surveillance trainees started in July 2022. Additionally, in September 2022 a refresher course for all ATCOs was provided on the simulator. The focus was runway 29 approaches, emergency situations, basic surveillance situations, VFR traffic and separation between IFR and VFR traffic.

VFR procedures for arriving and departure flights were drafted, reviewed and a final version was sent to DCAA in February 2022. Safety assessment was also submitted to DCAA and is pending final approval. In addition, JUMP-1 procedures were drafted, reviewed and a final version was sent to DCAA. Approval was given by DCAA in June 2022 and implemented. The restriction that was implemented by DCAA in 2017 regarding separation of all traffic with JUMP-1 was also cancelled.

The new ATCO regulation ("Regeling bewijzen van bevoegdheid luchtverkeersleiders") was implemented in October 2022. Before this regulation was implemented, ANSA provided feedback to DCAA. One of the main topics for the ATCOs in the regulation is that each ATCO shall log their hours at Tower and Approach position and submit to DCAA for renewal of their license. To facilitate this process, a form was created for the ATCOs. Also, new reporting procedures (timeframe) were implemented in accordance with the new ATCO regulation.

With regard to ATC related QMS activities, a comparative analysis procedure was developed and implemented in December 2022 in order to compare missing and erroneous flight plans detected by the Tower with the findings of the AIA unit.

The digital logbook project was partially implemented in December 2022 and was finalized in February 2023. It was created in ANSA's AFAS Insite platform. Digitalization has various advantages, including increased efficiency, transparency, and faster decision-making when required. Intended users (ATC and AIA personnel) have direct access to the logbook information. The scope of this project was broadened to include shift change ("dienstruil") portal, redesign of the workflow for the various occurrence reports (incidents, emergency and general) and SharePoint link for monthly work schedule.

In order to further mitigate flight plan errors, a data collection and the corresponding root cause analysis of missing, erroneous and duplicate flight plans (TopSky ATC & TopSky AIS systems) were performed by the Manager AIA and the AIS Officer in October and November 2022 for all inbound flights.

In November 2022 a proficiency check was conducted to evaluate if further training is required for the whole AIA team or if individual remedial training is appropriate. The goal thereof was to maintain and improve the competency of the AIA team and the quality of our Aeronautical Information Services. In March 2022 the Manager AIA completed the ICAO safety management course.

To ensure the continuity of service of the WAM/ADS-B, TopSky AMHS and TopSky AIS systems, a support contract with Thales was signed on July 1, 2022.

With respect to investment projects: in 2018 and 2019 ANSA invested Awg. 1.3 million and Awg. 1.2 million respectively in equipment, systems and infrastructure. However, in 2020 most of the planned investments were postponed due to the financial malaise caused by the COVID-19 pandemic. The invested amount was therefore only Awg. 148,000.

Due to the pandemic and the financial impact thereof on ANSA, a reprioritization of our investment projects for 2021 took place. Only the investments considered strictly necessary to guarantee continuity of services were implemented. This explains why the invested amount in 2021 was still relatively low at Awg. 279,000.

For 2022 (the second year of recovery) an amount of Awg. 1,120,000 was budgeted for investments, whereas Awg. 550,000 was realized (see Table 1). The main reasons for not implementing the planned investments during 2022 were the following:

- The project Renewal TopSky ATC hardware which was awarded in March 2022 has been postponed until 2023 due to the fact that the required hardware for this upgrade is not available on the market. This has led to a broadening of the scope of the project where not only the hardware needs to be upgraded but also the TopSky ATC software.
- The Upgrade ILS/DME was also delayed because during its preparation phase it was discovered that the DME of the ILS needed replacement. In addition, due to a long lead time to manufacture parts and new equipment caused by the worldwide supply chain crisis, this project was delayed. It was awarded in October 2022. The implementation will take place in 2023, although the down payment was made in October 2022.

The following investment projects were awarded and/or (partially) implemented in 2022:

- Upgrade Voice Communication System (VCS). The largest invested amount went to this project;
- Renewal TopSky ATC hardware;
- Robust ATS System: one UPS and one UPS Automatic Transfer Switch (UATS) for the IT cabinet at ANSA's Head Office and one UPS for AIA Office to ensure continuity of AIA Services, Internet, Telephones and the Point to Point communication between ANSA's Head Office and ATC Tower. The Robust ATS System is a continuous project since 2018;
- Upgrade BEA VOR/DME: awarded in December 2022, but will be implemented in 2023 and 2024;
- Upgrade ILS/DME;
- Air Conditioners (A/C's): two new A/C's for the RTS shelter;
- Furniture, Fixtures & ICT Assets: a handheld label printer for CNS/ATM Systems unit, new ICT equipment (13 laptops, 1 all-in-one printer for AIA unit, 4 Tablets for the digital logbook for ATC and AIA units, Divos software installation by Frequentis on two new laptops and one new Juniper switch for the IT cabinet at ANSA Head Office;
- Spare Parts: repair of spare WAM/ADSB modules, one new Planet Slot Media fiber optic converter and eleven surge protectors. The latter in connection with the project cable management which was finalized in January 2023;
- Other investments: Point to Point equipment and installation for data communication between ANSA's Head Office and ATC Tower.

	BUDGET	REALISATION	BALANCE
Upgrade Voice Communication System (VCS)	380,000	342,898	37,102
Renewal TopSky ATC hardware	256,500	0	256,500
Robust ATS System	17,851	17,453	398
Upgrade BEA VOR/DME	39,000	0	39,000
Upgrade ILS/DME	230,817	87,887	142,929
TopSky AMHS/AIS upgrade	0	0	0
Upgrade RTS and Glide Path antennas	50,000	0	50,000
Upgrade VRRS (Voice Rec. & Replay System)	22,000	0	22,000
Aeronautical charts update	7,649	0	7,649
A/C's	6,000	2,240	3,760
Furniture, Fixtures & ICT Assets	50,000	54,207	-4,207
Spare Parts	50,000	35,156	14,844
Other investments	10,296	10,296	0
TOTAL INVESTMENTS	1,120,112	550,137	569,975

Table 1: Investments 2022

# 3. ORGANIZATION

## 3.1 General

ANSA started the year 2023 with 41 employees because of the resignation of one (1) ATCO in October 2022. In the first quarter of 2023 ANSA will be hiring one (1) AIO as in the third quarter of 2023 one (1) AIO will retire. 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 will hire four (4) ATCOs in the third quarter of 2023.

# 3.2 Organizational structure and manpower resources

The operational organizational structure is provided in Figure 1 below.

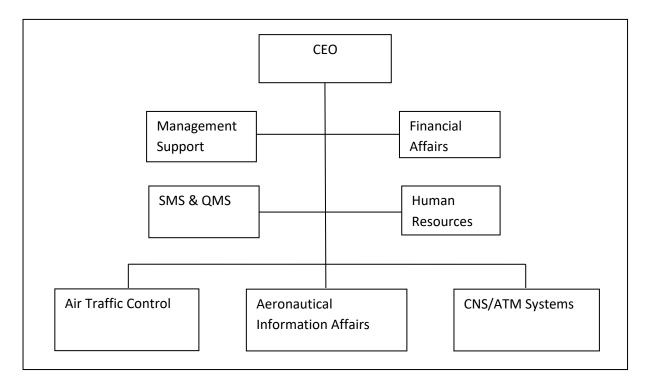


Figure 1: Organizational Structure ANSA

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 staff departments are the Financial Affairs (1 staff), Human Resources (1 staff) and SMS & QMS (1 staff). Compared with the previous ATS structure within the DCA, a SMS & QMS unit was added to the staff departments to comply with the requirements for quality and safety management. The staff departments are being kept to a minimum in order to maintain cost-effectiveness. 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 2 below. The information includes a comparison between January 1<sup>st</sup> of 2019, 2020 2021, 2022 and 2023.

Department/position	FTEs	FTEs	FTEs	FTEs	FTEs
	1-1-19	1-1-20	1-1-21	1-1-22	1-1-23
Chief Executive Officer (CEO)	1	1	1	1	1
Management Support	2	2	2	2	2
Financial Affairs	1	1	1	1	1
SMS & QMS	1	1	1	1	1
Human Resources	1	1	1	1	1
Air Traffic Control	21	24	23	22	21
Aeronautical Information Affairs	11	10	10	10	10
CNS/ATM Systems	4	4	4	4	4
Air Traffic Controller trainee	4	0	0	0	0
Total	46	44	43	42	41

Table 2: Manpower Resources ANSA

# 3.3 Mission, Vision and Core Values

#### Mission of ANSA

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 of ANSA

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

#### Core values of ANSA

- 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 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:** Continuously invests 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.

# 3.4 KPAs, Objectives and KPIs

In the coming years the operation of ANSA will focus on four Key Performance Areas (KPAs). These KPA's, together with the associated strategic objectives, Key Performance Indicators (KPIs) and strategic means to achieve those objectives are described in Table 3 below.

KPAs	Strategic objectives	KPIs	Strategic means to achieve goals
Safety	Reduction of incidents and	1. Number of safety related reports	- Promote a strong safety and
	prevention of accidents.	per year.	quality culture.
		2. Percentage of incidents that have	- Promote and enforce compliance
		been investigated within 30 days.	with the mandatory reporting
		3. Percentage of safety	program.
		recommendations implemented or	- Continually evaluate and improve
		in the process of being	the safety management system.
		implemented.	- Continuously review and update
		4. Percentage of safety assessments performed with respect to planned	the coordination procedures with CUR/ACC.
		implementation of airspace	- Include standard clearances and
		reorganizations, the introduction of	standard releases in those
		new equipment systems or	procedures to reduce verbal
		facilities, and new or changed ATS	coordination.
		procedures.	- Expand the hours of ATC
		5. Number of airproxes between	surveillance service when deemed
		IFR and VFR flights.	necessary.
		6. Number of incidents involving	-Continuously review and update
		the coordination between	the tower manual.
		CUR/ACC <sup>3</sup> and Beatrix approach.	- Review the performance of all
		7. Number of reported Pilot	ATCOs on a yearly basis through
		noncompliance.  8. Number of runway incursions or	proficiency checks and voice recording reviews.
		excursions.	- Provide competency-based
		9. Number of ATM incidents <sup>4</sup> .	refresher and safety training on a
		10. Number of MAC incidents <sup>5</sup> .	yearly basis.
		11. Number of B (hazardous) and	- Promote the modernization of
		C (major) severity level incidents.	national aviation regulation through
		(major) severny rever meraenasi	DCAA.
			- Maintain a high level of equipment
			availability and reliability.
			- Develop and implement QMS in
			accordance with ISO 9001
			requirements.
			- Implement investment program to
			ensure safe and efficient ATS.
			- Perform safety assessments and
			reviews with respect to planned or
			implemented airspace
			reorganizations, the introduction of
			new CNS/ATM systems or
			facilities, and new or changed ATS
			procedures.
			- Implement Team Resource
		_1	Management (TRM).

