

Democratic Socialist Republic of Sri Lanka



Civil Aviation Authority of Sri Lanka

Implementing Standards

(Issued under Section 120, Civil Aviation Act No. 14 of 2010)

Title: Requirements for Establishment, Operation and Maintenance of a Flying Training Organization**IS Reference Code. : IS-ORA****Date of Issue: 27th April 2023**

Pursuant to Section 120 of the Civil Aviation Act No.14 of 2010 (which is hereinafter referred to as the CA Act), Director General of Civil Aviation (hereinafter referred to as DGCA) shall have the power to issue, whenever he considers it necessary or appropriate to do so, such Implementing Standards for the purpose of giving effect to any of the provisions of the CA Act, any regulations or rules made thereunder including the Articles of the Convention on International Civil Aviation which are specified in the Schedule to the CA Act.

Accordingly, I being the DGCA do hereby issue the Implementing Standards on **Requirements for Establishment, Operation and Maintenance of a Flying Training Organization** as mentioned in the Attachment hereto (Ref. Attachment No. IS-ORA Att.), elaborating the requirements contained in ICAO Annex 1-“Personnel Licensing” and to the Section 66, 67, 68, 69 of Civil Aviation Act No.14 of 2010, and Civil Aviation (Licensing of Personnel and Training Institutions) Regulations No. 01 of 2018.

This Implementing Standard shall be applicable to existing licence holders of aviation training institutions and/or applicants for the licence and shall come in to force with effect from 1st of June 2023 and remain in force unless revised or revoked. This Implementing Standard will replace the previous 2nd Edition Rev 00 issued on 11th of September 2020.

Attention is also drawn to section 103 of the Civil Aviation Act, which states inter alia that failure to comply with any Implementing Standard is an offence. Further, if any standard stipulated in this Implementing Standard is not complied with or violated, an appropriate enforcement action will be taken as per the Aviation Enforcement Policy & Procedures Manual, SLCAP 0005 by the Director General of Civil Aviation under section 102 of the Civil Aviation Act No. 14 of 2010.

Civil Aviation Authority of Sri Lanka
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P.A.Jayakantha
Director General of Civil Aviation and
Chief Executive Officer

Enclosure: Attachment No. IS-ORA-Att

PREAMBLE

1. Notice to the Recipient

- 1.1. The requirements in this Implementing Standard are based on the Standards and Recommended Practices (SARPs) adopted by the International Civil Aviation Organization (ICAO) and incorporated in the Amendment No. 178 to Annex 01.
- 1.2. In pursuance of the obligation cast under Article 38 of the Convention which requires the Contracting States to notify the ICAO of any differences between the national regulations of the States and practices and the International Standards contained in the respective Annex and any amendments thereto, the CAASL will be taking steps to notify ICAO of such differences relating to either a Standard or a Recommended Practice, if any. The CAASL will also keep the ICAO currently informed of any differences which may subsequently occur, or of the withdrawal of any differences previously notified. Furthermore, the CAASL will take steps for the publication of differences between the national regulations and practices and the related ICAO Standards and Recommended Practices through the Aeronautical Information Service, which is published in accordance with the provisions in the Annex-15 to the Convention.
- 1.3. Taking into account of the ICAO council resolution dated 13 April 1948 which invited the attention of Contracting States of the desirability of using in the State's national regulations, as far as is practicable, the precise language of those ICAO Standards that are of a regulatory character, to the greatest extent possible the CAASL has attempted to retain the ICAO texts in the Annex in drafting this Implementing Standard.

1.4. Status of ICAO Annex components in the Implementing Standard

Some of the components in an ICAO Annex are as follows and they have the status as indicated:

- 1.4.1. **Standard:** Any specification for physical characteristics, configuration, material, performance, personnel or procedure, the uniform application of which is recognized as necessary for the safety or regularity of international air navigation and to which Contracting States will conform in accordance with the Convention; in the event of impossibility of compliance, notification to the Council is compulsory under Article 38. The ICAO Standards are reflected in the Implementing Standards if they are locally implemented using the normal fonts and recipients are required to conform to such requirements invariably.
- 1.4.2. **Recommended Practice:** Any specification for physical characteristics, configuration, material, performance, personnel or procedure, the uniform application of which is recognized as desirable in the interest of safety, regularity, efficiency or environmentally responsiveness of international air navigation, and to which Contracting States will endeavor to conform in accordance with the Convention. The ICAO Recommended Practices are reflected in the Implementing

Standards in italic fonts and the Recipients are encouraged to implement them to the greatest extent possible.

