

MOZAMBIQUE CIVIL AVIATION TECHNICAL STANDARDS



PART 141 MOZ-CATS-ATO AVIATION TRAINING ORGANIZATIONS



APPROVAL

By Powers granted to the Chairman and CEO of the Instituto de Aviação Civil de Moçambique (IACM) through, n.º 2, Article 15 of Civil Aviation Law n.º5/2016 of 14 of June, this amendment of the Technical Standards (MOZCATS Part 141) is hereby approved and published for implementation, from the day of approval.

Comments and recommendations for revision/amendment action to this publication should be forwarded to the head of Legal Office of Instituto de Aviação Civil de Moçambique.

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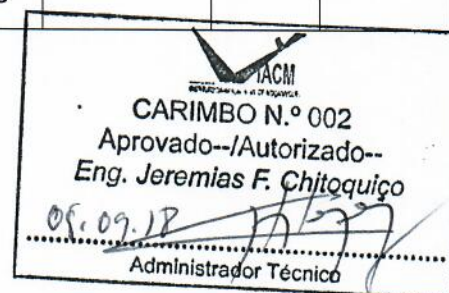
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The Chairman and Chief Executive Officer

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141.03.2	48 of 49	2 ND Edition	0	Aug. 2018				
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MOZAMBIQUE CIVIL AVIATION TECHNICAL STANDARDS: CATS RELATING TO AVIATION TRAINING ORGANIZATIONS

1. GENERAL

Article 15(2) of Civil Aviation LAW NO.5/2016 empowers the Director for Civil Aviation to issue technical standards for civil aviation on the matters, which are prescribed by regulation.

2. PURPOSE

Document MOZ-CATS-ATO contains the standards, rules, requirements, methods, specifications, characteristics and procedures, which are applicable in respect of aviation training organizations.

Each reference to a technical standard in this document, is a reference to the corresponding regulation in the Mozambique Civil Aviation Regulations, 2011 for example, technical standard 141.01.3 Refers to regulation 3 of Subpart 01 of Part 141 of the Regulations.

The abbreviation “MOZCAR” is used throughout this document when referring to any regulation. The abbreviation “MOZCATS” refers to any technical standard.

3. SCHEDULES AND NOTES

Guidelines and recommendations in support of any particular technical standard are contained in schedules to, and/or notes inserted throughout the technical standards.

Standard	Details	Page No:
141.01.2	APPROVAL OF AVIATION TRAINING ORGANIZATION.....	8
1.0	Definitions	8
2.0	REQUIREMENTS FOR APPROVAL.....	8
141.02.2	MANUAL OF PROCEDURE	9
1.0	Requirements for MOP	9
2.0	Information to be contained in Training and Procedures Manual:	10
	(Training Manual)	10
3.0	Information to be contained in Training and Procedures Manual:.....	15
	(Procedures Manual)	15
141.02.3	QUALITY ASSURANCE SYSTEM.....	18
1.	Objective of a quality assurance system	18
2.0	Elements of a quality assurance system.....	19
3.0	Quality policy and strategy.....	19
4.0	Quality manager	20
5.0	Quality assurance	20
6.0	Quality system for the ATO	21
7.0	Organizational risk profile.....	22
8.0	Risk management plan	22
9.0	Coherence matrix	23
10.0	Corrective and preventive action reports.....	23
11.0	Quality-related documentation	24
12.0	Quality assurance audit programme	24
13.0	Quality inspection	24
14.0	Quality audits	25
15.0	The various techniques that make up an effective audit are:	25
16.0	Auditors.....	25
17.0	Auditor's independence.....	26
18.0	Audit scheduling	26
19.0	Monitoring and corrective action	27
20.0	Continuous improvement process	27
21.0	Management review and analysis.....	28
22.0	Recording	29
23.0	QA responsibility for satellite ATOs.....	29
24.0	QA training.....	29
141.02.4	TRAINING PROGRAMME EVALUATION.....	33
1.0	Requirements for training programme evaluation	33
2.0	Training standards	33

3.0	Training Programme Approval Process	34
141.02.5	PERSONNEL REQUIREMENTS	35
1.0	Staffing Requirements	35
2.0	The duties and qualifications of training of instruction staff	36
141.02.6	FACILITIES, EQUIPMENT, AND MATERIAL.....	39
1.0	General Requirements	39
2.0	Facilities Required for Flight Crew Training.....	39
3.0	Facilities Required for Technician Training.....	42
4.0	Facilities Required for Air Traffic Control Training	43
5.0	Facilities Required for Flight Operations Officers or Cabin Crewmember Training	45
141.02.7	APPLICATION FOR APPROVAL OR AMENDMENT THEREOF.....	46
141.02.13	RENEWAL OF APPROVAL	47
141.03.2	APPLICATION FOR APPROVAL (Temporary).....	48
141.03.3	ISSUING OF APPROVAL (Temporary).....	49

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(4)			
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(6)			
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141.01.2 APPROVAL OF AVIATION TRAINING ORGANIZATION

1.0 Definitions

- 1.1 The following definitions pertain to the terminology used when approving aviation training organizations:

Policy. Document containing the organization's position or stance regarding a specific issue.

Procedure –a way of documenting a process.

Process. Set of interrelated or interacted activities which transform inputs into outputs.

Quality. The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.

Quality of training. The outcome of the training that meets stated or implied needs within the framework of set standards.

Quality assurance. All those planned and systematic actions necessary to provide adequate confidence that all training activities satisfy given standards and requirements, including the ones specified by the approved training organization in relevant manuals.

Quality manual. The document containing the relevant information pertaining to the approved training organization's Quality Assurance System.

Quality audit. A systematic and independent examination to determine whether quality activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives.

Quality inspection An inspection to observe a particular event/action/document etc., in order to verify whether established training procedures and requirements are followed during the accomplishment of that event and whether the required standard is achieved.

2.0 REQUIREMENTS FOR APPROVAL

- 2.1 The application for approval of a training organization, including approval of the foreign training organization, shall be made in a form and in a manner prescribed by IACM.
- 2.2 The issuance of an approval for a training organization and the continued validity of the approval shall depend upon the training organization being in compliance with the requirements of the MOZCAR141, these Technical Standards and requirements prescribed by IACM.
- 2.3 The approval document shall contain at least the following:
 - a) organization's name and location;
 - b) date of issue and period of validity (where appropriate);
 - c) terms of approval.

141.02.2 MANUAL OF PROCEDURE

1.0 Requirements for MOP

- 1.1 The Manual of Procedures required under MOZCAR 141.02.2 is the Training and Procedures Manual (TPM) issued by the approved training organization describing policies and procedures the training organization will conduct its activities to meet the requirements of the MOZCARs/MOZCATS and those prescribed by IACM.

Each applicant for, or holder of, an ATO certificate shall prepare and maintain a Training and Procedures Manual containing information and instructions to enable staff to perform their duties and to give guidance to students on how to comply with course requirements.
- 1.2 The Training and Procedures Manual may be issued in different volumes or may be combined.
- 1.3 The ATO shall ensure that the Training and Procedures Manual are amended as necessary to keep the information contained therein up to date.
- 1.4 Copies of all amendments to the Training and Procedures Manual shall be furnished promptly by the ATO to all organizations or persons to whom the manual has been issued.

- 1.5** The training and Procedures Manual, and any amendments there to, is required by MOZCAR 141.02.2 to be approved by the IACM.

2.0 Information to be contained in Training and Procedures Manual:

(Training Manual)

- 2.1** The information referred to in MOZCAR 141.02.2(1)(b), which must be contained in the Manual of the applicant, must include at a minimum the information stated in this standard.

- 2.2** A statement signed by the accountable manager confirming that the manual define the organization and demonstrate its means and methods for ensuring ongoing compliance with Part 141 and its associated technical standards; and will be complied with at all times.