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<sup>&</sup>lt;sup>3</sup> Curacao Area Control Center.

 $<sup>^4</sup>$  Occurrences involving ATM or communications, navigation, or surveillance (CNS) service issues.

<sup>&</sup>lt;sup>5</sup> Airprox, TCAS (Traffic Alert and Collision Avoidance System) alerts, loss of separation as well as near collisions or collisions between aircraft in flight.

#### Efficiency and quality of service

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.

#### Quality objectives ATC unit:

- Facilitate efficient operations by aircraft operators;
- Maintain and enhance level of competency for ATC;
- Improve collaboration with DCAA:
- Improve coordination with Cur/ACC:
- Improve collaboration with DC-ANSP.

#### ATC unit:

- 1. Percentage of flights that have experienced a gate departure delay. A flight is considered to experience a gate departure delay if the time difference between start-up clearance request and start-up clearance exceeds 5 minutes.
- 2. Percentage of flights that have experienced an enroute clearance delay. A flight is considered to experience an enroute clearance delay when the time difference between the enroute clearance request and the receipt of this enroute clearance exceeds 5 minutes.
- 3. Percentage of taxi-out delays. A flight is considered to experience a taxi-out delay when the time difference between start taxi and take-off exceeds 10 minutes.
- 4. Percentage of arrival delays. 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>7</sup>.
- 5. Percentage of ATC personnel that perform satisfactorily on all subjects, tasks and responsibilities.
- 6. Percentage of the number of times that ANSA is involved by the DCAA when making decisions affecting ANSA.
- 7. Amount of coordination related reports submitted.
- 8. Percentage of the number of times that ANSA is involved by the DC-ANSP when making decisions affecting ANSA.

# All operational units:

- Develop and implement QMS in accordance with ISO 9001 requirements.

#### ATC unit:

- Improve coordination with Cur/ACC.
- Proficiency checks and refresher training on a yearly basis.
- Implement ATFM.
- Expand the hours of ATC surveillance service when deemed necessary.
- Continuously review and update SIDs and STARs and promote the use thereof.
- Improve the data quality of Aruba in the Dutch Caribbean AIP.
- Maintain a high level of equipment availability and reliability.
- Implement competency-based training by providing refresher training on a yearly basis, as well as remedial training and training regarding new equipment and procedures when required.
- Implement competency-based assessment through yearly reviews of voice recordings, proficiency checks and performance evaluations.
- Implement a collaboration agreement with DC-ANSP.
- Minimize verbal coordination between DC-ANSP and ANSA by including standard clearance and standard releases in the LoA and implementing the interface of the Flight Data Processing Systems (FDPS).
- Mitigate non-compliance of the LoA between DC-ANSP and ANSA by both parties.
- Conduct a survey amongst the ATCOs of human errors in the Tower which can affect the coordination with DC-ANSP. Negotiate, sign and implement a collaboration agreement with DCAA.

#### AIA unit:

Maintain and enhance level of competency for AIA unit;mitigate flight plan errors

#### AIA unit:

1. Percentage of AIA personnel that perform satisfactorily on all subjects, tasks and responsibilities.

#### AIA unit:

- Implement competency-based training by providing refresher training on a yearly basis as well as

<sup>&</sup>lt;sup>7</sup> Depending on arrival route.

(missing, erroneous and duplicate flight plans);

- Ensure a high degree of aeronautical information and data quality in compliance with ICAO Annex 15, through the aeronautical information products being provided<sup>6</sup>.
- 2. Amount of flight plan errors detected and/or reported.
- 3. Amount of noncompliant data submitted for publication by data originators.
- 4. Number of errors introduced by DC-ANSP in published aeronautical information products.

remedial and training regarding new equipment and procedures when required.

- Implement competency-based assessment through quarterly data reviews (flight plans and system database) and yearly proficiency checks and performance evaluations.
- Make an analysis to determine the cause and severity of flight plan errors per airline/aircraft operators (root cause analysis).
- Develop and implement an action plan to mitigate the flight plan errors.
- Develop and implement procedures for the monitoring of flight plan errors.
- Conduct a survey amongst AIOs of human errors which might contribute to flight plan errors.
- Reroute outbound flight-plan messages in TopSky ATC.
- Develop and implement procedures to compare missing and erroneous flight-plans information with mandatory reports that are filed by ATC personnel.
- Develop and implement Multilateral Service Level Agreement (MSLA) to establish the responsibilities of each aeronautical data originator in accordance with ICAO regulation.
- Develop and implement quality control procedures regarding aeronautical information products.

# CNS/ATM Systems unit:

- Maintain a high level of availability of CNS/ATM Systems as recommended by ICAO.

#### CNS/ATM Systems unit:

1. Percentage of availability of equipment. Availability is the maximum facility service hours minus outage time divided by the maximum facility service hours.

#### CNS/ATM Systems unit:

- Ensure that maintenance of CNS/ATM Systems are performed conform the procedures set forth in the CNS/ATM Systems Manual and the CNS/ATM Facility Technical Instruction Books (TIBs).
- Finalize the CNS/ATM Systems Manual.
- Develop Facility TIBs.
- Develop CNS/ATM Systems Training Manual.
- Determine which CNS/ATM Systems require a maintenance support agreement.
- Determine the type of support required.

<sup>&</sup>lt;sup>6</sup>These include: Aeronautical Information Publication (AIP), including Amendments and Supplements; Aeronautical Information Circulars (AIC); aeronautical charts; NOTAM; and digital data sets.

Productivity and capacity  Cost-	Increase productivity and aircraft handling capacity of ATC.  Keep total costs as low as	1. Number of days on sick leave. 2. Number of aircraft movement per ATCO in operations. 3. Maximum number of aircraft handled per hour in VMC conditions. 4. Maximum number of aircraft handled per hour in IMC conditions.  1. Cost per aircraft movement.	<ul> <li>Negotiate the required type of support with vendors/suppliers.</li> <li>Determine which spare parts are critical and for which systems.</li> <li>Procure critical spare parts.</li> <li>Perform Technical assessment of VOR/DME.</li> <li>Develop investment program to ensure safe and efficient ATS.</li> <li>Enhance working environment.</li> <li>Implement program of organizational culture change.</li> <li>Continuously review and update the employee performance evaluation system.</li> <li>Proficiency checks and refresher training on a yearly basis.</li> <li>Continuously review and update coordination. procedures with CUR/ACC.</li> <li>Implement ATFM.</li> <li>Expand hours of ATC surveillance service when deemed necessary.</li> <li>Continuously review and update SIDs and STARs and promote the use thereof.</li> <li>Implement Team Resource Management (TRM).</li> <li>Implement cost control program.</li> </ul>
effectiveness	possible in order to comply with ICAO's cost-based principle related to the ANS charge.	Cost per aircraft movement.     Operational costs as percentage of revenues.	Effective billing and collection policy.

Table 3: KPAs, Objectives and KPIs ANSA

# 4. INVESTMENTS

# 4.1 Investment policy principles

ANSA features different Communication, Navigation, Surveillance (CNS) and Air Traffic Management (ATM) equipment that are essential for the provision of ATS. This equipment is critical for the aviation industry and need to be maintained, upgraded and/or replaced in order to guarantee continuous operation of the equipment. With properly functioning CNS/ATM equipment, ANSA is able to provide ATS at an optimum level within the Beatrix Control Zone.

Adequate air transport can only be assured when the airlines can rely on a safe, efficient, and expeditious flow of air traffic, supported by well-functioning equipment and installations. As in previous years, ANSA's investment policy of 2023 will be primarily based on the following principles:

- Investment backlog that ANSA inherited from the DCAA will be eliminated as soon as possible.
- Focus will be on safety, efficiency, and quality of service.
- Needs and interests of airlines will be factored-in as much as possible.
- All investments will be funded with ANSA's own cash flow.

#### 4.2 Investment Plan 2023-2025

The investment plan 2023-2025 is provided in Table 4 below and was developed in accordance with the principles mentioned in paragraph 4.1.

Our investments in 2023 will return to normal levels after two years (2020 and 2021) of almost no investments due to the pandemic and investment delays in 2022. In 2023 ANSA will invest Awg. 1.9 million. The most important investments that will be implemented in 2023 are the following:

- Renewal TopSky ATC Hardware;
- Robust ATS System;
- Upgrade BEA VOR/DME;
- Upgrade ILS/DME;
- Upgrade RTS and Glide Path Antennas;
- Aeronautical Charts Update;
- the start (i.e. preparation phase) of the New ATC Tower Annex ANSA Office Building.

	2023	2024	2025	TOTAL 2023 - 2025
Upgrade Voice Communication System (VCS)	13,355			13,355
Renewal TopSky ATC hardware	389,000	10,000		399,000
Robust ATS System	178,400	62,500	6,600	247,500
Upgrade BEA VOR/DME	97,575	200,000		297,575
Upgrade ILS/DME	275,600			275,600
ATC simulator upgrade		25,000		25,000
TopSky AMHS/AIS upgrade	10,000	223,000		233,000
Upgrade RTS and Glide Path antennas	75,000			75,000
Aeronautical charts update	200,000			200,000
A/C's	10,000	10,000	10,000	30,000
Furniture, Fixtures & ICT Assets	10,000	10,000	10,000	30,000
Spare Parts	75,000	75,000	75,000	225,000
New ATC tower Annex Ansa Office Building	500,000	500,000	2,000,000	3,000,000
Other investments	25,000	25,000	105,000	155,000
TOTAL INVESTMENTS	1,858,930	1,140,500	2,206,600	5,206,030

Table 4: Investment Plan 2023-2025

# 4.3 Description of Investment Projects 2023

## A. Upgrade Voice Communication System (VCS)

The SolaCom Voice Communication System (VCS) was installed and put into operation in 2008. The main function of the VCS is to switch/interface telephone and radio communications between ATC and aircrafts and vice versa. The project for upgrading the SolaCom VCS started in the last quarter of 2021 and was planned to be completed in the fourth quarter of 2022. Due to the worldwide supply chain crisis, it has been delayed until June 2023.

# This project entails:

- new hardware and software for the VCS;
- an upgrade of the Voice Recording and Replay System (VRRS);
- the "switch over" from analogue to IP technology;
- technical maintenance training on the system.

