GUIDANCE ON THE ESTABLISHMENT AND PROVISION OF AIS.

1.0 PURPOSE

This Advisory Circular (AC) provides information and guidance on the establishment and provision of an aeronautical information service (AIS) within the coverage of the territory of Uganda for which it is responsible for the provision of air traffic services (ATS).

2.0 REFERENCE

2.1. Section 35 of The Civil Aviation Authority Act, Cap. 354
2.2. Regulation 7 of The Civil Aviation (Aeronautical Information Services) Regulations, 2022
2.3. ICAO Doc 10066 – PANS AIM
2.4. ICAO Doc 9839 – Manual on the Quality Management System for Aeronautical Information Services
2.5. ICAO Doc 8126 – AIS Manual
2.6. ICAO Doc 9991 – Aeronautical Information Services Training Manual

3.0 GUIDANCE AND PROCEDURES

3.1. Background

3.1.1. The Civil Aviation Authority Act, Cap. 354 Section 35 requires the Authority to provide a service to be known as the Aeronautical Information Service, which shall comprise the collection and dissemination of aeronautical information and instructions with respect but not limited to: aerodromes; air traffic control services and facilities; communication and air navigation services and facilities; meteorological services and facilities; search and rescue services and facilities; procedures and regulatory requirements connected with air navigation; hazards to air navigation; differences from International Civil Aviation Organisation standards, recommended practices and procedures; units of measurement; nationality and registration marks; special equipment to be carried on aircraft; bird concentrations on or in the vicinity of aerodromes; prohibited or restricted airspace and danger areas; minimum flight altitudes; fees and charges; and aeronautical charts.

3.1.2. Regulation 7 of the Civil Aviation (Aeronautical Information Services) Regulations, 2022 requires the Authority to arrange for the establishment and provision of an AIS as well as specifies the Authority's responsibility for the aeronautical data and information.

3.2. Establishment of the AISP

3.2.1. Regulation 7 of the Civil Aviation (Aeronautical Information Services) Regulations, 2022 designates the Department of Aeronautical Information Management to provide aeronautical information services as the AISP.

3.2.2. As per the designation, the AISP is responsible to ensure the quality and flow of all aeronautical information necessary for the safety, regularity, and efficiency of air navigation from data origination to distribution of information.

3.3. Provision of AIS

3.3.1. The aeronautical information products and services provided shall be consistent and in compliance with the requirements of The Civil Aviation (Aeronautical Information Services) Regulations, 2022. And indicate that the aeronautical data and information are provided under the authorisation of the Authority, irrespective of the format in which they are provided.

3.3.2. The aeronautical data and information shall be available, in a form suitable for the operational requirements of the air traffic management community, aeronautical data and aeronautical information necessary for the safety, regularity and efficiency of air navigation, including:
   a) those involved in flight operations, including flight crews, flight planning and flight simulators; and
   b) air traffic services unit responsible for flight information service and the services responsible for pre-flight information.

3.3.3. The AISP shall:
   a) receive, collate or assemble, edit, format, publish or store and distribute aeronautical data and aeronautical information concerning the entire territory of Uganda;
   b) provide aeronautical data and aeronautical information as aeronautical information products;
   c) where 24-hour service is not provided, make available AIS during the whole period an aircraft is in flight in the area of responsibility of an AIS, plus a period of at least two hours before and after such a period;
   d) make available AIS at such other time as may be requested by an appropriate ground organisation;
   e) obtain aeronautical data and aeronautical information to enable it to provide pre-flight information service and to meet the need for in-flight information from the AIS of other States or other sources that may be available;
   f) clearly identify the aeronautical data and aeronautical information obtained from the AIS of other States, when distributed, as having the Authority of the originating State; and
   g) if possible, verify before distribution, aeronautical data and aeronautical information obtained from other sources other than AIS of other States, and if not verified shall, when distributed, be clearly identified as such.

3.3.4. Any aeronautical data and aeronautical information necessary for the safety, regularity or efficiency of air navigation required by other States shall be made promptly available to the AIS of other States

3.4. Organisation of AIS

3.4.1. The objective of the AIS is to ensure the flow of aeronautical data and aeronautical information necessary for the safety, regularity and efficiency of civil aviation. This is achieved through the provision of aeronautical data and aeronautical information in the form of aeronautical information products and services, in accordance with the requirements of The Civil Aviation (Aeronautical Information Services) Regulations, 2022.