2.3 General

- 2.3.1** The Training Manual for approved training courses shall include the following:

- (a) a list and description of all volumes in the training manual;
- (b) a list of effective pages and revision pages;
- (c) corporate Commitment statement;
- (d) a list of Management Staff;
- (e) responsibilities and qualifications of Management staff;
- (f) the organization Chart;
- (g) a description of facilities, equipment and data;
- (h) the type of approved training courses and the capability lists;
- (i) amendment of Training Manual;
- (j) number of instructors; and
- (k) notification procedure to Authority

2.4 Pilot Training

- 2.4.1** The Training Manual for use at an ATO conducting approved training courses for pilots shall include the following:

- (a) the Training Plan:
 - (i) aim of the course;

- (ii) a statement of what the student is expected to do as a result of the training, the level of performance, and the training constraints to be observed;
- (iii) Pre-entry requirements: Minimum age, educational requirements including language, and medical requirements;
- (iv) Credits for previous experience: to be obtained from the Authority before training begins;
- (v) **Training Curricula:** The single engine flying curriculum, the multi-engine flying curriculum, the synthetic flight training curriculum and the theoretical knowledge training curriculum;
- (vi) The time scale and scale in weeks: for each curriculum: arrangements of the course and the integration of curricula time;
- (vii) **Training program:** The general arrangements of daily and weekly programs for flying, ground and synthetic flight training; bad weather constraints; program constraints in terms of maximum student training times (flying, theoretical knowledge, synthetic) e.g. per day or week or month; restrictions in respect of duty periods for students; duration of dual and solo flights at various stages; maximum flying hours in any day or night; maximum number of training flights in any day or night and minimum rest period between duty period for students;
- (viii) **Training records:** Rules for security of records and documents; attendance records; the form of training records to be kept; persons responsible for checking records and students' log books; the nature and frequency of records checks; standardization of entries in training records and rules concerning log book entries;
- (ix) **Safety training:** Individual responsibilities; essential exercises; frequency of emergency drills; frequency of dual checks at various stages and requirement before first solo day or night or navigation;
- (x) Checks and tests;
- (xi) **Flying:** Progress checks and skill tests. Knowledge: Progress tests and knowledge tests. Authorization for test. Rules concerning refresher training before retest. Test reports and records. Procedures for test paper preparation, type of question

and assessment, standard required for 'Pass'. Procedure for question analysis and review and for raising replacement papers;

- (xii) **Test reset procedures;**
- (xiii) Training effectiveness: Individual responsibilities; General Assessment; liaison between departments; Identification of unsatisfactory progress individual students; actions to correct unsatisfactory progress; procedure for changing instructors; maximum number of instructor changes per student; internal feedback system for detecting training deficiencies; procedure for suspending a student from training; discipline and reporting and documentation;
- (xiv) Standards and level of performance at various stages:
 - (a) Individual responsibilities; Standardization; Standardization requirements and procedures; Application of test criteria.
 - (b) Briefing and air exercises:
 - (i) Air exercise: A detailed statement of the content specification of all the air exercises to be taught, arranged in the sequence to be flown with main and sub-titles;
 - (ii) Air exercise reference list: An abbreviated list of the exercises referred to paragraph (i) giving only main and sub-titles for quick reference, and preferably in flip-card form to facilitate daily use by instructors;
 - (iii) Course structure – Phase of training: A statement of how the course will be divided into phases, indication of how the air exercises referred to in paragraph (ii) will be divided between the phases and how they will be arranged to ensure that they are completed in the most suitable learning sequence and that essential emergency exercises are repeated at the correct frequency. Also, the curriculum hours for each phase and for groups of exercises within each phase shall be stated and when progress tests are to be conducted, etc.
 - (iv) Course structure integration of curricula: The manner in which theoretical knowledge, synthetic flight training and flying training will be integrated so that as the flying training exercises are carried out students will be able to apply the knowledge gained from the associated theoretical knowledge instruction and synthetic flight training;
 - (v) Student progress: The requirement for student progress including a brief but specific statement of what a student is expected to be able to do and the standard of proficiency the student must achieve before progressing from one phase of air exercise training to the next. Include minimum experience requirements in terms of hours, satisfactory exercise completion, as necessary before significant exercises, such as night flying;
 - (vi) Instructional methods: The requirements, particularly in respect of pre and post-flying briefing, adherence to curricula and training specifications and authorization of solo flights;

- (vii) Progress tests: The instructions given to examining staff in respect of the conduct and document of all progress tests;
- (viii) Glossary of terms: Definition of significant terms as necessary;
- (ix) Appendices: Samples of: Progress report forms, progress test report forms, skill test report forms, certificates of experience, competence, etc. as required, issued by an ATO
- (c) Synthetic flight training: Structure generally as in (b); and
- (d) Knowledge instruction: Structure generally as in (b) with a training specification and objectives for each subject. Individual lesson plans to include mention of the specific training aids available for use.

2.5 Training other than for Pilots

2.5.1 The Training Manual for use by an ATO conducting approved training courses other than pilots training shall include the following:

- (a) the Course Plan:
 - (i) the objectives and learning outcomes;
 - (ii) pre-entry requirements: Minimum age, educational requirements including language, and medical requirements as applicable for training sought;
 - (iii) a list showing each subject and the topics covered in the subject;
 - (iv) a description of the examination or assessment methods and the examination or assessment criteria;
- (b) a description of:
 - (i) methods in which training is conducted (for example: lecture, computer-based training, simulators or practical training);
 - (ii) available equipment and data necessary for training;
 - (iii) a description of the facilities including classroom, laboratory and workshop necessary to deliver the training;
 - (iv) a list showing the prerequisites, if any, for each subject;
 - (v) credits for previous experience: to be obtained from the Authority before training begins;
 - (vi) a statement showing the number of hours of training that are necessary for each topic and for the whole course;
 - (vii) the minimum and maximum student attendance requirements for each subject and description of the way in which students' attendance is checked and recorded;

- (viii) for each subject, a copy of:
 - (aa) the course notes that are to be given to student; and
 - (bb) any examination paper or examinations question bank that is to be used;
 - (ix) a list showing the units of competency that must be completed for each course
- (c) Training:
- (i) organisation of courses and course schedules
 - (ii) preparation of courses material
 - (iii) preparation of classroom equipment
 - (iv) preparation of workshops, simulation media and equipment
 - (v) method of conducting knowledge and practical training
 - (vi) retention of Records of Training conducted
 - (vii) rules for security of records and documents; attendance records; the form of training records to be kept; persons responsible for checking records and students' log books; the nature and frequency of records checks; and standardization of entries in training records;
- (d) use of locations other than location for which the ATO is approved
- (viii) conduct of basic practical training
 - (ix) organization of courses and course schedules
 - (x) preparation of courses material
 - (xi) preparation of classroom equipment
- (e) Examinations
- (i) organization and conduct of Examinations
 - (ii) security of Examination Materials
 - (iii) preparation of Examination Rooms
 - (iv) marking and record of Examinations
 - (v) storage and retention of Examination records
 - (vi) Examination or assessment at satellite locations
 - (vii) preparation, Control and Issue of training course records
 - (viii) storage of course material and equipment
 - (ix) prevention, Investigation and reporting of examination or assessment misconduct.

- (f) Certification
 - (i) course transcript;
 - (ii) certificates

3.0 Information to be contained in Training and Procedures Manual:

(Procedures Manual)

3.1 General

3.1.1 The Procedures Manual for approved training courses shall include the following:

- (a) a list and description of all volumes in the procedure manual;
- (b) a list of effective pages and revision pages; (c) corporate Commitment statement;
- (c) a list of Management Staff;
- (d) responsibilities and qualifications of Management staff;
- (e) organisation Chart;
- (f) description of facilities, equipment and data;
- (g) type of approved training courses and the capability lists;
- (h) amendment of Procedures Manual and Training Manual;
- (i) number of instructors;
- (j) notification Procedure to Authority; and
- (k) a list and description of all volumes in the procedure manual.

3.2 Pilot Training

3.2.1 Pilot Training

- (a) a list and description of all volumes in the Procedures Manual; (b) administration (function and management);
- (b) schedules of responsibilities for all management and administrative staff;
- (c) student discipline and disciplinary action.
- (d) approval/authorization of flights;
- (e) preparation of flying programme (restriction of numbers of aircraft in poor weather);
- (f) control of training aircraft;

- (g) responsibilities of pilot-in-command;
- (h) carriage of passengers;
- (i) aircraft documentation ;
- (j) retention of documents;
- (k) flight crew qualification records,;
- (l) renewal of licences and medical certificates;
- (m) flying duty period and flight time limitations for flying instructors;
- (n) flying duty period and flight time limitations for students;
- (o) rest periods for flying instructors;
- (p) rest periods for students;
- (q) pilots' log books;
- (r) flight planning; and
- (s) safety covering general: equipment, radio listening watch, hazards, accidents and incidents (including reports) and safety pilots;

3.2.2 **Technical**

- (a) aircraft descriptive notes;
- (b) aircraft handling (including checklists, limitations, aircraft maintenance and technical logs, in accordance with relevant requirements, etc.);
- (c) emergency procedures;
- (d) radio and radio navigation aids;
- (e) Minimum equipment list (MEL); and
- (f) Configuration deviation list (CDL);
- (g) aircraft descriptive notes;

3.2.3 **Route**

- (a) performance (legislation, take-off, route, landing, etc.);
- (b) flight planning (fuel, oil, minimum safe altitude, navigation equipment, etc.);
- (c) loading (loadsheets, mass, balance, limitations);
- (d) weather minima (flying instructors);
- (e) weather minima (students: at various stages of training); and
- (f) training routes/areas.