#### B. Renewal TopSky ATC Hardware

The TopSky ATC system was acquired in 2012, at that time to be used for flight planning. Since completion of the AMHS/AIS project in July 2017 flight planning is done on the AMHS/AIS system, whereas the TopSky ATC system is used for processing and displaying of surveillance data. With the aim to guarantee service continuity on the TopSky ATC system, at first it was planned to only renew all the computer hardware of the system and the network switches. However, due to the unavailability of new hardware that is compatible with the current ANSA's version of the TopSky ATC software, it became necessary to upgrade the TopSky ATC software as well. Thus, the scope of this project was broadened. This project will be implemented in June 2023 and consists of:

- renewal of the computer PC's (servers PC's, working positions PC's);
- renewal of the TopSky ATC network switches;
- upgrade of the TopSky ATC software to a newer version to match the new equipment.

# C. Robust ATS System

The main objective of the project Robust ATS System is to implement the recommendations set forth in the Report Robust ATS System, dated November 2018, to ensure a reliable ATS system that is less prone to unserviceability. Said recommendations are updated yearly.

The recommendations cover the following facilities, equipment and parts:

- the WAM/ADSB system;
- the TopSky ATC system;
- UPSs, batteries and communication equipment for the different facilities.

For the year 2023 the project Robust ATS System includes the purchase of:

- spares for the WAM/ADS-B system to ensure its continuity of service (to be purchased in March 2023);
- two new UPSs and one automatic transfer switch for the RTS shelter to ensure continuity of service of the VHF transmitter radios in case of power failure (to be purchased in June and installed in August 2023);
- one new UPS for the MEVA equipment to ensure flight plan data communication between the AIA unit and Atlanta National Enterprise Management Center (purchased and installed in January 2023);
- one new redundant UPS System for ATC Tower Equipment (purchased in February 2023 and to be installed in March 2023).

# D. Upgrade VOR/DME

The VOR/DME system was installed and put into operation in 2005. The VOR allows the pilots to measure the aircraft bearing to or from the VOR/DME station. The DME provides the pilot with the slant distance between the aircraft receiver and the VOR/DME station. The goal of the project Upgrade VOR/DME is to guarantee its continuous and reliable operation and to extend its lifespan for another 5 to 10 years. The project started in December 2022 and will be implemented in 2023 and 2024.

#### This project entails:

- a technical support to repair the VOR antenna and transmitter modules (execution in May 2023);
- a technical site survey to determine the health of the VOR/DME system and the necessary upgrade to extend its life for another 5 to 10 years (execution in May 2023);
- a microwave radio link for the remote control and status monitor of the VOR/DME system, as required by ICAO Annex 10, Volume 1 (execution in May 2023);
- the final upgrade (phase 2), based on the recommendations of the health check (execution in the 2<sup>nd</sup> quarter of 2024).

## E. Upgrade ILS/DME

The ILS/DME system was installed in 2004 and put in operation in 2005. An ILS provides pilots with both vertical and horizontal guidance during an approach to land. The DME provides the pilot with the slant distance between the aircraft receiver and the touch down zone to land. The objective of the project Upgrade ILS/DME is to guarantee its continuous and reliable operation and to extend its lifespan for another 5 to 10 years. The project started in January 2022 with a system health check from its manufacturer Selex. The actual upgrading following Selex's recommendations will be executed in May 2023.

The project Upgrade ILS/DME consists of:

- upgrading of the Localizer equipment;
- the purchase and installation of a new DME;
- OJT on the DME;
- spare parts for the DME;
- assistance during the flight check of the DME.

# F. Upgrade RTS and Glide Path Antennas

There are three antenna masts at the RTS site. The antennas for ANSA's ATC transmitter radios are installed on these masts. The transmitter radios are used for ground-to-ground and ground-to-air communications. The antennas for the Glide Path (GP) and the DME (both part of the ILS System) are installed on the GP antenna mast. The last time these antenna masts were refurbished was in 2018.

The project Upgrade RTS and Glide Path Antennas will be implemented in June-August 2023 and includes the following.

- paint work (including rust removal and surface preparation);
- where necessary replace rusted bolts, nuts and washers;
- any additional upgrade still to be identified.

#### G. New ATC Tower Annex ANSA Office Building

The objective of the project New ATC Tower Annex ANSA Office Building is to centralize all ANSA operations at one location in order to improve efficiency and quality of service. This project consists of two phases, namely: the preparation phase and the construction phase. The preparation phase will be implemented in 2023 and 2024 and includes:

- acquisition of a terrain from the Government of Aruba;
- hiring of an external company to design the building, prepare the specifications document, construction drawings as well as any other documentation necessary for the invitation to tender, and manage the tendering process;
- award the construction project to a contractor;
- hiring of an external company that will be responsible for the construction supervision; The construction phase will be implemented in 2025 and 2026 and includes:
  - construction of the new ATC Tower annex ANSA office building, including electrical installation, plumbing, data communication installation and other works still to be identified.

# 5. OTHER PROJECTS

In this chapter the projects that are not considered investments will be described separately for each organizational unit of ANSA. These projects are mentioned in the Roadmap of ANSA for 2023.

## **5.1 Air Traffic Control**

#### A. Revision Tower Manual

ANSA will submit the revised Tower Manual to DCAA by April 2023. The updates which are pending revision in the Tower Manual are: digital logbook guide, updated reporting program, ATCO hours log, VFR procedures, ship crossing approach area and wake turbulence separation.

# B. Tower Training Manual

ANSA submitted the updated Training Manual on October 24, 2018, and is awaiting DCAA's feedback or approval.

# C. Surveillance Training Program

Certification for the 7 surveillance trainees is expected to be done in April 2023 by TTCAA-CATC. If all 7 trainees are not certified by TTCAA-CATC, ANSA's examiner will complete the certification.

#### D. English proficiency training and exam

All ATCOs EPL are up to date for 2023. During the hiring process the new "ATCO candidates" will receive an English Proficiency training and complete the exam in April 2023.

#### E. Proficiency checks and refresher course for ATCOs

The proficiency checks will be implemented in August 2023. To refresh/guide all ATCOs to understand and apply all work-related procedures correctly/uniformly and meet the required proficiency standards, a simulator-based refresher training is scheduled for May-June 2023. This refresher simulator training will focus on the following topics: VFR traffic, phraseology, approaches for runway 29, emergency situations and speed control separation. In addition, a general one-on- one classroom refresher training is planned for September-October 2023. The topics will be determined based on the outcome of the proficiency checks and a survey that is planned for August 2023.

# F. Revision of LOA between ANSA and DC-ANSP

In the 3<sup>rd</sup> quarter of 2023, ANSA and DC-ANSP will complete the revision of the present LOA. Topic which is pending to be incorporated in the LOA is standard departure clearances. A trial will be done in April 2023 to evaluate the effectiveness of the standard departure procedures.

# G. VFR procedures

VFR procedures to hold VFR traffic were sent to DCAA and are pending approval. These procedures are for when there are arriving VFR flights which are subject to hold due to multiple IFR/VFR arriving flights and are also meant to sequence the VFR traffic in an orderly flow.

#### H. QMS ATC unit

With regard to the ATC unit related QMS, the following projects will be implemented:

- Development of process flow charts (March 2023)
- Yearly assessment of documented information (Q1 2023)
- ATFM (soon after opening of Aruba's airspace for Venezuela)
- Possibility to expand ATC surveillance hours (May 2023)
- Continuously review and update SIDs and STARs (April 2023)
- Voice recording review (April 2023)
- Proficiency check (August 2023)
- Refresher training (May-June and September-October 2023)
- Performance evaluations (October 2023)
- Comparative analysis procedures (March and June 2023)
- Analysis and evaluation of unit related QMS activities (February-April 2023)
- Revision of LOA between ANSA and DC-ANSP (January-August 2023)
- Compliance monitoring of LOA between ANSA and DC-ANSP (September 2023)
- ATC Human Errors Survey (April 2023)
- A collaboration agreement with DCAA will be drafted and internally reviewed in April 2023, sent to DCAA in June 2023 and expected to be implemented in Q3 2023.

# I. Digital logbook

All ATCOs received training in January 2023 on the AFAS platform for digital logbook. The digital logbook was implemented as per February 17, 2023. A soft launch took place on February 1, 2023.

# 5.2 CNS/ATM Systems

## A. Training activities

To enhance their knowledge on the various CNS/ATM systems, the CNS/ATM Manager and Technicians will take the following training courses in 2023:

- ATSEP (Air Traffic Safety Electronics Personnel) Communication Data Qualification (Q3 2023);
- ATSEP Communication Voice Qualification (Q3 2023);
- OJT for the new DME (May 2023);
- maintenance training on the upgraded VCS (June 2023);
- the manager CNS/ATM Systems will do the online IATA training "Quality Management Systems (QMS) for Civil Aviation Authorities (CAA) and Air Navigation Service (ANS) Providers" (March 2023).

## B. Flight Inspection of Navaids

To assure signal accuracy in the air and to comply with the ICAO recommendations set forth in ICAO Annex 10 Volume1 and ICAO Doc. 8071, the BEA VOR/DME and the IBE ILS/DME (Navaids) should be calibrated, and flight inspected annually. The last calibration and flight inspection of these Navaids<sup>8</sup> was performed in March 2021 by "Radiola Aerospace" and the results were up to standard. Due to the unserviceability of the ILS and the VOR, the Flight Inspection of 2022 was postponed until 2023. The next flight inspection mission is scheduled for May 2023 after completion of the project Upgrade ILS/DME and the first phase of the project Upgrade VOR/DME.

# C. CNS/ATM Systems Manual

A revised version of the manual will be finalized in March 2023. This manual contains a detailed description of all the processes, procedures and instructions that are essential for the maintenance of CNS/ATM systems for the provision of safe and efficient ATS in the Aruban airspace. As part of the CNS/ATM Systems Manual, ANSA will develop Technical Instruction Books (TIBs) for all its facilities. This process started in July 2022 and will be finalized in November 2023. The TIBs that will be developed are:

- TIB VCS/VRRS (July-August 2023)
- TIB ILS/DME (May-June 2023)
- TIB VOR/DME (May-June 2023)
- TIB WAM/ADSB (September-October 2023)
- TIB TOPSKY ATC (September-October 2023)
- TIB VHF TX/RX (March-April 2023)
- TIB AMHS/AIS (March-April 2023)
- TIB ATIS (September 2023)
- TIB Supporting facilities (October 2023)

#### D. Calibration Test Equipment

To ensure that all test equipment used for maintenance of CNS/ATM Systems are accurate and available for the continuity of measurement capability, this test equipment need to be calibrated against the standards on a yearly interval. The process to send all the test equipment to a certified laboratory in Miami to be calibrated takes place in the 2<sup>nd</sup> quarter of each year.