3.4.2. The functions of the service provider shall include data collection, processing and distribution of data, as well as quality control of aeronautical information products and services covering the entire territory of the Uganda placing into consideration external and internal issues relevant to the provision of aeronautical products and services, including legislative requirements, technology and organizational knowledge.

3.4.3. **Modes of operation**

3.4.3.1. There are two different modes of operation based on the nature of the data and information provided, namely:

    a) aeronautical data and aeronautical information which are processed according to the aeronautical information regulation and control (AIRAC) schedule require normal business day operation;

    b) aeronautical data and aeronautical information with a requirement for immediate distribution (e.g. NOTAM) require 24/7 operation.

3.4.3.2. As the volume of the information to be provided on a 24/7 basis is limited in relation to the engaged resources, the AISP may take on additional information related tasks (e.g. ATS Reporting Office (ARO), Communications (COM)) to better utilize their 24/7 resources, as shown in Figure 1 below.
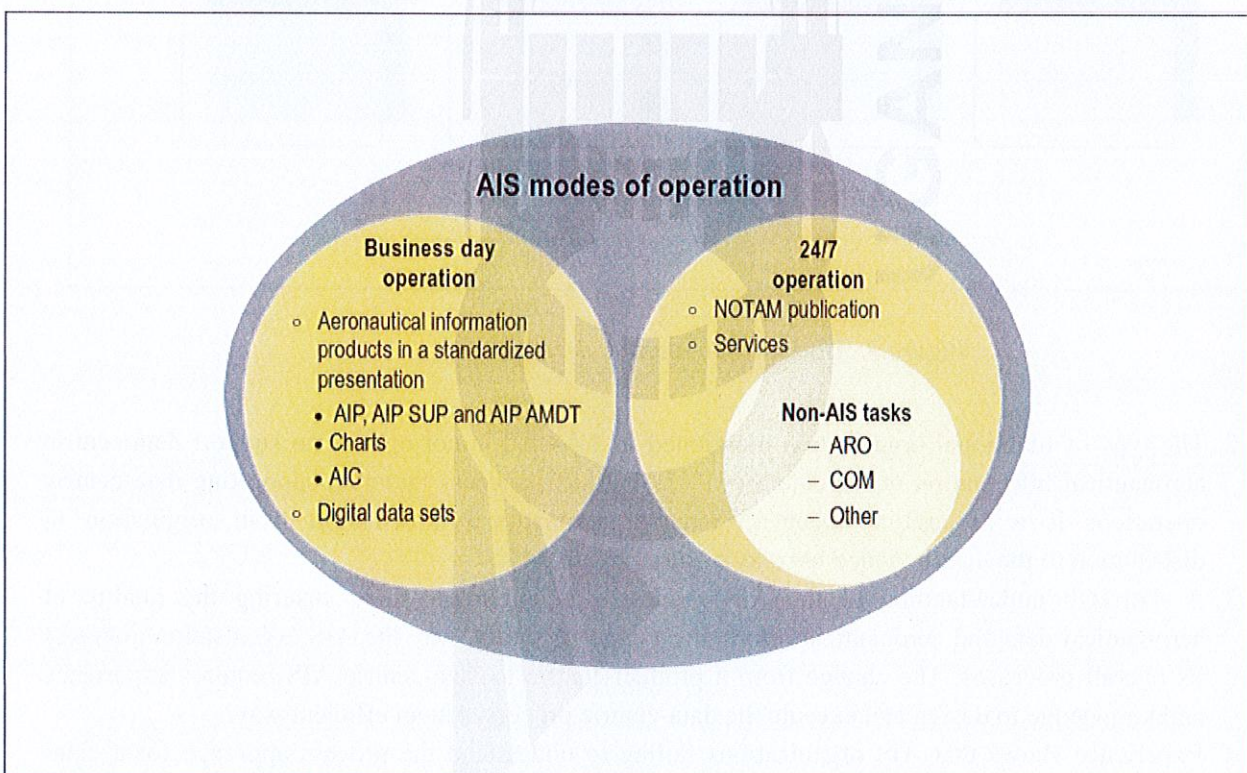