- 1.4.3. **Appendices:** Comprising material grouped separately for convenience but forming part of the Standards and Recommended Practices adopted by the Council. Enforcement action on such matters will be as in the case of Standards or Recommended Practices.
- 1.4.4. **Definitions:** A definition does not have independent status but is an essential part of each Standard and Recommended Practice in which the term is used, since a change in the meaning of the term would affect the specification.
- 1.4.5. **Tables and Figures:** add to or illustrate a Standard or Recommended Practice, and which are referred to therein, form part of the associated Standard or Recommended Practice and have the same status.

Implementing Standards

IS 067: Requirements for Establishment, Operation and Maintenance of a Flying Training Organization

1 General

1.1 Applicable Legal Provisions relating to the issue of the Implementing Standards

- (a) Section 66, 67, 68, 69 of the Civil Aviation Act No.14 of 2010;
- (b) Paragraph 1.2.8 chapter 1 and Appendix 2 of the Annex 1 – “Personnel Licensing” to the Convention;
- (c) Civil Aviation (Licensing of Personnel and Training Institutions) Regulations No. 01 of 2018;
- (d) Paragraph 1.2.8 of chapter 1 and Appendix 2 the Implementing Standards 050;
- (e) Air Navigation Regulation (interim) of 2002; and
- (f) Civil Aviation Safety Management Regulations No. 01 of 2018.

1.2 Objective

The objective of this Implementing Standard is to describe the requirements that are to be satisfied in the in the Establishment, Operation and Maintenance of a Flying Training Organization in Sri Lanka.

1.3 Applicability

- (a) Organizations engaged in training of pilots.
- (b) Applicants for establishment of operation and maintenance of Training Organizations for Pilots.

1.4 Document repealed

This document supersedes the 2nd Edition Rev: 00 of Implementing Standard 67 issued by the DGCA and 2nd Edition Rev: 00 of Implementing Standard 67 shall be treated as null and void from 1st June 2023.

1.5 Other related explanatory material

- (a) Personnel Licensing Procedures Manual, SLCAP 3010
- (b) Flying School Certification Manual, SLCAP 3090

Record of Revision

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List of effective pages

Page No	Revision No	Effective Date	Page No	Revision No	Effective Date
1	Rev 00	01.06.2023	34	Rev 00	01.06.2023
2	Rev 00	01.06.2023	35	Rev 00	01.06.2023
3	Rev 00	01.06.2023	36	Rev 00	01.06.2023
4	Rev 00	01.06.2023	37	Rev 00	01.06.2023
5	Rev 00	01.06.2023	38	Rev 00	01.06.2023
6	Rev 00	01.06.2023	39	Rev 00	01.06.2023
7	Rev 00	01.06.2023	40	Rev 00	01.06.2023
8	Rev 00	01.06.2023	41	Rev 00	01.06.2023
9	Rev 00	01.06.2023	42	Rev 00	01.06.2023
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11	Rev 00	01.06.2023	44	Rev 00	01.06.2023
12	Rev 00	01.06.2023	45	Rev 00	01.06.2023
13	Rev 00	01.06.2023	46	Rev 00	01.06.2023
14	Rev 00	01.06.2023	47	Rev 00	01.06.2023
15	Rev 00	01.06.2023	48	Rev 00	01.06.2023
16	Rev 00	01.06.2023	49	Rev 00	01.06.2023
17	Rev 00	01.06.2023	50	Rev 00	01.06.2023
18	Rev 00	01.06.2023	51	Rev 00	01.06.2023
19	Rev 00	01.06.2023	52	Rev 00	01.06.2023
20	Rev 00	01.06.2023	53	Rev 00	01.06.2023
21	Rev 00	01.06.2023	54	Rev 00	01.06.2023
22	Rev 00	01.06.2023	55	Rev 00	01.06.2023
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25	Rev 00	01.06.2023	58	Rev 00	01.06.2023
26	Rev 00	01.06.2023	59	Rev 00	01.06.2023
27	Rev 00	01.06.2023	60	Rev 00	01.06.2023
28	Rev 00	01.06.2023	61	Rev 00	01.06.2023
29	Rev 00	01.06.2023	62	Rev 00	01.06.2023
30	Rev 00	01.06.2023	63	Rev 00	01.06.2023
31	Rev 00	01.06.2023	64	Rev 00	01.06.2023
32	Rev 00	01.06.2023	65	Rev 00	01.06.2023
33	Rev 00	01.06.2023	66	Rev 00	01.06.2023