# E. Collaboration Agreement ANSA and DC-ANSP

The Working Group that was established to coordinate implementation of the collaboration agreement agreed to prioritize and pursue the following areas of collaboration:

- joint project preparation and equipment acquisition;
- joint training for ATC, CNS/ATM Systems and AIA;
- interface between the Air Traffic Management Systems of both entities;
- joint missions for flight Inspection of navaids.

<sup>8</sup> Navaid (navigational aid) is a device or facility that provides position data or guidance to aircraft.

# F. QMS CNS/ATM Systems unit

With respect to QMS of the CNS/ATM Systems unit, the following projects will be implemented:

- development of process flow charts (February-December 23);
- yearly assessment of documented information (Q1 2023);
- develop CNS/ATM training manual (February-July 2023);
- analysis and evaluation of unit related OMS activities (March 2023);
- finalize revision CNS/ATM Manual (see paragraph 5.2 section C);
- development of TIBs (see paragraph 5.2 section C);
- determine which spare parts are critical, for which systems and procurement thereof (June 2023);
- technical assessment VOR/DME (see paragraph 4.3 section D);
- develop/update ANSA's investment plan as part of the yearly budgeting process (Q4 2023).

## 5.3 Aeronautical Information Affairs

# A. Training activities

The Air Traffic Services Reporting Office (ARO) is responsible for the provision of services associated with the submission of flight plans and the distribution and reception of messages of air traffic services. In addition, it distributes NOTAMs & Pre-flight Information Bulletin (PIB) based on the requirements of the aircraft crew or the representatives of aircraft operators, in accordance with the track data in the flight plan.

In order to refresh and upgrade all AIOs to understand and execute all procedures uniformly and meet the required proficiency standards, a refresher course will be given to all AIOs in April-May 2023. If deemed necessary, as part of the refresher course, a follow-up self-training program will take place from September till November 2023. The Manager AIA, along with the managers ATC and CNS/ATM Systems, and the SQ Officer, will participate in IATA's virtual quality management system course which will be held in March 2023. The Manager AIA will also attend the TTCAA Aeronautical Information Management (AIM) Certificate (Virtual) Course which will start in August 2023 with a duration of 14 weeks.

#### B. Transition from AIS to AIM

The main objective of the AIS to AIM transition is to enhance the process of data distribution in terms of quality and timeliness. This will contribute to improved safety, increased efficiency, and greater cost-effectiveness of the air navigation system. Derived objectives can be structured per step as defined in the ICAO Roadmap document.

In 2016 ANSA complied with the ICAO Port-of-Spain Declaration including the transition from AIS to AIM phase 1.

Phase 2 started after completion of phase 1. During Phase 2 of the transition to AIM (see table 4), the main focus is on the establishment of data-driven processes for the production of AIS products by using computer technology or digital communications and introducing structured

digital data from databases into the production processes ("going digital").

In accordance with the letter of agreement with DC-ANSP AIS, in recent years the following phase 2 steps were completed:

- AIXM: the establishment and maintenance of a database where digital aeronautical data from a State are integrated and used to produce current and future AIM products and services is the main step in Phase 2 of the transition to AIM;
- unique identifiers: improvements to the existing mechanisms for the unique identification of aeronautical features are required to increase the effectiveness of information exchange without the need for human intervention;
- aeronautical information conceptual model: defining the semantics of the aeronautical information to be managed in terms of digital data structures is essential for introducing interoperability;
- eAIP: the electronic version of the AIP is defined in two forms: a printable document and one that can be viewed by web browsers.

## In 2023 the main focus for phase 2 will be:

- data quality monitoring: an ongoing challenge for organizations producing information is to ensure that the quality of the information suits its intended uses and that data users are provided with the appropriate information about data quality;
- data integrity monitoring: data integrity requirements introduced by safety objectives must be measurable and adequate;
- terrain: the compilation and provision of terrain data sets is an integral part of the transition to AIM;
- obstacles: the compilation and provision of obstacle data sets is an integral part of the transition to AIM;
- aerodrome mapping: traditional aerodrome charts need to be complemented by structured aerodrome mapping data that can be imported into electronic displays.

Phase/Step Description	AIS to AIM Step		Remarks					
	No.	2022	2023	2024	2025	2026	2027	
and the second s			PI	nase II				
Data Quality Monitoring	P-01							SEMI-COMPLETED  PLX module
Data Integrity Monitoring	P-02							SEMI-COMPLETED  PLX module
AIXM	P-06							COMPLETED
Unique identifiers	P-07							COMPLETED
Aeronautical information conceptual model	P-08							COMPLETED
eAIP	P-11							COMPLETED
Terrain Areas 1, 2, 3, 4	P-13							SEMI-COMPLETED
Obstacle Areas 1, 2, 3, 4	P-14							SEMI-COMPLETED
Aerodrome Mapping	P-15	1						

Table 4: Timeline Phase 2 AIS to AIM Transition

#### C. AIA Manual

To comply with ICAO and national regulations, and to guarantee a standardized workflow for the AIA unit, an AIA Manual was developed. The manual was submitted on January 18, 2018 to the DCAA for approval and it was approved on May 28, 2019. A review/update will take place in the last quarter of 2023.

## D. Data/Info of Aruba in the Dutch Caribbean AIP

To ensure the Aruba data quality, accuracy and integrity in the AIP, a complete review will be performed in 2023 by the AIS Officer under the supervision of the Manager AIA. All the data originators will be involved in this process.

## E. ICAO Task Force for the implementation of AIM 2023-2025

During the first meeting of the Air Navigation Implementation Working Group (ANI/WG), it was agreed to activate a group (AIM/TF) working for the AIM implementation to support and make more efficient the implementation activities of AIM in accordance with the roadmap for the transition from AIS to AIM. This task group will have to improve processes and coordination among States, Territories, and international organizations, as well as offer to the regional planning groups and States practical guidance and advice for the development of implementation strategies of AIM. The AIM/TF will also propose the tasks that have to be done and corresponding implementation schedule, as well as update and report its progress to the ANI/WG based on the plan of action for these tasks. Approval from the DCAA was granted to manager AIA to form part of the AIM/TF. The Taskforce is pending ICAO for the activities and timeline for 2023-2025.

# F. Compliance check of LOA with airlines representatives

An LOA was signed between ANSA and the ground handlers' operations in September 2021 to establish procedures for the coordination and validation of flight plans and associated ATS messages to achieve an orderly and expeditious process. The LOA also contains procedures aimed to safeguard the required competency level of the ground handlers' operations officers. A compliance check will be carried out in March-April 2023. If deemed necessary, ANSA will provide training to the ground handlers' operations officers (June-August 2023).

# G. Terrain and obstacle survey 2023

In April 2023 ANSA, in cooperation with the Aruba Airport Authority (AAA), will start a project for the execution of the terrain and obstacle survey, which includes a verification of the geometric data and the processing of the data to update all the associated aeronautical procedures, charts and (coding) tables in the AIP. This is necessary to comply with the national regulations and ICAO standards. MovingDot has prepared a proposal for the execution of this project. Considering MovingDot's planning as well as the approval and publication procedures, the effective date of this AIP amendment will be November 30, 2023.

#### H. QMS AIA unit

With regard to the AIA unit related QMS, the following projects will be implemented:

- development of process flow charts (February-March 2023);
- yearly assessment of documented information (Q1 2023);
- AIA training manual (Q2 2023);
- analysis and evaluation of unit related QMS activities (February-April 2023);
- proficiency check (Q2 2023);
- refresher training (April-May 2023) see paragraph 5.3 section A;
- Performance evaluations (October 2023);
- develop and implement procedures for the monitoring of flight plan errors (March-April 2023);
- analysis of missing, erroneous and duplicate flight plans and development of an action plan to mitigate the errors (Q3 2023). The main goal of this project is to avoid flight plan errors which could lead to unnecessary delays;
- conduct a survey amongst AIOs of human errors that might contribute to flight plan errors (March 2023);
- develop a request for proposal to avoid duplicate outbound flight-plan messages in TopSky ATC via the AMHS switch routing and implementation thereof (March-June 2023);
- develop, sign and implement an AIM Multilateral Service Level Agreement (MSLA) to establish the responsibilities of each data originator in accordance with ICAO Annex 15 (January-August 2023);
- development of quality control procedure for AIS products (February-March 2023);

#### **5.4 Financial Affairs**

The Financial Controller provides monthly the Financial Statements, which include the Balance Sheet, Profit & Loss, Budget Comparison figures, Cash Flow Report, investment progress report, the Accounts Receivable statuses (debtor list with collection percentages for Commercial Credit and Commercial Cash Basis airlines) and the notes with an explanation of the aforementioned figures including illustrative charts. Once a year the Annual Budget is prepared, and this budget is then divided in appropriate monthly figures to be used in the comparison analyses with the actual monthly figures.

To date ANSA has closed 7 years, successfully audited and duly presented to the Supervisory Board and the Minister concerned. By the end of May 2023, the Financial Report for the closed 2022 fiscal year should be ready. Plus Accountants has been hired to audit ANSA's figures (revenues, expenses, accruals, balances etc.) and procedures, which process will start on April 6, 2023. The necessary confirmations will be requested from the different parties and the reconciliations will be provided to facilitate the verification of the final figures.

During the year 2023 (June-September) ANSA will work on the implementation of the CGC in its procedures, in anticipation of the introduction of legislation.

#### 5.5 Human Resources

The training plan 2023 was approved on November 30, 2022, and will be implemented in 2023. In 2023 ANSA will continue to take advantage of online training opportunities. The yearly personnel performance evaluations will take place in 2023 as well. ANSA will also update its performance management system in the first quarter of 2023 in order to make it more effective. The Handbook Employment Regulations will be completed with the detailed description of all HR procedures in the first quarter of 2023. It is important for a healthy employer-employee relationship that clarity and transparency exist regarding the rights and obligations of the employee.

ANSA's website will be updated with new information (e.g. new policy paper, organizational chart and monthly ANSA Statistics). It is expected that the negotiations for a new CLA (2023-2025) will commence in the first quarter of 2023 or soon thereafter. The process of hiring one (1) AIO will be finalized in March 2023, whereas the hiring process of four (4) ATCOs will start in March 2023.

# 5.6 SMS & QMS

To comply with article 15 of the "Landsbesluit luchtverkeer" ANSA has developed and implemented an SMS. The ANSA SMS manual was submitted to the DCAA for approval on November 23, 2018. The DCAA has performed its review of the above-mentioned manual and shared its findings with ANSA on June 15, 2021. The ANSA SMS manual is currently being revised and updated to conform with the DCAA feedback. The revised SMS manual is expected to be submitted to the DCA by the end of March 2023.