Figure 1. Modes of operation with associated AIS tasks

3.4.4. **Organisational structure**

3.4.4.1. AIS organisations have evolved over time and this has resulted in different types of AIS organisational structures depending on the assigned core AIS tasks and additional delegated tasks. The setup may be according to the following approaches:

3.4.4.2. Product-centric approach:

3.4.4.2.1. The setup may be arranged to meet the requirements for an optimised product-centric approach, e.g. with a focus on products like AIP production, aeronautical charts production, etc., as illustrated in Figure 2.
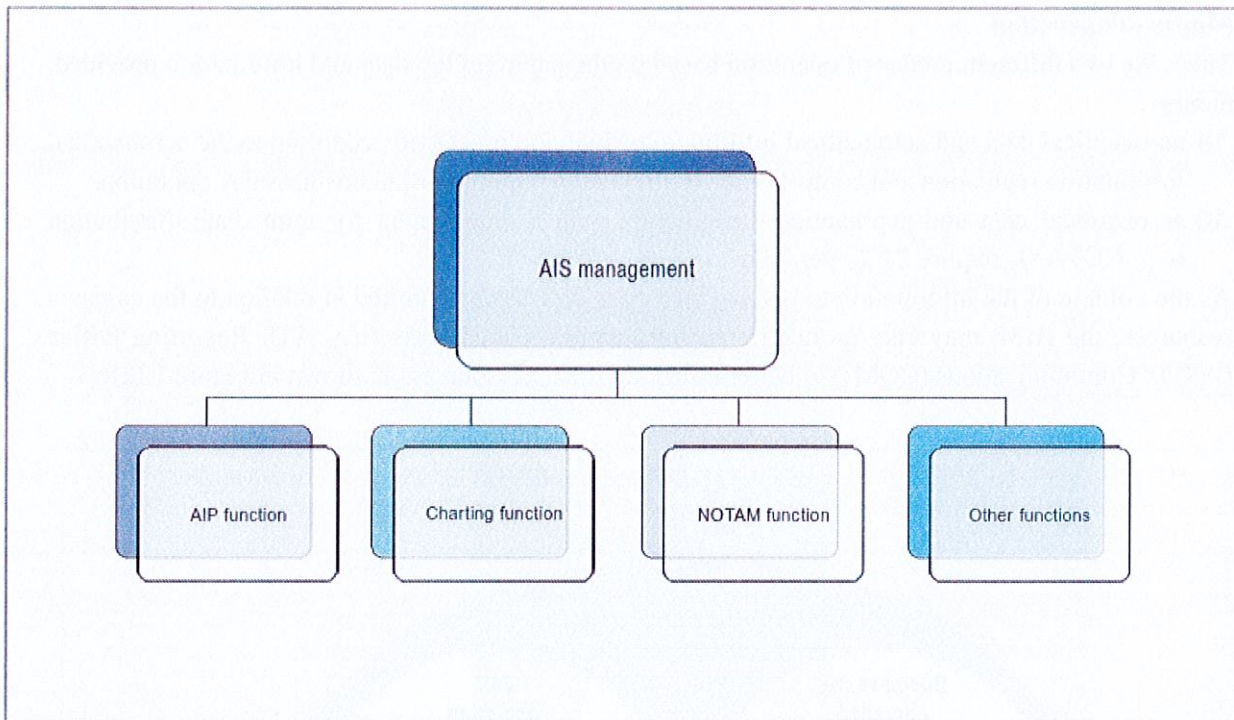

Figure 2. AIS based on a product-centric set up.

3.4.4.2.2. The type of functional organisation mentioned in 3.4.4.2.2 is not optimal to support data-centric aeronautical information management (AIM). A critical success factor in supporting data-centric operations is a process approach to manage aeronautical information from origination to distribution to the next intended user, as required by a QMS.

3.4.4.2.3. A thorough understanding of the AIS processes is important since ensuring the quality of aeronautical data and aeronautical information depends on the way the AIS organisation manages its overall processes. The change from a product-centric to data-centric AIS requires experience and knowledge to design and execute the data-centric processes in an efficient way.