3.2.4 **Staff training**

- (a) appointments of persons responsible for standards or competence of flying staff;

- (b) initial training;
- (c) refresher training;
- (d) standardization training;
- (e) proficiency checks;
- (f) upgrading training; and
- (g) Staff standards evaluation

3.2.5 Quality Management System

- (a) the procedure for quality control of training;
- (b) the procedures used to audit examination and competency assessment system;
- (c) the procedures used to analyse the results of any examination or assessment;
- (d) the procedures used to rectify deficiencies identified by analysis in (iii);
- (e) the procedure used for conducting periodic reviews including information on review timetable;
- (f) the procedure for maintenance of instructors' skills and qualifications;
- (g) the procedure used for recording instructors' qualification;
- (h) the procedures to assess compliance and adequacy of the procedures

3.3 Training other than for Pilots

3.3.1 Training other than for Pilots

- (a) Training and Examination Procedures
- (b) courses organization procedures;
- (c) the procedures used to develop or acquire documents for Training and Examinations;
- (d) the procedures used to prepare and use of equipment for theory and basic practical training;
- (e) the procedures for conducting knowledge and practical training;
- (f) training record storage and retention procedures;
- (g) procedures for conducting examinations and practical skill assessments;
- (h) procedures for marking of examinations and recording
- (i) the results;
- (j) procedures for storage of examination records;
- (k) the procedures for storage of course material and equipment used for instruction;
- (l) procedures to prevent, investigate and report to Authority any examination or assessment misconduct.

3.3.2 Quality Management System

- (a) the procedure for quality control of training;
- (b) the procedures used to audit examination and competency assessment system;
- (c) the procedures used to analyse the results of any examination or assessment;
- (d) the procedures used to rectify deficiencies identified by analysis in (c);
- (e) the procedure used for conducting periodic reviews including information on review timetable;
- (f) the procedure for maintenance of instructors' skills and qualifications;
- (g) the procedure used for recording instructors' qualification;
- (h) the procedures to assess compliance and adequacy of the procedures

3.3.3 Appendices

- (a) samples of documents and forms used;
- (b) syllabus of each training course

3.3.4 Staff training

- (a) appointments of persons responsible for standards or competence of training staff;
- (b) initial training;
- (c) refresher training;
- (d) standardization training;
- (e) proficiency checks;
- (f) upgrading training; and
- (g) Staff standards evaluation

141.02.3 QUALITY ASSURANCE SYSTEM

In order to show compliance with MOZCAR 141.03.2, an ATO should establish its quality assurance and quality system in accordance with the instruction and information contained in this Technical Standards.

1. Objective of a quality assurance system

- 1.1 The objective of a quality assurance system is to ensure the achievement of results that conforms to the standards set out in the training organization's manuals and in requirements and documents issued by IACM, thus promoting continual improvement of the quality of training provided.

- 1.2 The basis for quality is to establish standards, to plan activities and document procedures to support such standards, to train the personnel involved before implementing the documented procedures, and to measure the outcomes of the activities to ensure that they meet standards and expected results.
- 1.3 If any non-conformities are found, corrective actions are taken to improve processes and procedures.

2.0 Elements of a quality assurance system

- 2.1 In a quality assurance system of an ATO, the following elements should be clearly identifiable:
 - (i) organization's training policy;
 - (ii) training and flight safety standards;
 - (iii) allocation of responsibility;
 - (iv) resources, organization and operational processes;
 - (v) system to ensure conformance of training with the policy and flight safety standards;
 - (vi) system for identifying deviations from policy and standards and taking corrective action; and
 - (vii) evaluation and analysis of experiences and trends concerning policy, training and flight safety standards, in order to provide feedback into the system for the continual improvement of the quality of training.

3.0 Quality policy and strategy

- 3.1 The ATO shall describe how the organisation formulates, deploys, and reviews its policy and strategy and turns them into plans and actions applicable to all levels of the organisation. A formal written quality policy statement should be prepared, establishing a commitment by the accountable manager of the training organisation to achieving and maintaining the highest possible standards in quality. The quality policy should reflect the achievement and continued compliance with all applicable MOZCARs and any additional standards specified by the ATO.
- 3.2 The accountable manager of the training organisation will have the overall responsibility for the standard in quality including the frequency, format, and structure of the internal management review and analysis activities and may delegate the responsibility for the tasks defined under paragraph 4 of this MOZCAT to a quality manager. Depending on the size and scope of the

organisation and the requirements of IACM, the accountable manager and quality manager may interact in different ways as illustrated in the organisational charts indicated below in Figures 1 to 3.

4.0 Quality manager

- 4.1 The primary role of the quality manager is to verify, by monitoring activities in the field of training, that the standards as established by the ATO and any additional requirements of IACM are being carried out properly.
- 4.2 The quality manager should be responsible for ensuring that the quality system is properly documented, implemented, maintained, and continuously reviewed and improved.
- 4.3 The quality manager should:
 - (a) Report directly to the Head of Training (see Note); and
 - (b) Have unencumbered access to all parts of the ATO.

Note: When the Head of Training is not the accountable manager, reporting mechanisms should be instituted to ensure that the accountable manager is aware of all issues impacting the quality of the training services being provided by the affected ATO (see Figure 2 below).

- 4.4 The quality manager should be responsible for ensuring that personnel training related to the quality system is conducted.

5.0 Quality assurance

- 5.1 The term quality assurance is frequently misunderstood to mean the testing and checking of products and services. Organisations that only do checking and testing activities are merely applying 'quality control' measures, which are designed to catch product and service defects, but not necessarily prevent them. For example, an ATO that administers exams at the end of the training syllabus, only to discover that a large proportion of the students have failed to meet the required standard, has only identified a deficiency in expected results. The implication would be that there could be a problem with the training programme, or the instructor, or even the student selection criteria. In this instance, the ATO has no idea what the real problem is or what to do about it. Quality control, by itself, provides limited value without the suite of complementary activities that comprise QA.
- 5.2 QA, on the other hand, attempts to improve and stabilise the training process to identify and avoid, or at least minimise, issues that lead to problems in the first place. It continuously verifies that standards are adhered to throughout the training process by introducing various checkpoints and controls. It further introduces a system of audits to ensure that documented policies, processes,

and procedures are consistently followed. It is the ‘assurance’ part of quality management.

5.3 A QA plan for an ATO should encompass well-designed and documented policies, processes, and procedures for at least the following activities:

- (a) Monitoring training services and process controls;
- (b) Monitoring assessment and testing methods;
- (c) Monitoring personnel qualifications and training;
- (d) Monitoring training devices and equipment qualification, calibration, and functionality, as applicable;
- (e) Conducting internal and external audits;
- (f) Developing, implementing, and monitoring corrective and preventive actions and associated reporting systems; and
- (g) Utilising appropriate statistical analysis to identify and respond appropriately to trends.

5.4 An effective QA plan will aid significantly in the ATO’s compliance with requirements, its conformity with the standards, and the adequacy of its training activities. Taking the ATO’s performance to a higher level requires a structure that ensures that the combined QA effort of the employees reaches its full potential.

Note: Annex 1 only requires ATOs to establish and implement QA policies, processes, and procedures acceptable to the Licensing Authority granting the approval, which ensures that training and instructional practices comply with all relevant requirements.

5.5 QA plans by themselves are subject to breakdowns in human performance and therefore are in need of robust organisational structures that underpin the QA efforts of individuals. It is for this reason that ATOs and States should embrace the quality system governance model described in this Technical Circular.

6.0 Quality system for the ATO

6.1 A quality system is the aggregate of all the organisation’s activities, plans, policies, processes, procedures, resources, incentives, and infrastructure working in unison towards a total quality management approach. It requires an organisational construct complete with policies, processes, procedures, and resources that underpins a commitment to achieve excellence in product and service delivery through the implementation of best practices in quality management.

6.2 An ATO that supports its QA plan with a well-designed, implemented, and maintained quality system structure should be able to easily and repeatedly achieve results that exceed both the requirements of the applicable national regulations and the expectations of the ATO’s clients.

6.3 The basic attributes of an effective quality system should include, but are not necessarily limited to:

- (a) A managerial structure that facilitates and encourages clear and unencumbered access to the decision makers;
- (b) An overarching company commitment to achieving excellence in training service delivery rather than meeting minimum requirements;
- (c) Quality policies, processes, and procedures that are well-designed, consistently applied, and subject to formalised review and refinement processes;
- (d) An employee training plan that instils and promotes best practices in quality management efforts;
- (e) An organizational risk profile and corresponding risk management plan, which together provide a comprehensive list of hazards that are tied to the ATO's activities and establish mitigating measures to effectively manage those risks, which threaten the achievement of desired standards of performance; and
- (f) A strategic review of policies and procedures, which measures the organization's current assumptions, objectives, and plans by applying a relevance test matched to evolving trends in the industry or changes occurring within the ATO.