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History of Revision

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List of acronyms used throughout this Document

(A) Aeroplane
 (H) Helicopter
 ACAS- Airborne Collision Avoidance System
 AD- Airworthiness Directive
 AIS- Aeronautical Information Service
 AM- Accountable Manager
 AMC- Acceptable Means of Compliance
 ARA- Authority Requirements for Aircrew
 ATA- Air Transport Association
 ATC- Air Traffic Control
 ATO- Approved Training Organisation
 ATPL- Airline Transport Pilot Licence
 BITD- Basic Instrument Training Device
 BPL- Balloon Pilot Licence
 CBT- Computer-Based Training
 CFI- Chief Flying Instructor
 CM- Compliance Monitoring
 CMP- Compliance Monitoring Programme
 CMS- Compliance Monitoring System
 COP- Code of Practice
 CRM- Crew Resource Management
 CS-FSTD(A)- Certification Specifications for Aeroplane Flight Simulation Training Devices
 CS-FSTD(H)- Certification Specifications for Helicopter Flight Simulation Training Devices
 CTKI- Chief Theoretical Knowledge Instructor
 DG- Dangerous Goods
 ERP- Emergency Response Plan
 ETOPS- Extended Range Operations with Twin-Engined Aeroplanes
 FATO- Final Approach and Take-off Area
 FBW- Fly by wire
 FFS- Full Flight Simulator
 FMGC- Flight Management and Guidance Computer
 FMS- Flight Management System
 FNPT- Flight Navigation and Procedures Trainer
 FSTD- Flight Simulation Training Device
 FTD- Flight Training Device
 FTE- Full-Time Equivalent
 FTI- Flight Test Instructor
 GM- Guidance Material
 GMP- General Medical Practitioner
 HEMS- Helicopter Emergency Medical Service
 HHO- Helicopter Hoist Operation
 HT- Head of Training
 IFR- Instrument Flight Rules
 IMC- Instrument Meteorological Conditions

IOS- Instructor Operation Station
IR- Implementing Rule
KSA- Knowledge, Skills and Attitude
LAPL- Light Aircraft Pilot Licence
LIFUS- Line Flying Under Supervision
LVO- Low Visibility Operation
MCC- Multi-Crew Cooperation
MMEL- Master Minimum Equipment List
MPA- Multi-Pilot Aeroplane
MPL- Multi-crew Pilot Licence
NVIS- Night Vision Imaging System
OPC- Operator Proficiency Check
ORA- Organisation Requirements for Aircrew
OSD- Operational Suitability Data
OTD- Other Training Device
PBN- Performance-Based Navigation
PF- Pilot Flying
PIC- Pilot-In-Command
PPL- Private Pilot Licence
QTG- Qualification Test Guide
SB- Service Bulletins
SMM- Safety Management Manual
SOP- Standard Operating Procedure
SPL- Student Pilot Licence
TK- Theoretical Knowledge
TAWS- Terrain Awareness Warning System
TRE -Type Rating Examiner
TRI- Type Rating Instructor
VDR -Validation Data Roadmap
ZFTT- Zero Flight-Time Training