3.4.4.2.4. Experience shows that AIS organizations failing to understand the process approach for a data-centric operation struggle to maintain data quality levels, which ultimately negatively impacts their performance. However, AIS organizations that establish a process-oriented culture (i.e. teamwork, readiness to change and focus on the end users) manage to perform well.

3.4.4.3. Process-oriented approach

3.4.4.3.1. A process-oriented organisational structure is designed around the end-to-end flow of different processes (as indicated in Figure 3). Unlike the strictly functional structure illustrated in Figure 2, a process-oriented structure considers not only the activities performed by AIS personnel, but also how those different activities interact with one another. A process approach does not imply that the AIS provider cannot perform other ANS tasks related to the available competencies. In such cases, the respective process owners have to be identified and coordinate with the AIS management.
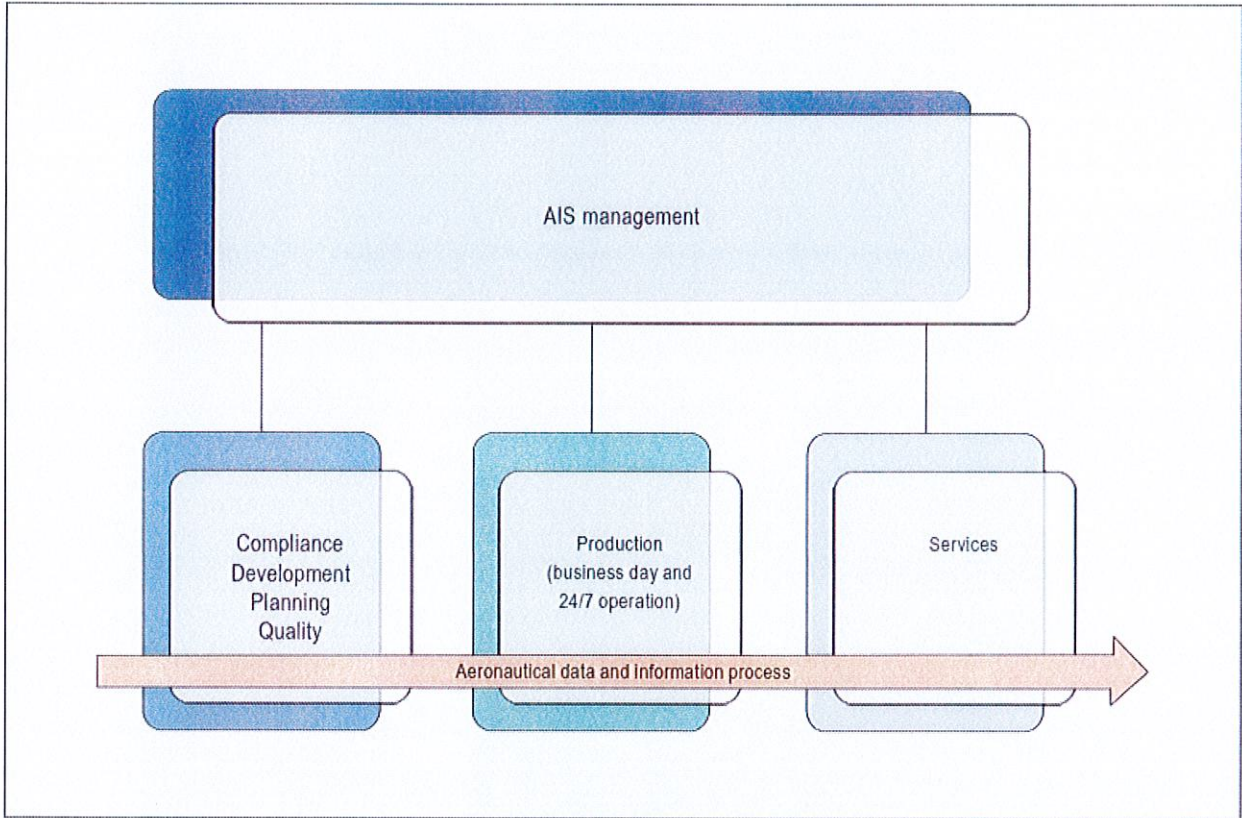
Figure 3. AIS organisation with a focus on process.

Director Safety, Security and Economic Regulation.