7.0 Organizational risk profile

7.1 An organizational risk profile is an inventory of identified hazards and threats that present risks which are likely to prevent conformity with the required standards of performance. This 'threat to quality' list is normally derived by first establishing a directory of those activities that routinely take place in order to deliver and administer a training programme. Once complete, the activity directory is then expanded to identify the hazards and threats associated with each individual activity. Some examples of routine activities that should be examined during this process are:

- (i) Selection and training of staff;
- (ii) Training programme development, validation, and review;
- (iii) Development and maintenance of training courseware;
- (iv) Administrative staff duties in support of the training programme; instructors and evaluators, and students;
- (v) Delivery of training;
- (vi) Record keeping;
- (vii) Assessment and examination processes; and
- (viii) Client and Authority feedback.

7.2 The risks identified through this exercise should not be limited to just those which currently exist, but should also include those potential risks that could arise from a change to existing circumstances or conditions.

8.0 Risk management plan

- 8.1 A risk management plan is designed to mitigate the identified risks, real or potential, which were derived from the organizational risk profile exercise. The plan's objective is not to eliminate risk so much as it is to effectively manage risk by putting in place risk-controlling measures.
- 8.2 A well-developed and implemented risk management plan will substantially aid in accurately scoping out the depth and frequency of planned QA-related activities.
- 8.3 The plan should be subject to the management review process outlined in paragraph 4.3(f) of this Technical Circular.
- 8.4 The current risk management plan should be readily accessible to all employees so that it can be accurately followed and open to comment for improvement.

9.0 Coherence matrix

- 9.1 A coherence matrix, sometimes known as a correspondence matrix, is a very powerful addition to the ATO's compliance efforts. It is a detailed tabulated document that lists all the applicable regulatory requirements imposed on the ATO. Beside each listed provision there should be at least two descriptive elements that identify:
 - (a) The existing process(es) that is (are) designed to ensure continuous compliance with that specific regulatory rule or standard; and
 - (b) The individual managerial position responsible for the effective implementation of each process.
- 9.2 The coherence matrix should indicate the next intended and most recently completed audits designed to validate the functionality of each of the identified processes. Any recent audit findings should be listed in the matrix or referred to as being documented in a separate 'register of findings.' The coherence matrix is developed and managed by the quality manager and is subject to the management review process.
- 9.3 The current coherence matrix should be readily accessible to all employees so that it can be accurately followed and open to comment for improvement

10.0 Corrective and preventive action reports

- 10.1 Quality assurance plans should include a well-structured reporting system to ensure that suggestions by ATO personnel for both corrective and preventive actions are recorded and promptly addressed. Paragraph 3.3(f) of this Appendix identifies this as a necessary component of QA.
- 10.2 After an analysis of the reports submitted, the reporting system should specify who is required to rectify a discrepancy and/or nonconformity in each particular case and the procedure to be followed if corrective action is not completed

within an appropriate timescale. Just as important, the reporting system should identify who is required to investigate and act upon any report identifying measures that could prevent a nonconformity from occurring.

- 10.3 Corrective and preventive action reports should be able to be submitted anonymously, if individuals so choose, to maximize the opportunity for open and effective reporting.

Note: Since corrective and preventive action reports, in this instance, represent suggestions for improvement in conformity levels and deal with quality issues, this reporting system and its processes should be managed by the quality manager.

11.0 Quality-related documentation

- 11.1 Relevant documentation includes part(s) of the Training and Procedures Manual, which may be included in a separate Quality Manual.

- 11.2 In addition, the relevant documentation should include the following:

- (a) Quality policy and strategy;
- (b) Glossary;
- (c) Organizational risk profile;
- (d) Risk management plan;
- (e) Coherence matrix;
- (f) Corrective and preventive action procedures and reporting system;
- (g) Specified training standards;
- (h) Description of the organization;
- (i) Assignment of duties and responsibilities; and
- (j) Training procedures related to the quality system to ensure regulatory compliance.

- 11.3 The QA audit programme documentation should reflect:

- (a) The schedule of the monitoring process;
- (b) Audit procedures;
- (c) Reporting procedures;
- (d) Follow-up and corrective action procedures;
- (e) The recording system; and
- (f) Document control.

12.0 Quality assurance audit programme

The QA audit programme should include all planned and systematic actions necessary to provide confidence that every training activity is conducted in accordance with all applicable requirements, standards, and procedures.

13.0 Quality inspection

13.1 The primary purpose of a quality inspection is to review a document or observe a particular event, action, etc., in order to verify whether established training procedures and requirements are followed during the conduct of the inspection and whether the required standard is achieved.

13.2 Examples of typical subject areas for quality inspections are:

- (a) Actual training sessions;
- (b) Maintenance, if applicable;
- (c) Technical standards; and
- (d) Training standards.

14.0 Quality audits

14.1 An audit is a systematic and independent comparison between the way in which training is being conducted and the way in which it should be conducted according to the published training procedures.

14.2 Audits should include at least the following quality procedures and processes:

- (a) A description of the scope of the audit, which should be explained to the audited personnel;
- (b) Planning and preparation;
- (c) Gathering and recording evidence; and
- (d) Analysis of the evidence.

15.0 The various techniques that make up an effective audit are:

- (a) A review of published documents;
- (b) Interviews or discussions with personnel;
- (c) The examination of an adequate sample of records;
- (d) The witnessing of the activities which make up the training; and
- (e) The preservation of documents and the recording of observations

16.0 Auditors

16.1 The ATO should decide, depending on the complexity of the organization and the training being conducted, whether to make use of a dedicated audit team or a single auditor. In any event, the auditor or audit team should have relevant training and/or operational experience.

16.2 The responsibilities of the auditors should be clearly defined in the relevant documentation.

17.0 Auditor's independence

- 17.1 Auditors should not have any day-to-day involvement in the area of the operation or maintenance activity that is to be audited.
- 17.2 An ATO may, in addition to using the services of full-time dedicated personnel belonging to a separate quality department, undertake the monitoring of specific areas or activities through the use of part-time auditors. An ATO whose structure and size does not justify the establishment of full-time auditors may undertake the audit function using part-time personnel from within its own organization or from an external source under the terms of an agreement acceptable to the Licensing Authority.
- 17.3 In all cases the ATO should develop suitable procedures to ensure that persons directly responsible for the activities to be audited are not selected as part of the auditing team. Where external auditors are used, it is essential that any external specialist has some familiarity with the type of activity conducted by the ATO.
- 17.4 The QA audit programme of the ATO should identify the persons within the organization who have the experience, responsibility, and authority to:
- (a) Identify and record concerns or findings, and the evidence necessary to substantiate such concerns or findings;
 - (b) Initiate or recommend solutions to concerns or findings through designated reporting channels;
 - (c) Verify the implementation of solutions within specific and reasonable timescales; and
 - (d) Report directly to the quality manager

18.0 Audit scheduling

- 18.1 A QA audit programme should include a defined audit schedule and a periodic review cycle. The schedule should be flexible and allow unscheduled audits when negative trends are identified. The quality manager should schedule follow-up audits when necessary to verify that a corrective action resulting from a finding was carried out and that it is effective.
- 18.2 An ATO should establish a schedule of audits to be completed during a specific calendar period. This schedule should be influenced by the organizational risk profile and be reflected in both the risk management plan and the coherence matrix documents. As a minimum, all aspects of the training should be reviewed within a period of 12 months in accordance with the audit programme.
- 18.3 When an ATO defines the audit schedule, it should take into account significant changes to the management, organization, training, or technologies, as well as changes to the standards and requirements.

19.0 Monitoring and corrective action

- 19.1 The aim of monitoring within the quality system is primarily to investigate and judge its effectiveness and thereby ensure that defined policy and training standards are continuously complied with. Monitoring and corrective action functions fall under the responsibilities of the quality manager. Monitoring activity is based upon:
- (a) Quality inspections;
 - (b) Quality audits; and
 - (c) Corrective and preventive action reports and subsequent follow-up.
- 19.2 Any nonconformity identified as a result of monitoring should be communicated by the quality manager to the manager responsible for taking corrective action or, if appropriate, to the head of training or, when circumstances warrant, to the accountable manager. Such nonconformity should be recorded, for the purpose of further investigation, in order to determine the cause and to enable the recommendation of an appropriate corrective action.
- 19.3 The QA audit programme should include procedures to ensure that corrective and preventive actions are developed in response to findings. Personnel implementing these procedures should monitor such actions to ensure that they have been completed and to verify their effectiveness. Organizational responsibility and accountability for the implementation of a corrective action resides with the department where the finding was identified. The accountable manager will have the ultimate responsibility for ensuring, through the quality manager, that the corrective action has re-established conformity with the standard required by the ATO and any additional requirements established by the Licensing Authority or the ATO.
- 19.4 As part of its quality system, the ATO should identify internal and external customers and monitor their satisfaction by measurement and analysis of feedback

20.0 Continuous improvement process

- 20.1 The quality manager should be responsible for the review and continuous improvement of the established quality system's policies, processes, and procedures. The following tools, on which the quality manager relies, are essential to the ongoing continuous improvement process:
- (a) Organizational risk profile;
 - (b) Risk management plan;
 - (c) Coherence matrix;
 - (d) Corrective and preventive action reports; and
 - (e) Inspection and audit reports.
- 20.2 These tools and processes are interrelated and help define the continuous improvement efforts of the organization. For example, any corrective or

preventive action report could identify a deficiency or an opportunity for improvement. As outlined in paragraph 8.2 of this Technical Circular, the quality manager would then be required to ensure the identified issue was addressed and effectively implemented. The same would be true if the discovery of an issue was identified during an inspection or audit.