In 2023 ANSA will continue its efforts to identify hazards through e.g., the investigation of incidents, analysis of hazard reports, safety reviews and the management of risks involved with changes in procedures and equipment. The EFS safety review is planned for April 2023. Safety talks will be held with operational personnel for the purpose of safety promotion and hazard identification (June-July 2023).

A QMS manual has been developed and ANSA is in the process of implementing a QMS. The SQ will coordinate the following QMS activities that are programmed to take place in 2023:

- Develop and implement QMS Training and awareness program (March 2023);
- Develop and implement QMS communication plan (March 2023);
- Development of document control procedures (April 2023);
- Performance evaluation of the external providers (March-June 2023);
- Develop and implement procedures to monitor and measure customer's satisfaction (April 2023);
- Develop the internal audit program and implement these procedures (July 2023);
- Top management review of QMS (July 2023).

## 6. CONCLUDING REMARKS

2022 was the second year of post pandemic recovery and our financials show that ANSA performed better than expected, in terms of revenues, profit and cash flow position. But, we should take into account that air traffic volume has yet to reach the pre pandemic levels. Moreover, our cash flow was positively impacted by delays in the implementation of several investments. Nevertheless, based on all the accomplishments, projects and activities of 2022, it is safe to say that 2022 was a successful year.

However, ANSA is still being confronted with huge challenges and risks. Firstly, we need to keep in mind the global uncertainties and challenges: high inflation in combination with looming recession and the war in Ukraine. It is not clear how and to what extent this will impact international tourism. Secondly, the Venezuelan border is already closed for four years and there is no clarity as to when it will be opened for air traffic. Thirdly, imported inflation in combination with recent government policy changes, such as the increase of the minimum wage and BBO, have prompted our local suppliers of goods and services to increase their prices significantly. This development will put an upward pressure on our expenses.

So far, we closed January 2023 with a negative result, while the revenues of January and February are less than budgeted. Yet, we are hopeful that with the support and cooperation of all employees, our Supervisory Board and stakeholders, we will overcome these challenges and that 2023 and beyond will be positive years for ANSA.

From the contents of this paper, it can be concluded that ANSA's projects and activities for 2023 are primarily aimed at enhancing safety, improving quality, accountability and transparency, and complying with or exceeding international standards. To achieve this, ANSA will invest in CNS/ATM equipment necessary to safeguard continuity of service. Moreover, ANSA will focus on training as well as employees' development and performance. Furthermore, special attention will be given to ways to improve coordination with DC-ANSP, strengthening of the cooperation with stakeholders, updating of operational manuals and implementation of SMS, QMS and corporate governance.

Attached is the Roadmap of ANSA, which contains a general overview and timetable for the projects of ANSA for 2023.

# **Annex: ANSA Roadmap 2023**

		KUADIWAP ANSA 2023	2023													
		PROJECT ACTIVITIES ANSA 2021/2022/2023			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					,	100	1-1011	11-12-1	1-1019	,4.11	,	1148	ЗОР			
			WHO?	FINALIZED												
Α		Financial Controller - Nerisa Giel														
1		ANSA annual Budget	FIN													
	1.8	Budget 2022	FIN	11-Jan-22												
	1.9	Budget 2023	FIN	14-Feb-23												
2		Monthly budget	FIN													
	2.8	Monthly budget 2022	FIN	1-Feb-22												
	2.9	Monthly budger 2023	FIN													
4		Annual report	FIN													
	4.7	Annual report 2021	FIN	31-May-22												
	4.8	Annual report 2022	FIN													
	4.8.1	Interim audit 2022	FIN	30-Sep-22												
5		New billing software	FIN													
	5.1	Drafting/signing of Aviony agreement	FIN	15-Sep-22												
	5.2	Implementation	FIN	9-Dec-22												
6		Develop new cash basis procedures & Revise Gen T & C	FIN													
	6.3	Revise Cash Basis Procedures 2022	FIN/MA	28-Sep-22												
13		Policy Paper	FIN													
	13.2	Policy Paper 2022	FIN	8-Mar-22												
	13.3	Policy paper 2023	FIN													
14		ANSA corporate governance code	FIN													
	14.1	Collect and review data / books / legislation	FIN	4-Nov-22												
	14.2	Pilot project Corporate Governance manual	FIN													
	14.3	Implementation Corporate Governance	FIN													
15		Financial ratios and proyections 2023-2025	FIN	1-Nov-22												
В		Human Resources - Oliver Clark														
8		Annual Training Plan	HR													
	8.8	Training Plan 2023	HR	30-Nov-22												
	8.9	Training Plan 2024														
12		Handbook employment regulations ANSA	HR													
21		Document Management Procedures	HR	25-Oct-22												
23		Website revamp 2022	HR													
24		Update functionerings- en beoordelingsformulier	HR													
25		Recruitment ATCOs 2023	HR/MATC													
		Vacancy placement in the media	HR													
		Pre Screening application letters	HR													
	25.3	Capability test	HR													
	25.4	Job Interview with the candidates	HR													
	25.5	Decision to narrow down to 10 candidates	HR													
	25.6	English & Spanish Proficiency tests	MATC													
	25.7	Psychological test	HR													
	25.8	Submit VDA forms	HR													

	ROADMAP ANSA 2023 2023															
											<b>Z</b> 3					
		PROJECT ACTIVITIES ANSA 2021/2022/2023			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
			WHO?	FINALIZED												
	25.9	Aeromedical examination	HR													
	25.10	Final decision regarding the 4 candidates	HR													
	25.11	Basic ATC Introduction Training	MATC													
	25.12	Aerodrome and Approach Control Programme (Sep'23-Apr'24)	MATC													
26		Collective Labor Agreement 2023-2025	HR/FIN													
С		Safety & Quality Officer - Charles Brouwer														
1		Safety Management System	SQ													
	1.9	SMS Training ANSA personnel 2021	SQ													
	1.9.3	Course delivery	SQ													
	1.9.3.2	ARO	sq	23-Feb-22												
	1.9.4	Certification	SQ													
	1.9.4.2	ARO	SQ	31-May-22												
	1.10	SMS Manual	SQ													
	1.10.5	DCA Approval (pending since 23-11-2018)	SQ													
	1.10.6	SMS manual update (based on DCA feedback of 15-6-2021)	SQ													
	1.10.7	Discuss and review with CEO	SQ													
	1.10.8	Resubmit to the DCA for approval	SQ													
	1.11	Safety talks with operational personnel	SQ													
9		Quality Management System	SQ													
	9.5	Development of Quality Manual	SQ	8-Aug-22												
	9.6	DCA Approval (pending since 9-8-2022)	SQ													
	9.7	Publish Quality manual on website	SQ/HR	28-Sep-22												
	9.8	QMS Training and awareness program	SQ													
	9.9	QMS communication plan	SQ													
	9.10	Development of document control procedures	SQ													
	9.11	Performance evaluation of the external providers	SQ													
	9.11.1	Moving Dot (Mar-Jun'23, Q1 2024)	SQ/MATC/M	AIA												
	9.11.2	DC-ANSP (Feb-May'23, Q1 2024)	SQ/MATC/M	AIA/MCAS												
	9.11.3	DMA (Feb-May 2023, Q1 2024)	SQ/MATC													
	9.12	Procedures to monitor and measure customer's satisfaction	SQ													
	9.13	ISO certification (Q4 2024)	SQ													
	9.14	Development of the internal audit program and procedures	sQ													
	9.15	Top management review of QMS (Jul'23, Q2 2024)	SQ/CEO													
12		Fatique Risk Management System (FRMS)	sq													
	12.2	Review and update FRMS procedures	sq	25-Mar-22												
	12.3	DCA Approval	sQ													
15		STCA and CLAM analysis (on hold)	sq													
16		SMS Review 2019-2021	sQ	31-Aug-22												
17		Safety review EFS	sQ													
18		Create VFR procedures training video	sQ													
E		Manager Air Traffic Control - Erika Dedier														<u> </u>

										20	23					
		PROJECT ACTIVITIES ANSA 2021/2022/2023			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
			WHO?	FINALIZED												
1	1.10	Revision of Tower Manual:	MATC													
$\vdash$	1.10	Approval from DCAA (pending since 2-11-2018)  Receive feedback from DCAA	MATC	17 Feb 22												
	1.12	Revise and submit revised Tower Manual to DCAA	MATC MATC	17-Feb-22												
	1.13	Publication new Tower manual (pending DCAA approval)	MATC													
16	1.14	Develop ATC training manual	MATC/SQ													
<del></del>	16.4	Approval from DCA (pending since 24-10-2018)	MATC													
18	10.4	EFS Project	MATC													
10	18.16	Contingency plan	MATC	20-Jun-22												
$\vdash$	18.17	Update incident reporting procedures	SQ	27-Jan-22												
		TopSky EFS Guide	MATC	27 Juli 22												
		First draft prepared by EFS WG	MATC	14-Jan-22												
		2 Send to ATCOs for comments and input	MATC	14-Jan-22												
		Send to SQ and CEO	MATC	1-Feb-22												
		Implement TopSky EFS Guide	MATC	8-Feb-22												
	18.19	Update SOP TWR-APP (on hold)	MATC	8-1 60-22												
	18.20	EFS Ergonomics monitoring	MATC	7-Jun-22												
$\vdash$	18.21	EFS Proficiency check	MATC													
21	10.21		MATC	29-Aug-22												
31	24.2	ICAO Training Instructors Course		10 4 22												
22	31.3	Training Developers Course	MATC	19-Aug-22												
32	22.4	ATC Refresher Training (see 50.8)	MATC													
		ATC Refresher Training 2021/2022	DAATC	24 1 22												
		Survey and determine subjects for Refresher training	MATC	31-Jan-22												
	32.1.2	·	MATC	25-Feb-22												
	32.1.3	Implement Refresher course	MATC	15-Mar-22												
33		Update Emergency Procedures and Checklist	MATC													
35		Prepare simulator for training	MATC													
	35.3	Scenarios 1 and 2	MATC	12-Apr-22												
	35.4	Simulator training for surveillance trainees	MATC	12-Apr-22												
	35.5	Scenarios 3 and 4 (1st week September 2022)	MATC	16-Sep-22												
	35.6	Scenarios 5 and 6 (4th week May 2022)	MATC	18-May-22												
	35.7	Scenarios 7 and 8 (1st week September 2022)	MATC	16-Sep-22												
	35.8	Scenarios 9, 10 and 11 (end November 2022)	MATC	25-Nov-22												
	35.9	Refresher/simulator training for all ATCOs (September 5 t/m 16)	MATC	16-Sep-22					ļ	ļ						
38		Prepare and sign collaboration agreement with DC-ANSP	MATC						ļ	ļ						
	38.6	Feedback by ANSA	MATC	31-Jan-22					ļ	ļ						
	38.7	Final feedback by DC-ANSP	MATC	25-May-22												
	38.8	Signing of agreement	MATC	1-Jul-22												
39		Update Performance Based Air Navigation (PBAN) Roadmap	MATC													
	39.6	Send to DCA (on hold pending ICAO approval of RPBANIP V4.0)	MATC													
40		Revision LOA between ANSA and DC-ANSP 2021/2022 (see 50.13)	MATC													

