



Advisory Circular

UCAA-AC-AIM003
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GUIDANCE ON AIS/CARTOGRAPHY PERSONNEL ADEQUACY, COMPETENCY, EXPERIENCE AND FACILITY REQUIREMENTS.

1.0 PURPOSE

This Advisory Circular (AC) provides information and guidance to the Aeronautical Information Service Provider (AISP) and Aeronautical Cartographic Service Provider (ACSP) in the determination of technical personnel adequacy as well as the establishment and implementation of competency, experience and facility requirements to ensure the safe, regular and efficient provision of aeronautical information services (AIS) and aeronautical charts.

2.0 REFERENCE

- 2.1. Regulation 18 of The Civil Aviation (Aeronautical Information Services) Regulations, 2022
- 2.2. Regulation 6, 28 of The Civil Aviation (Certification of Air Navigation Services) Regulations, 2022
- 2.3. Regulation 19 of The Civil Aviation (Aeronautical Charts) Regulations, 2022
- 2.4. ICAO Doc 10066 – PANS AIM
- 2.5. ICAO Doc 9839 – Manual on the Quality Management System for Aeronautical Information Services
- 2.6. ICAO Doc 8126 – AIS Manual
- 2.7. ICAO Doc 7192 – Training Manual
- 2.8. ICAO Doc 9868 – ICAO Training Manual
- 2.9. ICAO Doc 9683 – Human Factors Training Manual
- 2.10. ICAO Doc 9991 – Aeronautical Information Management Training Development Manual
- 2.11. ICAO Doc 9995 – Manual on Evidence Based Training

3.0 GUIDANCE AND PROCEDURES

3.1. Background

- 3.1.1. Regulation 18 of The Civil Aviation (Aeronautical Information Services) Regulations, 2022 requires then AISP to identify the competencies and the associated knowledge, skills and abilities required for each function; put in place processes to ensure that personnel possess the competencies required to perform specific assigned functions; as well as use periodic assessments of personnel as a means to detect and correct shortfalls in knowledge, skills and abilities. Regulations 28 of The Civil Aviation (Certification of Air Navigation Services) Regulations, 2022 also requires the Air Navigation Service Provider (ANSP) to ensure that all his or her personnel

possess the requisite skills, knowledge and competences required to perform the services that he or she is applying for.

- 3.1.2. Regulation 6 of The Civil Aviation (Certification of Air Navigation Services) Regulations, 2022 similarly requires the applicant for a certificate of air navigation services to have an adequate number of personnel with the requisite competencies to provide the air navigation services applied for as well as ensure that the necessary facilities, services and equipment conform to The Civil Aviation (Certification of Air Navigation Services) Regulations, 2022 and meet the requirements set out in other applicable Civil Aviation Regulations.
- 3.1.3. The objective of the AIS and the aeronautical cartographic service is to ensure the flow of information necessary for the safety, regularity, and efficiency of air navigation. Corrupt or erroneous aeronautical data/aeronautical information can potentially affect the safety of air navigation. To satisfy the uniformity and consistency in the provision of aeronautical information required for the operational use, the AISP and ACSP must ensure high standards in recruitment and training of personnel.

3.2. Personnel Adequacy

To address the issue of personnel adequacy, the AISP and ASCP:

- 3.2.1. Should classify its functions into categories, for instance two categories: operational (production and services) and support (compliance, development, planning and quality control). Operational functions are directly related to the production of aeronautical information products and the delivery of associated services. All other functions, which are not directly related to operations, are support functions (e.g. quality management, compliance management, financial and human resources management, customer service and change management). Such functions are required for the successful performance of the organization
- 3.2.2. Should ensure that its management is responsible for determining and ensuring that sufficient resources are available to meet all applicable requirements. With the transition from AIS to AIM, it is recommended that the service provider management, in collaboration with the State, annually review the engaged resources in terms of the required competencies in the operational environment (e.g. an automated production environment may require other competencies than a non-automated environment). Furthermore, it should be determined whether the organization is sufficiently staffed to handle demand during peak periods in order to comply with AIRAC.
- 3.2.3. Should clarify before determining the resources required, whether their functions are to be performed in an integrated organization (e.g. within an ANSP) or as an autonomous organization (e.g. AIS provider detached from an ANSP). This identifies whether support functions are shared or whether autonomous support functions are needed.
- 3.2.4. Should document and determine through a mechanism (e.g. through a formula), the personnel requirements for a particular unit/section so that the numbers are sufficient and conducive to support all the services offered at each station (unit or section). These may vary from airport to airport due to varying size and complexity of the operations but should generally depend on the following factors:
 - a) the processes and level of automation applied for providing the aeronautical information products and services
 - b) the number of tasks related to processes that are performed during business hours, and those requiring 24/7 availability (Hours of service/watch)
 - c) peak production requirements to comply with AIRAC for aeronautical information products or timeliness requirements (e.g. NOTAMs)

- d) availability of personnel (e.g. personnel on leave, annual training, retirement)
- e) contingency considerations
- f) The volume of aircraft operations
- g) The extent to which the service provider provides civil aviation facilities
- h) Amount of information to be processed (scope)
- i) Level of operational procedures and requirements to be implemented
- j) Any other factors that may be considered relevant.

3.3. Competency

- 3.3.1. Competency is a range of capabilities (knowledge, skills, and abilities) that enable one to carry out a specific activity or achieve a function to an agreed standard or requirement. Often people refer to an individual's knowledge, skills, and abilities as the attributes required to perform a job. They are generally demonstrated through qualifying service, education, or training. More specifically, knowledge is generally considered as information that is applied directly to the performance of a function, while skill is an observable competence to perform a task. Ability on the other hand is the competence to perform an observable behaviour or a behaviour that results in an observable outcome.
- 3.3.2. Competencies are generally behaviours that can be observed as individuals perform their work and can be measured against their performance. These competencies are the applied knowledge, skills and abilities that enable an individual to perform a job. Therefore, individuals who have and use the appropriate competencies will achieve the requirements of the job as evidenced by their performance. A competency statement for a job description should consist of the following: Action verb (observable or measurable activity related to the job); Content (subject matter, type of performance, specific task); and Context (limitations or conditions) for example.
- 3.3.3. Competency is a consistent dimension of human performance that is used to reliably predict successful performance on the job. Competency is manifested and observed through behaviours that mobilize the relevant knowledge, skills, and attitudes (KSAs) to carry out activities or tasks under specified conditions. A person successfully achieves a competency if its associated standard is met. Competencies allow people to formulate solutions for complex and difficult situations, including situations that are experienced for the first time.
- 3.3.4. Competence can only be observed through performance. However, it is not possible to directly observe all the different behaviours which contribute to competence, especially the cognitive skills; instead, they are inferred from observations of the trainee performing the tasks. After repeatedly observing the trainee consistently achieving a desired outcome, it is reasonable for the assessor to assume that the competencies have been acquired.
- 3.3.5. The AISP and ACSP when determining the scope and depth of KSAs required, should carry out an analysis of the duties and tasks to be performed to ascertain the requisite training and experience for effective execution of duties.
- 3.3.6. The service provider shall:
- a) Only deploy technical personnel who have undergone the requisite training/on-job-training (OJT) and have been duly designated as competent in the respective disciplines that they shall be offering the services.
 - b) Ensure that initial and periodic assessments are established that require personnel to demonstrate the required continuous competence (i.e., the knowledge, skills and attitudes) necessary to provide the services.

3.4. Experience

3.4.1. The AISP and ACSP should determine and document in the operations manual the pre-requisite experience requirements of each individual role that participates in the provision of AIS and aeronautical charts. .

3.5. Facilities and Equipment

3.5.1. The service provider should determine and document the minimum facilities and equipment required for the operational office(s)/station(s) in the operations manual in addition to the basic office furniture and stationery. These facilities and equipment may be categorised for each office/section/unit.

3.5.2. The AISP and ACSP should endeavour to avail working tools that will facilitate effective and efficient delivery of services.



Director Safety, Security and Economic Regulation