20.3 The effective implementation of change and the subsequent validation that the change did indeed result in the desired outcome is critical to the continuous improvement process. Simply introducing a well-meaning suggestion for improvement into the organization without carefully managing that change could have undesirable consequences. It is therefore incumbent upon the quality manager to responsibly introduce, monitor, and validate improvement efforts.

20.4 A simplistic but effective process to use in managing continuous improvement is known as the plan-do-check-act, or PDCA, approach. This continuous improvement process cycle includes:

- (a) **Planning:** Map out the implementation of the recommended change, identifying at least:
 - (1) Those people who will be affected by the change;
 - (2) The required quality control measures necessary to mitigate risk; and
 - (3) The desired outcome and its intended consequences.
- (b) **Doing:** Execute the implementation plan once all affected groups have accepted the proposal and understand their role in ensuring its success.
- (c) **Checking:** Apply sufficient quality control “stage” checks throughout the implementation phase to ensure any unintended deviations in the execution are identified and addressed without delay; and
- (d) **Acting:** Analyse the results and take appropriate action as necessary

21.0 Management review and analysis

21.1 Management should accomplish a comprehensive, systematic, and documented review and analysis of the quality system, training policies, and procedures, and should consider:

- (a) The results of quality inspections, audits, and any other indicators;
- (b) The overall effectiveness of the management organization in achieving stated objectives; and
- (c) The correction of trends, and prevention, where applicable, of future nonconformities.

21.2 Conclusions and recommendations made as a result of the review and analysis should be submitted in writing to the responsible manager for action. The responsible manager should be an individual who has the authority to resolve relevant issues and take action. The head of training should decide upon the frequency, format, and structure of meetings for internal review and analysis, in

coordination with the accountable manager, if different, as the accountable manager has the overall responsibility for the quality system, including the frequency, format, and structure of the internal management review and analysis activities.

22.0 Recording

22.1 Accurate, complete, and readily accessible records documenting the result of the QA audit programme should be maintained by the ATO. Records are essential data to enable an ATO to analyse and determine the root causes of nonconformity so that areas of noncompliance can be identified and subsequently addressed

22.2 Records should be retained at least for the period that may be mandated by national requirements. In the absence of such requirements, a period of 3 years is recommended. The relevant records include:

- (a) Audit schedules;
- (b) Quality inspection and audit reports;
- (c) Responses to findings;
- (d) Corrective and preventive action reports;
- (e) Follow-up and closure reports; and
- (f) Management review and analysis reports.

23.0 QA responsibility for satellite ATOs

23.1 An ATO may decide to subcontract certain activities to external organizations subject to the approval of the Licensing Authority.

23.2 The ultimate responsibility for the training provided by the satellite ATO always remains with the ATO. A written agreement should exist between the ATO and the satellite ATO clearly defining the training services to be provided and the level of quality to be assured. The satellite ATO's activities relevant to the agreement should be included in the ATO's QA audit programme.

23.3 The ATO should ensure that the satellite ATO has the necessary authorisation/approval when required and commands the resources and competence to undertake the task.

24.0 QA training

24.1 Appropriate and thorough training is essential to optimize quality in every organization. In order to achieve the appropriate outcomes of such training, the ATO should ensure that all staff members understand the objectives as laid out in the Quality Manual to a level relevant to their duties, including the:

- (a) Concept of QA and associated systems;

- (b) Quality management;
- (c) Quality Manual;
- (d) Inspections and audit techniques; and
- (e) Reporting and recording.

- 24.2 Time and resources should be allocated to provide appropriate levels of QA training to every employee.
- 24.3 QA courses are available from the various national or international standards institutions, and an ATO should consider whether to offer such courses to those likely to be involved in the management or supervision of QA processes. Organizations with sufficient appropriately qualified staff should consider the possibility of providing in-house training.