2023															
Oct Nov D	Oct	Sep	Aug	Jul	Jun	May	Apr	Mar	Feb	Jan			PROJECT ACTIVITIES ANSA 2021/2022/2023		
											FINALIZED	WHO?			
											4-Feb-22	MATC	ANSA Provide feedback for non- compliance	40.5	
											14-Mar-22	MATC	Implement trial	40.6	
											12-Apr-22	MATC	Evaluate trial	40.7	
												MATC	Wake Turbulence category		43
											25-Feb-22	MATC	Memo to ATCOs (DOC 4444 Amendment)	43.2	
												MATC	VFR procedures for arrival and departure flights		45
											18-Jan-22	MATC	Send to SQ and CEO for input	45.4	
											11-Feb-22	MATC	Feedback from SQ and CEO	45.5	
											17-Feb-22	MATC	Send to updated draft to ATCOs	45.6	
											17-Feb-22	MATC	Final draft VFR procedures for arrival and departure flights	45.7	
											25-Feb-22	MATC	Send to DCAA for approval	45.8	
											17-Jun-22	SQ	Safety review VFR procedures	45.9	
												MATC	DCAA approval	45.10	
												MATC	Implement VFR procedures for arrival and departure flights	45.11	
												MATC	JUMP 1 procedures		46
											18-Jan-22	MATC	Send draft to SQ and CEO	46.4	
											27-Jan-22	MATC	Feedback from SQ and CEO	46.5	
											17-Feb-22	MATC	Final draft JUMP 1	46.6	
											25-Feb-22	MATC	Send to DCAA for approval	46.7	
											28-Apr-22	MATC	Receive feedback from DCAA	46.8	
											12-May-22	MATC	Send revised draft to DCAA for approval	46.9	
											16-Jun-22	MATC	DCAA approval	46.10	
											20-Jun-22	MATC	Implement JUMP 1 procedure	46.11	
												MATC	English Language proficiency 2022		47
											24-Feb-22	MATC	Request quotation for training and exams	47.1	
											3-Mar-22	MATC	Prepare Memo	47.2	
											16-Mar-22	MATC	Order Exams	47.3	
											11-Apr-22	MATC	Provide English Language Proficiency Training	47.4	
											11-Apr-22	MATC	English Language Proficiency Exams	47.5	
												MATC	Surveillance course 2022		48
											12-Apr-22	MATC	Surveillance simulator pre-training	48.1	
											1-Jun-22	MATC	Theoretical	48.2	
											28-Jun-22	MATC	Simulator	48.3	
												MATC	On- the-job training	48.4	
												MATC	ATCO Regulations		49
											4-Apr-22	MATC	Received from DCA	49.1	
											20-Jun-22	MATC	Internal review	49.2	
											22-Jun-22	MATC	Submit to DCA	49.3	
											14-Oct-22	MATC	Final regulation	49.4	
												MATC	ATC - QMS		50
												MATC	Development of process flow charts	50.1	
											12-Apr-22 1-Jun-22 28-Jun-22 4-Apr-22 20-Jun-22 22-Jun-22	MATC MATC MATC MATC MATC MATC MATC MATC	Surveillance course 2022  Surveillance simulator pre-training  Theoretical  Simulator  On- the-job training  ATCO Regulations  Received from DCA  Internal review  Submit to DCA  Final regulation  ATC - QMS	48.1 48.2 48.3 48.4 49.1 49.2 49.3 49.4	49

		2023													
	PROJECT ACTIVITIES ANSA 2021/2022/2023			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		WHO?	FINALIZED												
50.2	Yearly assesment of documented information (Q1 2023, 2024)	MATC													
50.3	ATFM (Quality objective 1 ATC Ad 2.3) (on hold, pending opening airspace for Venezuela)	MATC													
50.4	ATC surveillance hours (Quality objective 1 ATC Ad 2.4)	MATC													
50.5	Continuously review and update SIDs and STARs (Quality objective 1 ATC Ad 2.5)	MATC													
50.6	Voice recording review (Apr'23, Q2 2024)	MATC													
50.7	Proficiency check (Quality objective 2 ATC Ad 2.1) (Aug'23 and '24)	MATC													
50.8	Refresher training (Quality objective 2 ATC Ad 2.1) (May-Oct'23, Oct'24)	MATC													
50.8.1	ATC Refresher Training 2023	MATC													
50.8.1.	1 Refresher simulator training	MATC													
50.8.1.	2 Survey and determine subjects for general refresher training	MATC													
50.8.1.	Prepare general refresher training material	MATC													
50.8.1.	4 Implement general refresher training	MATC													
50.9	Performance evaluations (Quality objective 2 ATC Ad 2.1) (Oct'23 and '24)	MATC													
50.10	Comparative analysis procedures (Quality objective 2 AIA Ad 2.6)	MATC													
50.11	Analysis and evaluation of unit related QMS activities	MATC													
50.11.1	Yearly evaluation (Quality objective 1 ATC Ad 2.3, 2.4 and 2.5) (Q1 2023, 2024)	MATC													
50.11.7	Yearly evaluation (Quality objective 2 ATC Ad 2.1 and 2.2) (Q1 2023, 2024)	MATC													
50.11.	Yearly evaluation (Quality objective 3 ATC Ad 2.1) (Q1 2023, 2024)	MATC													
	Yearly evaluation (Quality objective 4 ATC Ad 2.1 and 2.2) (Q1 2023, 2024)	MATC													
50.11.	Yearly evaluation (Quality objective 5 ATC Ad 2.1 ) (Q1 2023, 2024)	MATC													
50.12	Collaboration Agreement with DC-ANSP (Quality objective 4 ATC Ad 2.2)	MCAS/MATO													
50.12.1		MCAS/MATO	1-Jul-22												
50.12.7	Implement agreement (see G46)	MCAS/MATO													
		MATC													
	L Send DC-ANSP procedure for Standard Departure	MATC													
50.13.	Receive feedback from DC-ANSP	MATC													
	Implement trial for standard departure procedures	MATC													
	Evaluate trial	MATC													
50.13.!	Update LOA and final internal review	MATC													
	Final meeting between ANSA and DC-ANSP	MATC													
50.13.	7 Signing of LoA between ANSA and DC-ANSP	MATC													
	3 Implement LoA between ANSA and DC-ANSP 2022	MATC													
	Interface FDPS (Quality objective 4 ATC Ad 2.1b) (Q1 2023)(On hold pending update DC-ANSP)	MCAS/MATO													
50.15	LOA compliance monitoring (Quality objective 4 ATC Ad 2.2) (Sept'23 and '24)	MATC													
		MATC							1		1				1
		MATC													
	L Draft collaboration agreement	MATC													
	2 Send draft for internal feedback	MATC							1		1				1
	3 Update draft	MATC							1		1				1
	Send draft to DCAA	MATC									1				1
	5 Feedback from DCAA	MATC													1

		KUADIVIAP ANSA 2023		2023												
						- 1	3.5			_				0.1		-
		PROJECT ACTIVITIES ANSA 2021/2022/2023			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
			WHO?	FINALIZED												
	50.17.6	Finalize draft	MATC													
	50.17.7	Sign collaboration agreement	MATC													
	50.17.8	Implement collaboration agreement	MATC													
	50.17.9	Periodical meetings (to be determined) (Quality objective 5 ATC Ad 2.1)	MATC													
51		Digital Logbook	MATC/MAIA													
	51.1	Traning MATC	MATC	26-Jan-23												
	51.2	Training ATCers	MATC	19-Jan-23												
	51.3	Implementation digital logbook	MATC	17-Feb-23												
F		Manager Aeronautical Information Affairs - Leonel Jarzagaray														
2		Implementation Port of Spain Declaration (AIM)	MAIA													
	2.3	Transition from AIS to AIM phase 2	MAIA													
	2.3.3	Implementation plan (Pending ICAO)	MAIA													
	2.3.4	Data integrity monitoring (Pending ICAO)	MAIA													
	2.3.5	Data quality monitoring (Pending ICAO)	MAIA													
	2.3.6	Integrated aeronautical information database (Pending ICAO)	MAIA													
	2.3.7	Unique identifiers (Pending ICAO)	MAIA													
	2.3.8	Aeronautical information conceptual model (Pending ICAO)	MAIA													
	2.3.9	Aerodrome mapping (Pending ICAO)	MAIA													
	2.3.10	Electronic AIP (Pending ICAO)	MAIA													
	2.3.11	Obstacles (Pending ICAO)	MAIA													
	2.3.12	Terrain (Pending ICAO)	MAIA													
19		ICAO Training Instructors Course	MAIA													
	19.3	Training Developers Course	MAIA	19-Aug-22												
20		Letter of Agreement (LOA) for airline representatives	MAIA													
	20.8	Compliance check	MAIA/AIS													
24		Missing inbound flight plans Commercial Airlines	MAIA													
	24.3	Implementation of recommendations	MAIA/AIS	31-Jan-22												
27		ICAO AIM Taskforce	MAIA													
	27.1	NAM/CAR Regional AIM Collaborative Plan	MAIA													
	27.2	Information on the AIM transition progress (on hold)	MAIA													
	27.3	Regional Contingency Plan Development and Implementation Coordination (on hold)	MAIA													
28		Point 2 Point Microwave project	MAIA													
	28.4	Government decree	MAIA	14-Jun-22												
$\coprod$	28.5	Implementation	MAIA/MCAS	1-Dec-22												
31		New Computers/Laptops for ANSA HQ	MAIA													
	31.1	Project preparation	MAIA	14-Jan-22												
		Request for Proposal	MAIA	19-Jan-22												
	31.3	Review/XA-Tech advice/Approval	MAIA	10-Feb-22												
	31.4	Shipping	MAIA	7-Mar-22												
	31.5	Installation	MAIA	28-Mar-22												
33		ICAO/IATA Courses	MAIA													