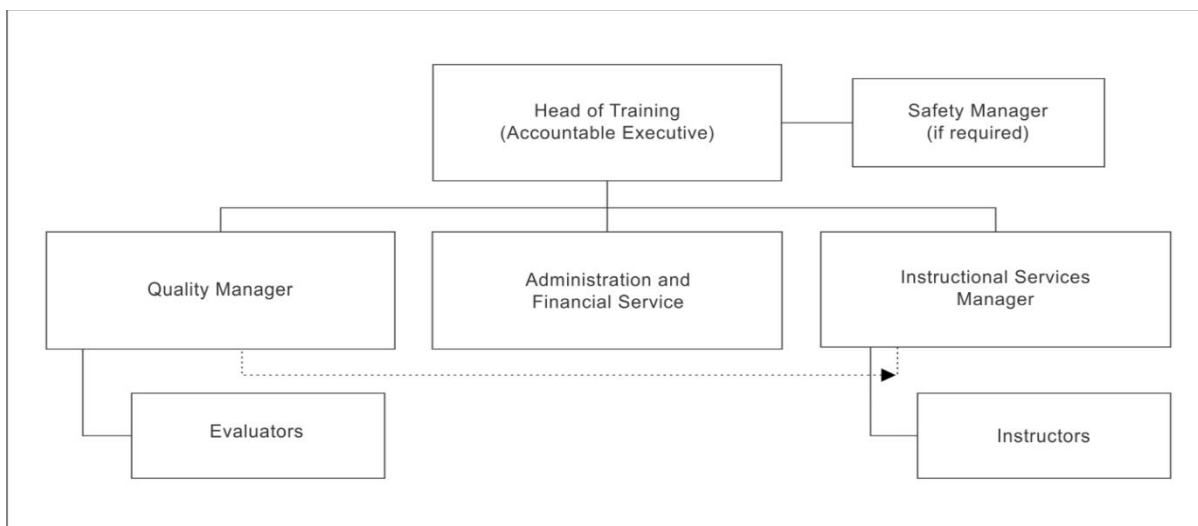


Fig 1: Example of a small generic ATO

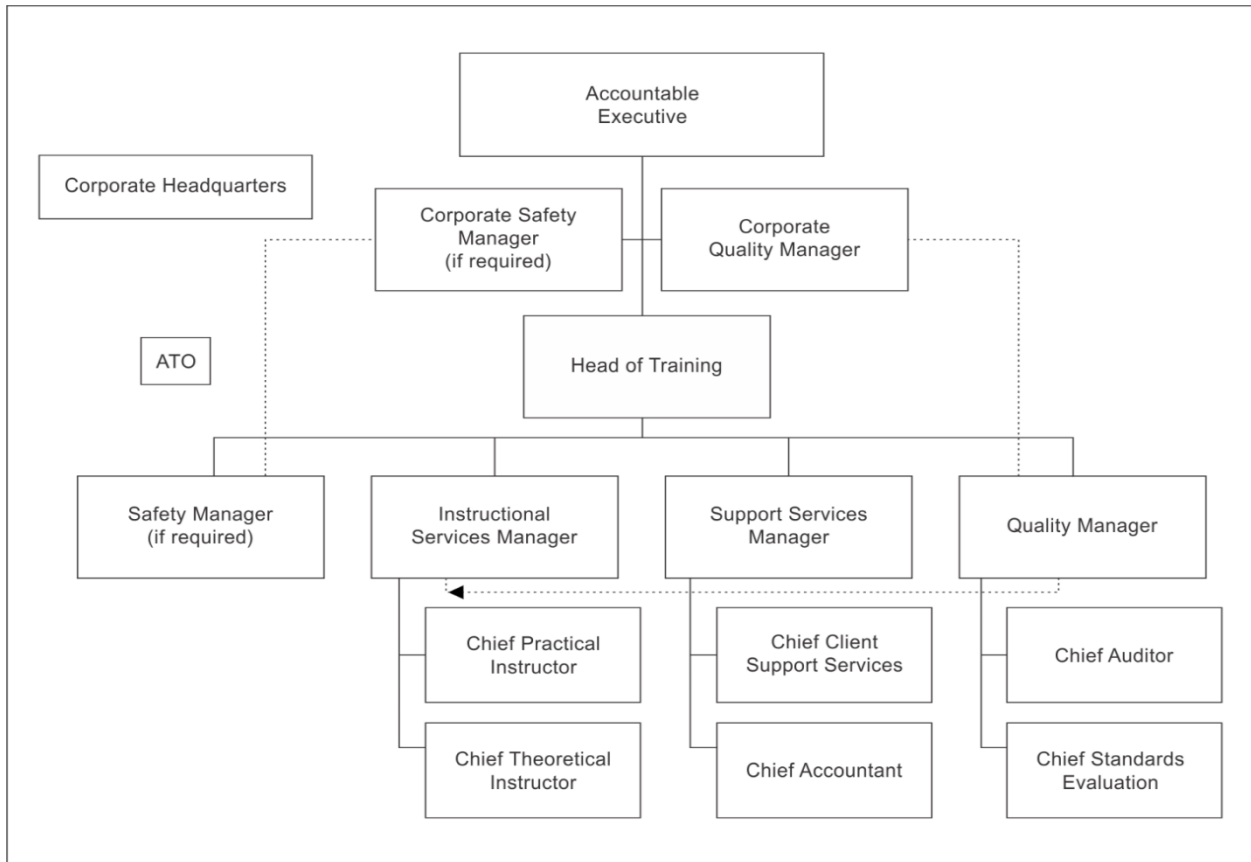


Fig 2: Example of a small/medium (complex) generic ATO

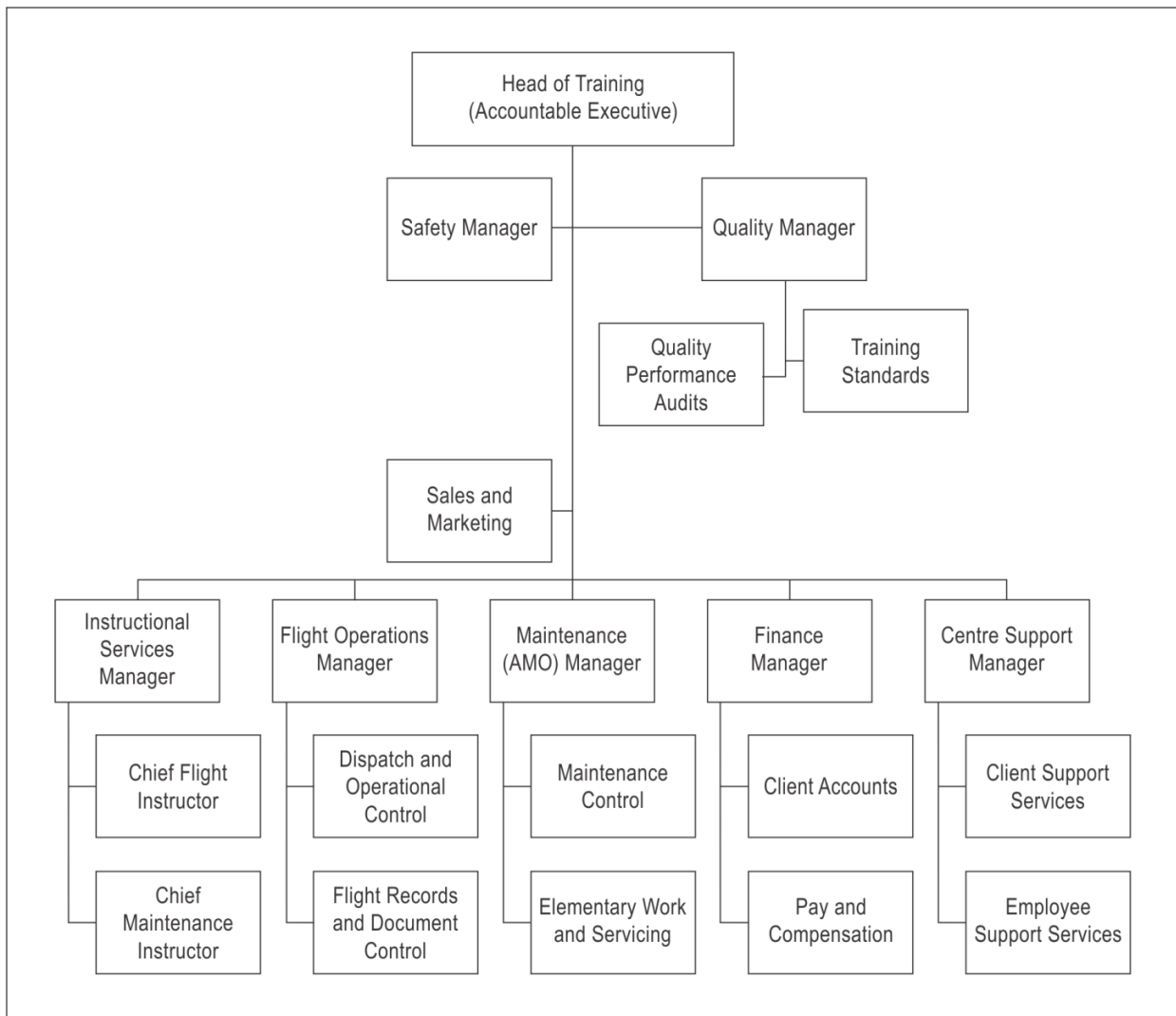


Fig 3: Example of a large (complex) multi-faceted ATO

141.02.4 TRAINING PROGRAMME EVALUATION

1.0 Requirements for training programme evaluation

- 1.1 IACM is responsible to ensure that every training programme and/or Curriculum delivered by the training organization meets the requirements laid down in the relevant Part of the MOZCAR.
- 1.2 The training organization must submit, together with its application for approval, all training programmes/curriculum that would be delivered when it starts operating.
- 1.3 The procedures for delivery of the programmes must be documented in the Manual of Procedure prescribed under 141.02.2.
- 1.4 The complete programme must be submitted for evaluation and approval, including lesson plans, student and instructor guides, syllabus, progress and final assessments, theoretical examination papers and practical test reports.
- 1.5 The evaluation of programmes form part of the approval process of the training organization.

2.0 Training standards

- 2.1 The training program established by the ATO shall include training knowledge and skills related to human performance, including coordination with other relevant personnel as appropriate.
- 2.2 The ATO shall establish the curriculum and standards for training, as well as the prequalification standards for the personnel that will attend the training. The Prequalification's standards are intended to insure that the trainee has a reasonable chance of successfully completing any of the courses conducted by an ATO.
- 2.3 A curriculum submitted for approval should consist of at least the following elements:
 - (a) Subjects, appropriate to ratings requested

- (b) Course content, appropriate to ratings requested
- (c) Objective testing and grading criteria
- (d) Classroom or theory, appropriate to ratings requested
- (e) Total number of hours required for successful completion
- (f) A schedule of required tests, which indicates the sequence of examinations for each
- (g) subject in the curriculum
- (h) The order of instruction for each subject element.
- (i) List of training devices, and
- (j) Supporting facilities details, instructors and sample courseware.

3.0 Training Programme Approval Process

- 3.1 ATO shall submit the proposed training programme/curriculum initially during the application for approval together with the submission of the Training and Procedures Manual.
- 3.2 The evaluation for approval of the Training Programme will include review of the programme and inspecting its implementation during training.

141.02.5 PERSONNEL REQUIREMENTS

1.0 Staffing Requirements

1.1 General Requirements

- 1.1.1 The ATO shall nominate a person responsible for ensuring that it is in compliance with the requirements for an approved organisation.
- 1.1.2 The ATO shall employ the necessary personnel to plan, perform, and supervise the training to be conducted.
- 1.1.3 The competence of instructional personnel shall be in accordance with procedures and to a level acceptable to IACM.
- 1.1.4 The ATO shall ensure that all instructional personnel receive initial and recurrent training appropriate to their assigned tasks and responsibilities. The training programme established by the ATO shall include training in knowledge and skills related to human performance. The training programme for ATO employees shall be contained in the ATO Training and Procedures Manual.

1.2 Staffing for ATO training flight crew

- 1.2.1 An ATO approved or applying for approval to conduct training for flight crew curricula shall have on its staff the following:
 - (a) An accountable manager;
 - (b) A quality manager;
 - (c) A Head of Training;
 - (d) A Chief Flight Instructor (CFI), as applicable;
 - (e) A Chief Ground Instructor, as applicable; and
 - (f) An adequate number of ground and flight instructors relevant to the courses provided.
- 1.2.2 Each instructor to be used for training shall have received the appropriate training and hold the appropriate licences and/or ratings as required by MOZCAR Part 61.
- 1.2.3 The duties and qualifications of the personnel listed in this paragraph are contained 4.0 hereunder.

1.3 Staffing for ATO training other than flight crew personnel

- 1.3.1 An ATO approved or applying for approval to conduct training for maintenance, air traffic control and other ground staff curricula shall have on the staff the following:
 - (a) An accountable manager;
 - (b) A quality manager;
 - (c) A Head of Training; and
 - (d) An adequate number of instructors relevant to the courses provided.
- 1.3.2 Each instructor to be used for training shall have received the appropriate training and hold the appropriate licence and/or rating as required by MOZCAR Part 66 for maintenance personnel, Part 65 for air traffic control and flight dispatchers.
- 1.3.3 The duties and qualifications of the personnel listed in this paragraph are contained 4.0 hereunder.

2.0 The duties and qualifications of training of instruction staff

2.1 Instruction staff – Flight Crew Training

- 2.1.1 ***The Head of Training*** shall have overall responsibility for ensuring satisfactory integration of flying training, flight simulation training, and theoretical knowledge instruction, and for supervising the progress of individual students. The Head of Training shall have had extensive experience in training as a flight instructor for professional pilot licences and possess a sound managerial capability.
- 2.1.2 ***The CFI shall*** be responsible for the supervision of flight and synthetic flight instructors and for the standardization of all flight instruction and synthetic flight instruction. The CFI shall:
 - (a) Hold the highest professional pilot licence related to the flying training courses conducted;
 - (b) Hold the rating(s) related to the flying training courses conducted;
 - (c) Hold a flight instructor rating for at least one of the types of aircraft used on the course; and
 - (d) Have completed 1000 hours pilot-in-command flight time of which a minimum of 500 hours shall be on flying instructional duties related to the flying courses conducted, of which 200 hours may be instrument ground time.

- 2.1.3 *Flight instructors* shall hold:
- (a) A pilot licence and rating(s) in accordance with MOZCAR Part 61 related to the flying training courses they are approved to conduct; and
 - (b) An instructor rating or authorisation in accordance with MOZCAR Part 61, relevant to the part of the course being conducted, e.g., flight instructor, flight instrument rating instructor, instructor for additional class or type rating(s), instructor for flight simulation training, as appropriate.
- 2.1.4 ***Instructors for flight simulation training*** shall hold the authorization in accordance with MOZCAR Part 61 related to the flight simulation training courses they are appointed to conduct.
- 2.1.5 ***Instructors for flight engineer*** licenses and rating training shall hold:
- (a) The licence and the rating(s) in accordance with MOZCAR Part 61 related to the flight engineer licence and/or rating training courses they are appointed to conduct; and
 - (b) An instructor rating in accordance with MOZCAR Part 61, relevant to the part of the course being conducted.
- 2.1.6 ***The Chief Ground Instructor*** shall:
- (a) Be responsible for the supervision of all ground instructors and for the standardisation of the theoretical knowledge instruction; and
 - (b) Shall have a practical background in aviation and have the appropriate ground instructor licence in accordance with MOZCAR Part 61.
- 2.1.7 ***Ground instructors*** shall be responsible for conducting ground training in subject areas required for a license or rating. Ground instructors may have either a license or be approved by IACM in accordance with MOZCAR Part 61, depending upon the subject matter to be taught.
- 2.1.8 ***Ground instructors, who are approved by IACM*** but not licensed, who teach knowledge subjects for licenses and ratings, shall have appropriate experience in aviation and shall, before appointment, give proof of their competency by giving a lecture based on material they have developed for the subjects they are to teach.

2.2 Instruction staff – other than Fligh Crew Training

2.2.1 **Each instructor** to be used for training shall have received the appropriate training and hold the appropriate licence/authorization and/or rating as required by appropriate and applicable MOZCAR Part.

2.2.2 The duties and qualifications of training and instruction staff are as follows:

- (a) **Head of Training:** The Head of Training shall have overall responsibility for ensuring satisfactory integration of theoretical knowledge instruction and practical training and for supervising the progress of individual students. The Head of Training shall have had extensive experience in training as an instructor for appropriate licensing and possess a sound managerial capability.
- (b) **Instructors**
 - (i) Each ATO shall provide the number of instructors holding appropriate licences and ratings, issued under appropriate MOZCAR Part, that the Authority determines is necessary to provide adequate instruction and supervision of the students.
 - (ii) An ATO may provide specialised instructors, who are not licensed but who are approved in accordance with appropriate MOZCAR Part, to teach some general or specific subjects of the course.

141.02.6 FACILITIES, EQUIPMENT, AND MATERIAL

1.0 General Requirements

- 1.1. The facilities and working environment of the ATO shall be appropriate for the task to be performed and acceptable to the Authority.
- 1.2. The ATO shall have the necessary information, technical data, equipment, training devices, and material to conduct the courses for which it is approved.
- 1.3. Any training devices used by the ATO shall be qualified according to requirements established by the Authority and their use shall be approved by the Authority to ensure they are appropriate to the task.
- 1.4. A certificate holder shall not make a substantial change in facilities, equipment, or material that have been approved for a particular training programme, unless that change is approved in advance by the Authority.
- 1.5. The facility that is the ATO principal place of business shall:
 - (a) not be shared with, or used by, another ATO; and
 - (b) be adequate to maintain the files and records required to operate the business of the ATO.

2.0 Facilities Required for Flight Crew Training

2.1 Training Facilities

- 2.1.1 An applicant for, and holder of, an ATO certificate teaching flight crew curricula shall have facilities, as determined by the Authority, appropriate for the maximum number of students expected to be taught at any time, as follows:
 - (a) Flight operations facilities:
 - (i) An operations room
 - (ii) A flight planning room
 - (iii) Adequate briefing rooms
 - (iv) Offices for the instructors
 - (b) Knowledge instruction facilities, including:
 - (i) Classroom accommodation
 - (ii) Suitable demonstration equipment
 - (iii) An RT training and testing facility
 - (iv) A library

(v) Offices for instructors

2.2 Training Aircraft

2.2.1 An applicant for, or holder of, an ATO certificate must ensure that each aircraft used for flight instruction and solo flights meets the following requirements:

- (a) Except for flight instruction and solo flights in a curriculum for agricultural aircraft operations, external load operations, and similar aerial work operations, the aircraft must have a Mozambique standard airworthiness certificate or a foreign equivalent of a Mozambique standard airworthiness certificate acceptable to the Authority.
- (b) The aircraft must be maintained and inspected in accordance with MCAR 8.3 and an approved maintenance programme.
- (c) The aircraft must be equipped as provided in the training specifications for the approved course for which it is used.
- (d) Except as provided in (5) below, each aircraft used in flight training must have at least two pilot stations with engine-power controls that can be easily reached and operated in a normal manner from both pilot stations.
- (e) Airplanes with controls such as nose-wheel steering, switches, fuel selectors, and engine air flow controls that are not easily reached and operated in a conventional manner by both pilots may be used for flight instruction if the certificate holder determines that the flight instruction can be conducted in a safe manner considering the location of controls and their non-conventional operation, or both.
- (f) Each aircraft used in a course involving instrument flight rule en route operations and instrument approaches must be equipped and maintained for instrument flight rule operations. For manoeuvring of an aircraft by reference to instruments, the aircraft may be equipped as provided in the approved course of training.

2.3 Flight Simulation Training Devices

2.3.1 An applicant for, or holder of, an ATO certificate, approved to use flight simulation training devices, shall show that each flight simulation training device used for training and checking will be or is specifically qualified and approved by the Authority for:

- (a) Each maneuver and procedure for the make, model, and series of aircraft, set of aircraft, or aircraft type simulated, as applicable; and
- (b) Each training programme or training course in which the flight simulation training device is used.

2.3.2 Each qualified and approved flight simulation training device used by an ATO must:

- (a) Be maintained to ensure the reliability of the performances, functions, and all other characteristics that were required for their qualification;
- (c) Be modified to conform with any modification to the aircraft being simulated if the modification results in changes to performance, functions, or other characteristics required for qualification;
- (d) Be given a functional pre-flight check each day before being used; and
- (e) Have a discrepancy log in which the instructor or evaluator, at the end of each training session, enters each discrepancy.

2.4 Aerodromes and Sites

2.4.1 Each applicant for, and holder of, an ATO certificate shall show that it has continuous use of each aerodrome and site (for helicopter training) at which training flights originate, and that the aerodrome has an adequate runway and the necessary equipment.

2.4.2 The base aerodrome, and any alternative base aerodrome, at which flying training is being conducted shall have at least one runway or take-off area that allows training aircraft to make a normal take-off or landing at the maximum certificated take-off or maximum certificated landing mass, under the following conditions:

- (a) Under calm wind (not more than four knots) conditions;
- (b) At temperatures equal to the mean high temperature for the hottest month of the year in the operating area;
- (c) If applicable, with the power plant operation and landing gear and flap operation recommended by the manufacturer; and
- (d) In the case of a take-off:
 - (i) Clearing all obstacles in the take-off flight path by at least 50 feet;
 - (ii) With a smooth transition from lift-off to the best rate of climb speed without exceptional piloting skills or techniques.