		KUADIVIAP ANSA 2023		2023												
					-	- I	7.5		1.5	_				0.1	3.7	
		PROJECT ACTIVITIES ANSA 2021/2022/2023			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	0ct	Nov	Dec
			WHO?	FINALIZED												
	33.1	Safety Management Course	MAIA	18-Mar-22												
	33.2	Training Decelopers Course	MAIA	19-Aug-22												
	33.3	Quality Management System (2023)	MAIA													
34		Digital Logbook AIA/ATC	MAIA/MATC													
	34.1	Project activities/ Planning	MAIA/MATC	11-Sep-22												
	34.2	Implementation	MAIA	17-Feb-23												
35		ICAO Global Campaign on NOTAM Improvement	MAIA													
	35.1	Prepare memo	MAIA	11-Jul-22												
	35.2	Prepare letter to DCAA	MAIA	28-Jul-22												
	35.3	Confirm compliance with recommendations	MAIA/AIS	1-Dec-22												
36		AIA - QMS	MAIA													
	36.1	Development of process flow charts	MAIA													
	36.2	Yearly assesment of documented information (Q1 2023, 2024)	MAIA													
	36.3	AIA training manual (Q2 2023)	MAIA													
	36.4	Analysis and evaluation of unit related QMS activities	MAIA													
	36.4.1	Yearly evaluation (Quality objective 1 AIA Ad 2.2) (Q1 2023, 2024)	MAIA													
	36.4.2		MAIA													
	36.4.3	Yearly evaluation (Quality objective 3 AIA Ad 2.1 and 2.2) (Q1 2023, 2024)	MAIA													
	36.5	Proficiency check (Quality objective 1 AIA Ad 2.2) (Q2 2023, 2024)	MAIA	16-Sep-22												
	36.6	Refresher training (Quality objective 1 AIA Ad 2.1) (Q3 2023, 2024)	MAIA													
	36.7	Performance evaluations (Quality objective 1 AIA Ad 2.2) (Oct 2023, 2024)	MAIA	21-Nov-22												
	36.8	Missing flight plans analysis (Quality objective 2 AIA Ad 2.1) (Q3 2023, 2024)	MAIA													
	36.9	Erroneous flight plans analysis (Quality objective 2 AIA Ad 2.1) (Q3 2023, 2024)	MAIA													
	36.10.		MAIA													
		Action plan (Quality objective 2 AIA Ad 2.2) (Q3 2023, 2024)	MAIA													
			MAIA													
		AIOs human errors survey (Quality objective 2 AIA Ad 2.4) (Q1 2023)	MAIA													
		Request for Proposal (Quality objective 2 AIA Ad 2.5)	MAIA													
		Thales's offer (Quality objective 2 AIA Ad 2.5)	MAIA													
			MAIA													
	36.17	Implementation (Quality objective 2 AIA Ad 2.5)	MAIA													
		AIM MSLA with DCAA and other stakeholders (Quality objective 3 AIA Ad 2.1)	MAIA													
		Draft MSLA	MATC													
		Send draft MSLA to DCAA and other stakeholders	MATC													
		Feedback from DCAA and other stakeholders	MATC													
<u> </u>		Finalize draft MSLA	MATC													
<u> </u>		7 Sign MSLA	MATC						ļ	ļ						
<u> </u>		Implement MSLA	MATC						ļ	ļ						
<u> </u>	36.19	Development of quality control procedure (Quality objective 3 AIA Ad 2.2)	MAIA													
37		Terrain and obstacle survey 2023	MAIA						ļ	ļ						
	37.1	Scope of work	MAIA	17-Aug-22												

		ROADMAP ANSA 2023  2023														
											123 					
		PROJECT ACTIVITIES ANSA 2021/2022/2023			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
			WHO?	FINALIZED												
	37.2	Proposal	MAIA	30-Sep-22												
	37.3	Approval	MAIA	00 00p 11												
	37.4	Execution	MAIA/MATC													
	37.5	DCAA approval	MAIA													
-																
	37.6	Publication	MAIA/AIS													
	37.7	Effective date														
G 10		Manager CNS/ATM Systems - Joselito Correia de Andrade	DACAC													
10	10.6	Flight Inspection Nav-aids	MCAS													
		Inspection 2020/2021	MCAS													
<u> </u>	10.7	Inspection 2022 (Q2 2023) Postponed to 2023	MCAS													
		RFQ 2022	MCAS	21-Jan-22												
	10.7.2	Quotation 2022	MCAS	14-Feb-22												
	10.7.3	Approval (Q2 2023)	MCAS													
	10.7.4	Execution (Q2 2023)	MCAS													
	10.8	Inspection 2023	MCAS													
		RFQ	MCAS	2-Dec-22												
		Quotation	MCAS	4-Dec-22												
			MCAS	4-Dec-22												
		Approval														
<u> </u>	10.8.4		MCAS													
23	22.2	Renewal TopSky ATC Hardware	MCAS	44.5.1.22												
		Request for Proposal Hardware	MCAS	14-Feb-22												
-	23.4	Award project to Thales	MCAS	10-Mar-22												
-	23.5	Contract Signing with Thales  Approval Amendment to Contract - Software Upgrade	MCAS MCAS	20-May-22												
-		Signing Amendment to Contract Signing Amendment to Contract	MCAS	17-Jan-23												
	23.5.2	New Request for Proposal Hardware due to change in equipment	MCAS	21-Apr-22												
	23.6.1	New Request for Proposal Hardware due to Amendment contract Thales	MCAS	20-Dec-22												
	23.0.1	Validation and award Hardware purchase	MCAS	24-Jan-23												
	23.8	Purchase Order Hardware	MCAS	26-Jan-23						<del> </del>		<del> </del>	<del> </del>			
	23.9	Shipping hardware	MCAS	20 0011 20						<u> </u>		<u> </u>	<u> </u>			
	23.10	Installation	MCAS													
		SAT	MCAS													
26		Cable Management	MCAS									1	1			
	26.6	Execution Phase 3 - Organize and retrieve old cables (on hold since Oct'20)	MCAS													
	26.6.1		MCAS	31-Jan-23												
	26.7	Phase 4 - Electrical Outlets relocation and installation	MCAS													
	26.7.1	RFQ Electrical works by AAA	MCAS	1-Jul-22												
		Quotation by AAA	MCAS	1-Jul-22												
			MCAS	1-Jul-22												
	26.7.4		MCAS	8-Nov-22												
29		Upgrade Voice Communication System (VCS)	MCAS													
	29.2	Project Planning and RFP Upgrade Harris/SolaCom VCS	MCAS	21-Feb-22												
	29.3	Quotation Upgrade SolaCom VCS	MCAS	3-May-22												

29.4 29.5 29.6 29.7 29.8 29.9 29.10		2023													
29.5 29.6 29.7 29.8 29.9 29.10	PROJECT ACTIVITIES ANSA 2021/2022/2023			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
29.5 29.6 29.7 29.8 29.9 29.10		WHO?	FINALIZED												
29.5 29.6 29.7 29.8 29.9 29.10	Approval Upgrade SolaCom VCS	MCAS	7-Jun-22												
29.7 29.8 29.9 29.10		MCAS	22-Jul-22												
29.8 29.9 29.10		MCAS	22-Dec-22												
29.8 29.9 29.10		MCAS	22-Dec-22												
29.9 29.10		MCAS	16-Jan-23												
29.10		MCAS													
29.11	SAT	MCAS													
	Training	MCAS													
29.12		MCAS													
33	Robust ATS System	MCAS													
33.9		MCAS													
33.9.	1 RFQ and proposal Spares WAM/ADSB	MCAS													
	2 Approval	MCAS													
	Shipping	MCAS													
33.10		MCAS													
33.10	1 RFQ	MCAS	25-Nov-22												
_	2 Approval	MCAS	2-Feb-23												
	3 Shipping	MCAS													
33.10	4 Installation	MCAS													
33.11	New UPS & ATS for IT room ANSA	MCAS													
33.11	6 Award 2nd phase	MCAS	17-Jan-22												
33.11	7 Shipping	MCAS	24-May-22												
33.11	8 Implementation 2nd phase	MCAS	17-Jun-22												
33.17	New Batteries UPSs MEVA and Navaids	MCAS													
33.12	1 RFQ	MCAS													
33.12	2 Approval	MCAS													
33.12	3 Shipping	MCAS													
33.12	4 Installation	MCAS													
33.13	New UPS and ATS for RTS	MCAS													
33.13	1 RFQ	MCAS	3-Mar-23												
	2 Approval	MCAS													
	3 Shipping	MCAS													
33.13	4 Installation	MCAS													
33.14	Review Robust ATS System Report	MCAS													
40	Upgrade ILS/DME	MCAS													
40.6	Execution Site Survey	MCAS	29-Jan-22												
40.7	Report and Quoation for Upgrade	MCAS	22-Apr-22												
40.7.	New Quoation for Upgrade	MCAS	20-Sep-22												
40.8		MCAS	18-Oct-22												
40.9		MCAS	27-Oct-22												
	Factory activities	MCAS													
	FAT	MCAS													
40.12	11 -	MCAS													
	Installation	MCAS													
40.14	SAT - Put in Operation	MCAS													<u> </u>