2.4.3 Each aerodrome must:

- (a) Have a wind direction indicator that is visible at ground level from the ends of each runway;
- (b) Have adequate runway electrical lighting if used for night training; and
- (c) Have a traffic direction indicator when:

- (i) The aerodrome does not have an operating control tower; and
 - (ii) Traffic and wind advisories are not available.
- 2.4.4 Except as specified in item (e) below, each aerodrome used for night training flights must have permanent runway lights.
- 2.4.5 An aerodrome or seaplane base used for night training flights in seaplanes may be approved by the Authority to use adequate, non-permanent lighting or shoreline lighting.
- 2.4.6 Sites shall be available for:
 - (a) Confined area operation training;
 - (b) Simulated engine off autorotation; and
 - (c) Sloping ground operation.

3.0 Facilities Required for Technician Training

- 3.1 An applicant for, and holder of, an ATO certificate shall have facilities, as determined by the Authority, appropriate for the maximum number of students expected to be taught at any time, as follows:
 - 3.1.1 An enclosed classroom.
 - 3.1.2 Suitable facilities arranged to assure proper separation from the working space, for parts, tools, materials and similar articles.
 - 3.1.3 Suitable area for application of finishing materials, including paint spraying.
 - 3.1.4 Suitable areas equipped with wash tank and degreasing equipment with air pressure or other adequate cleaning equipment.
 - 3.1.5 Suitable facilities for running engines.
 - 3.1.6 Suitable area with adequate equipment, including benches, tables, and test equipment, to disassemble, service, and inspect:
 - (a) Ignition systems, electrical equipment, and appliances;
 - (b) Carburetors and fuel systems; and
 - (c) Hydraulic and vacuum systems for aircraft, aircraft engines, and their appliances.
 - 3.1.7 Suitable space with adequate equipment, including tables, benches, stands, and jacks for disassembling, inspecting, and rigging aircraft.

- 3.1.8 Suitable space with adequate equipment for disassembling, inspecting, assembling, troubleshooting, and timing engines.
- 3.2 An applicant for, or holder of, an ATO certificate with approved AMT courses shall have and maintain the following instructional equipment as is appropriate to the rating sought:
 - 3.2.1 Various kinds of airframe structures, airframe systems and components, power plants, and power plant systems and components (including propellers) of a quantity and type suitable to complete the practical projects required by its approved training programme
 - 3.2.2 At least one aircraft of a type acceptable to the Authority
- 3.3 An applicant for, or holder of, an ATO certificate with an AMT rating shall have airframes, power plants, propellers, appliances, and components thereof, to be used for instruction and from which students will gain practical working experience and shall ensure that the airframes, power plants, propellers, appliances, and components thereof be sufficiently diversified as to show the different methods of construction, assembly, inspection, and operation when installed in an aircraft for use.
- 3.4 An applicant for an ATO certificate with an AMT rating, or an applicant seeking an additional AMT rating, shall have at least the facilities, equipment, and materials appropriate to the rating sought.
- 3.5 An applicant for, or holder of, an ATO certificate with an AMT rating shall maintain, on the premises and under the full control of the ATO, an adequate supply of material, special tools, and shop equipment used in constructing and maintaining aircraft as is appropriate to the approved training programme of the ATO, in order to assure that each student will be properly instructed.
- 3.6 A certificate holder may not make a substantial change in facilities, equipment, or material that have been approved for a particular training programme, unless that change is approved by the Authority in advance.

4.0 Facilities Required for Air Traffic Control Training

- 4.1 An applicant for, and holder of, an ATO certificate teaching air traffic control curricula shall have facilities, as determined by the Authority, appropriate for the maximum number of students expected to be taught at any time, as follows:
 - 4.1.1 Aerodrome control Tower, Approach and area control facilities:
 - (a) An operations room;
 - (b) A Pseudo Pilot room;
 - (c) Adequate briefing rooms; and
 - (d) Offices for the instructors.

4.1.2 Knowledge instruction facilities, including:

- (a) Classroom accommodation;
- (b) Suitable demonstration equipment;
- (c) An RT training and testing facility;
- (d) A library; and
- (e) Offices for instructors.

4.2 ATC Simulation Training Devices

4.2.1 An applicant for, or holder of, an ATO certificate, approved to use ATC simulation training devices, shall show that each ATC simulation training device used for training and checking will be or is specifically qualified and approved by the Authority for:

- (a) Each procedure for the make, model, and series of aircraft, set of aircraft, or aircraft type simulated, as applicable; and
- (b) Each training programme or training course in which the ATC simulation training device is used.

4.2.2 Each qualified and approved ATC simulation training device used by an ATO must:

- (a) Be maintained to ensure the reliability of the performances, functions, and all other characteristics that were required for their qualification;
- (b) Be modified to conform with any modification to the simulated scenario if the modification results in changes to performance, functions, or other characteristics required for qualification;
- (c) Be given a functional pre check each day before being used; and
- (d) Have a discrepancy log in which the instructor or evaluator, at the end of each training session, enters each discrepancy.

4.3 Aerodromes And Sites

4.3.1 Each applicant for, and holder of, an ATO certificate shall show that it has continuous use of each aerodrome and site at which training originate, and that the aerodrome has an adequate runway and the necessary equipment.

4.3.2 Each aerodrome must:

- (a) Have a wind direction and speed indicator;
- (b) Have adequate and a clear runway, taxiway and apron indications; and

- 4.3.3 Except as specified in item (4.3.4) below, each aerodrome used for night training must have permanent runway lights.
- 4.3.4 Have a signal lamp
- 4.3.5 Crash Fire Alerting System

5.0 Facilities Required for Flight Operations Officers or Cabin Crewmember Training

- 5.1 An applicant for, or holder of an ATO certificate to train flight operations officers or cabin crewmembers shall have facilities, as determined by the Authority, appropriate for the maximum number of students expected to be taught at any time, as follows:
 - 5.1.1 adequate enclosed classroom;
 - 5.1.2 flight operations facilities, including:
 - (c) an operations room;
 - (d) a flight planning room;
 - (e) an office for the instructors;
 - 5.1.3 suitable demonstration equipment and cabin mock-ups;
 - 5.1.4 suitable radio telephony training and testing facility (for flight operations officer training only);
 - 5.1.5 a library; and
 - 5.1.6 Secure storage facilities for examination papers and training records.
- 5.2 An applicant for, or a holder of an ATO certificate for flight operations officers or cabin crewmembers courses shall:
 - 5.2.1 have and maintain instructional equipment appropriate for the training sought;
 - 5.2.2 not make a substantial change in facilities, equipment or material that have been approved for a particular training program, without prior approval by the Authority; and
 - 5.2.3 ensure that the equipment and materials, required by paragraph (5.2.1) and (5.2.2) be in satisfactory working condition for instructional and practice purposes.

141.02.7 APPLICATION FOR APPROVAL OR AMENDMENT THEREOF

1.0 Form and manner of application

IACM shall prescribe the form and manner to apply for approval of a training organisation.

141.02.13 RENEWAL OF APPROVAL

1.0 Form and manner of application

ACM shall prescribe the form and manner to apply for renewal of approval of a training organisation.

141.03.2 APPLICATION FOR APPROVAL (Temporary)

1.0 Requirement for Temporary approval

- 1.1 MOZCAR 141.03.provides requirements for IACM to issue temporary approval for applicants who needs to do a training course outside an approved ATO. A temporary approval is an authorisation granted to an applicant who meets the requirements for a specific training programme/course at an identified place acceptable to the Authority.
- 1.2 The temporary authorization for the training will be granted upon the applicant demonstrating meeting the requirements of MOZCAR/CAT for the particular training including:
 - 1.2.1 Submitting fully completed application form prescribed by IACM with the required details attachments covering:
 - (a) Detaches of the involved instructors and personnel with their qualifications and experience;
 - (b) Details on procedures of how the training will be managed and provided;
 - (c) Details of the participants in the training and if it is contractual with a third party, details and copy of the contract.
 - 1.2.2 The applicant shall identify the facilities to be used and resources required
 - 1.2.3 Submit the training programme/curriculum for approval

6.0 Form of application

- 2.1 ACM shall prescribed the form and manner to apply for renewal of approval of a training organization.

141.03.3 ISSUING OF APPROVAL (Temporary)

1.0 Form of approval

The Authorization granted for the temporary approval may be by a letter or a certificate accompanied by specifications detailing the privileges and restrictions (conditions) for the approval. The conditions will include the specific training programme, place of delivery and validity period of the training.