PROJECT ACTIVITIES ANSA 2021/2022/2023		NOADIVIAP ANSA 2025	2023													
40.15   Flight Inspection		PROJECT ACTIVITIES ANSA 2021/2022/2023			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
46.1   Implement Collaboration Agreement with DC-ANSP			WHO?	FINALIZED												
A6.1   Install Working Group(s)		40.15 Flight Inspection	MCAS													
A6.1   Install Working Group(s)	46		MCAS													
46.3.1 Training Requirements ATC			MCAS	4-Oct-22												
66.3.1, Training Requirements ATC			MCAS													
46.3.1.1 Restreether Training ATC		46.3 Training V	//CAS/ATC/AIA	A												
46.3.2   Training Requirements AIA		46.3.1 Training Requirements ATC	MCAS/MATC	7-Dec-22												
46.3.2.1 [Restresher Training AlA		46.3.1.1 Resfresher Training ATC	MCAS/MATC													
46.3.3   Training Requirements CNS/ATM   MCAS   7-Dec-22		46.3.2 Training Requirements AIA	MCAS/MATC	7-Dec-22												
A6.3.3.1 Training Data Com and Voice Com		46.3.2.1 Resfresher Training AIA	MCAS/MATC													
46.4   MEVA Network Node Sharing		46.3.3 Training Requirements CNS/ATM	MCAS	7-Dec-22												
46.4   MEVA Network Node Sharing		46.3.3.1 Training Data Com and Voice Com	MCAS													
46.6.6   Decision making			MCAS												_	
46.5.1   Operations SOW (Q1 2024)		46.4.5 Risk analysis	MCAS/SQ	4-Oct-22												
46.5.1   Operations SOW (Q1 2024)		46.4.6 Decision making	MCAS	4-Oct-22												
46.5.2   Technical SOW (01 2024)		46.5 Interface ATM Systems	MCAS													
46.6   Joint Mission Flight Inspection Navaids		46.5.1 Operations SOW (Q1 2024)	MATC													
A6.6.1   Develop Joint RFP		46.5.2 Technical SOW (Q1 2024)	MCAS													
Solidar   Soli		46.6 Joint Mission Flight Inspection Navaids	MCAS													
So.1   RFP for Site Survey Health check VOR/DM by Thales and support for repair   MCAS   30-Sep-22		46.6.1 Develop Joint RFP	MCAS													
So.2   Receive Proposal for Site Survey and support for repair - Thales   MCAS   S-Nov-22   So.3   Approval / Award Site Survey proposal   MCAS   MCAS   S-Dec-22   So.3   Approval / Award Site Survey proposal   MCAS   MCAS   So.6   Approval   MCAS   So.7   Approval   MCAS   So.7   Approval   MCAS   So.8   Approval   MCAS   So.8   Approval   MCAS   So.8   Approval   MCAS   So.8   Approval   MCAS   So.9   Factory activities (Jan-Mar'24)   MCAS   So.9   FAT (Mar'24)   MCAS   So.10   Shipping (Apr'24)   MCAS   So.11   Installation (May'24)   MCAS   So.12   Flight Inspection (May'24)   MCAS   So.13   SAT - Put in Operation (May'24)   MCAS   So.13   SAT - Put in Operation (May'24)   MCAS   So.13   SAT - Put in Operation (May'24)   MCAS   So.14   Request For Proposal for upgrade   MCAS   So.15   Approval proposal   MCAS   So.16   So.17   Approval proposal   MCAS   So.18   So.19   So.19   Approval proposal   MCAS   So.19   So.19   So.19   Approval proposal   MCAS   So.19   So.1	50	Upgrade VOR/DME	MCAS													
So.3   Approval / Award Site Survey proposal   MCAS   8-Dec-22		50.1 RFP for Site Survey Health check VOR/DM by Thales and support for repair	MCAS	30-Sep-22												
S0.4   Execution Site Survey and support for repair   MCAS   S0.5   Report and Quoation for Upgrade phase 2   MCAS   S0.6   Approval   MCAS   S0.7   Contract Signing / Downpayment (Dec'23 - Jan'24)   MCAS   S0.8   Factory activities (Jan-Mar'24)   MCAS   S0.9   FAT (Mar'24)   MCAS   S0.9   FAT (Mar'24)   MCAS   S0.10   Shipping (Apr'24)   MCAS   S0.11   Installation (May'24)   MCAS   S0.12   Flight Inspection (May'24)   MCAS   S0.13   SAT - Put in Operation (May'24)   MCAS   S0.13   SAT - Put in Operation (May'24)   MCAS   S0.14   Request For Proposal for upgrade   MCAS   S0.15   Approval proposal   MCAS   S0.16   S0.17   Approval proposal   MCAS   S0.18   S0.19   Solidation (May'24)   MCAS   S0.19		50.2 Receive Proposal for Site Survey and support for repair - Thales	MCAS	9-Nov-22												
So.5   Report and Quoation for Upgrade phase 2   MCAS   So.6   Approval   MCAS   So.7   Contract Signing / Downpayment (Dec'23 - Jan'24)   MCAS   So.8   Factory activities (Jan-Mar'24)   MCAS   So.9   FAT (Mar'24)   MCAS   So.9   FAT (Mar'24)   MCAS   So.10   Shipping (Apr'24)   MCAS   So.11   Installation (May'24)   MCAS   So.12   Fight Inspection (May'24)   MCAS   So.13   SAT - Put in Operation (May'24)   MCAS   So.13   SAT - Put in Operation (May'24)   MCAS   So.13   Request For Proposal for upgrade   MCAS   So.14   Request For Proposal for upgrade   MCAS   So.15   Approval proposal   MCAS   So.16   So.17   Approval proposal   MCAS   So.18   So.19		50.3 Approval / Award Site Survey proposal	MCAS	8-Dec-22												
So.6   Approval   MCAS   So.7   Contract Signing / Downpayment (Dec'23 - Jan'24)   MCAS   So.8   Factory activities (Jan-Mar'24)   MCAS   So.9   FAT (Mar'24)   MCAS   So.9   FAT (Mar'24)   MCAS   So.10   Shipping (Apr'24)   MCAS   So.11   Installation (May'24)   MCAS   So.12   Flight Inspection (May'24)   MCAS   So.13   SAT - Put in Operation (May'24)   MCAS   So.13   SAT - Put in Operation (May'24)   MCAS   So.14   So.15   Flight Inspection (May'24)   MCAS   So.16   So.17   Flight Inspection (May'24)   MCAS   So.18   So.19			MCAS													
50.7   Contract Signing / Downpayment (Dec'23 - Jan'24)   MCAS		50.5 Report and Quoation for Upgrade phase 2	MCAS													
50.8         Factory activities (Jan-Mar'24)         MCAS		''	MCAS													
50.9         FAT (Mar'24)         MCAS		50.7 Contract Signing / Downpayment (Dec'23 - Jan'24)	MCAS													
50.10   Shipping (Apr'24)		50.8 Factory activities (Jan-Mar'24)	MCAS													
50.11         Installation (May'24)         MCAS         Installation (May'24)         Installation (May'24)         MCAS         Installation (May'24)         Installa																
50.12Flight Inspection (May'24)MCASImage: Control of the control of		50.10 Shipping (Apr'24)	MCAS													
50.13SAT - Put in Operation (May'24)MCAS51Upgrade RTS and Glide Path AntennasMCAS51.1Request For Proposal for upgradeMCAS51.2Proposal for upgradeMCAS51.3Approval proposalMCAS51.4Execution upgrade worksMCAS52Calibration Test EquipmentMCAS																
51Upgrade RTS and Glide Path AntennasMCAS51.1Request For Proposal for upgradeMCAS51.2Proposal for upgradeMCAS51.3Approval proposalMCAS51.4Execution upgrade worksMCAS52Calibration Test EquipmentMCAS																
51.1Request For Proposal for upgradeMCAS51.2Proposal for upgradeMCAS51.3Approval proposalMCAS51.4Execution upgrade worksMCAS52Calibration Test EquipmentMCAS																
51.2Proposal for upgradeMCAS51.3Approval proposalMCAS51.4Execution upgrade worksMCAS52Calibration Test EquipmentMCAS	51															
51.3Approval proposalMCAS51.4Execution upgrade worksMCAS52Calibration Test EquipmentMCAS																
51.4 Execution upgrade works     MCAS       52 Calibration Test Equipment     MCAS																
52 Calibration Test Equipment MCAS MCAS																
I I 52.1 [Paguest for Proposal - Calibration 2022]	52															
		52.1 Request for Proposal - Calibration 2022	MCAS													
52.1.1 Receive Proposal MCAS 27-Jan-22																
52.1.2 Award         MCAS         24-Mar-22																
52.1.3 Send 1st batch Test Equipmnt for calibration MCAS 30-Mar-22																
52.1.4 Receive 1st batch back from calibration MCAS 23-May-22																
52.1.5 Send 2nd batch Test Equipmnt for calibration MCAS 14-Jun-22		52.1.5   Send 2nd batch Test Equipmnt for calibration	MCAS	14-Jun-22												

2023																
		PROJECT ACTIVITIES ANSA 2021/2022/2023			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
			WHO?	FINALIZED												
		Receive 2nd batch back from calibration	MCAS	29-Jul-22												
	52.1.7	Send 3rd batch Test Equipmnt for calibration	MCAS	2-Aug-22												
	52.1.8	Receive 3rd batch back from calibration	MCAS	15-Sep-22												
	52.2	Request for Proposal - Calibration 2023	MCAS	23-Feb-23												
	52.2.1	Receive Proposal	MCAS													
	52.2.2	Award	MCAS													
	52.2.3	Send 1st batch Test Equipmnt for calibration	MCAS													
	52.2.4	Receive 1st batch back from calibration	MCAS													
	52.2.5	Send 2nd batch Test Equipmnt for calibration	MCAS													
	52.2.6	Receive 2nd batch back from calibration	MCAS													
	52.2.7	Send 3rd batch Test Equipmnt for calibration	MCAS													
	52.2.8	Receive 3rd batch back from calibration	MCAS													
57		Renewal MOU's for VCS and VRRS with AAA	MCAS													
	57.1	Draft MOU VCS and VRRS	MCAS	17-Jun-22												
	57.2	Send for Review AAA	MCAS	25-Jun-22												
	57.3	Receive comments AAA	MCAS	26-Jul-22												
	57.4	Sign MOU VCS and VRRS	MCAS	27-Jul-22												
58		CNS/ATM Systems - QMS	MCAS													
	58.1	Development of process flow charts	MCAS													
	58.2	Yearly assesment of documented information (Q1 2023, 2024)	MCAS													
	58.4	Develop CNS/ATM training manual	MCAS													
	58.5	Analysis and evaluation of unit related QMS activities	MCAS													
	58.5.1	Yearly evaluation (Quality objective 1 CNS/ATM Ad 2.1-2.5) (Q1 2023, 2024)	MCAS													
	58.6	Finalize revision CNS/ATM Manual (Quality objective 1 CNS/ATM Ad 2.1)	MCAS													
	58.7	TIB VCS/VRRS(Quality objective 1 CNS/ATM Ad 2.1)	MCAS													
	58.8	TIB ILS/DME (Quality objective 1 CNS/ATM Ad 2.1)	MCAS													
	58.9	TIB CVORDME (Quality objective 1 CNS/ATM Ad 2.1)	MCAS													
	58.10	TIB WAM/ADSB (Quality objective 1 CNS/ATM Ad 2.1)	MCAS													
	58.11	TIB TOPSKY ATC (Quality objective 1 CNS/ATM Ad 2.1)	MCAS													
	58.12	TIB VHF TX/RX	MCAS													
	58.13	TIB AMHS/AIS	MCAS													
	58.14	TIB ATIS (Quality objective 1 CNS/ATM Ad 2.1)	MCAS													
		TIB Supporting facilities	MCAS													
	58.16	TIB MEVA (Quality objective 1 CNS/ATM Ad 2.1)	MCAS													
	58.17	Maintenance support (Quality objective 1 CNS/ATM Ad 2.2)	MCAS	1-Jul-22												
	58.18	Critical spare parts (Quality objective 1 CNS/ATM Ad 2.3)	MCAS													
	58.19	Technical assessment VOR/DME (Quality objective 1 CNS/ATM Ad 2.4)	MCAS													
	58.20	Investment plan (Quality objective 1 CNS/ATM Ad 2.5) (Q4 2023, 2024)	MCAS	1-Dec-22												