SUBPART GEN – GENERAL REQUIREMENTS

SECTION I – General

ORA.GEN.115 Application for an organisation certificate

- (a) The application for an organisation certificate or an amendment to an existing certificate shall be made in a form and manner established by the DGCA Sri Lanka, taking into account the applicable requirements.
- (b) Applicants for an initial certificate shall provide the DGCA Sri Lanka with documentation demonstrating how they will comply with the applicable requirements. Such documentation shall include a procedure describing how changes not requiring prior approval will be managed and notified to the DGCA Sri Lanka.
- (c) Applicants shall follow the procedure stated in SLCAP 3090, for initial certification or an amendment of the organisation certificate. (Refer ORA.GEN.130)

ORA.GEN.120 Means of compliance

- (a) Alternative means of compliance to the AMC adopted by the CAASL may be used by an organizations to establish compliance with Operating Regulations and Implementing Standards.
- (b) When an organisation wishes to use an alternative means of compliance, it shall, prior to implementing it, provide the DGCA Sri Lanka with a full description of the alternative means of compliance. The description shall include any revisions to manuals or procedures that may be relevant, as well as an assessment demonstrating that Regulations and its Implementing Standards are met.

The organisation may implement these alternative means of compliance subject to prior approval by the DGCA Sri Lanka and upon receipt of the notification as prescribed below.

The DGCA Sri Lanka shall evaluate all alternative means of compliance proposed by an organisation in accordance with Implementing Standard by analyzing the documentation provided and, if considered necessary, conducting an inspection of the organisation.

When the DGCA Sri Lanka finds that the alternative means of compliance are in accordance with the Implementing Standards, CAASL will notify the applicant that the alternative means of compliance may be implemented and, if applicable, amend the approval or certificate of the applicant accordingly;

AMC1 ORA.GEN.120 (a) Means of compliance

DEMONSTRATION OF COMPLIANCE

In order to demonstrate that the Implementing Standards are met, a risk assessment should be completed and documented. The result of this risk assessment should demonstrate that an equivalent level of safety to that established by the Acceptable Means of Compliance (AMC) adopted by the DGCA Sri Lanka is reached.

ORA.GEN.125 Terms of approval and privileges of an organisation

A certified organisation shall comply with the scope and privileges defined in the terms of approval attached to the organisation's certificate.

AMC1 ORA.GEN.125 Terms of approval and privileges of an organisation

MANAGEMENT SYSTEM DOCUMENTATION

The management system documentation should contain the privileges and detailed scope of activities for which the organisation is certified, as relevant to the applicable requirements. The scope of activities defined in the management system documentation should be consistent with the terms of approval.

ORA.GEN.130 Changes to organisations

- (a) Any change affecting:
 - (1) the scope of the certificate or the terms of approval of an organisation; or
 - (2) any of the elements of the organisation's management system as required in ORA.GEN.200(a)(1) and (a)(2),
 shall require prior approval by the DGCA Sri Lanka.
- (b) For any changes requiring prior approval in accordance with applicable Regulations and Implementing Standards, the organisation shall apply for and obtain an approval issued by the DGCA Sri Lanka. The application shall be submitted before any such change takes place, in order to enable the DGCA Sri Lanka to determine continued compliance with Regulations and its Implementing Standards and to amend, if necessary, the organisation certificate and related terms of approval attached to it.

The organisation shall provide the DGCA Sri Lanka with any relevant documentation.

The change shall only be implemented upon receipt of formal approval by the DGCA Sri Lanka in accordance with the following requirements.

- (1) Upon receiving an application for a change that requires prior approval, the DGCA Sri Lanka shall verify the organisation's compliance with the applicable requirements before issuing the approval.

The DGCA Sri Lanka shall prescribe the conditions under which the organisation may operate during the change, unless the DGCA Sri Lanka determines that the organisation's certificate needs to be suspended.

When satisfied that the organisation is in compliance with the applicable requirements, the DGCA Sri Lanka shall approve the change.

- (2) Without prejudice to any additional enforcement measures, when the organisation implements changes requiring prior approval without having received DGCA Sri Lanka approval as defined in (a), the DGCA Sri Lanka shall suspend, limit or revoke the organisation's certificate.

(3) For changes not requiring prior approval, the DGCA Sri Lanka shall assess the information provided in the notification sent by the organisation in accordance with ORA.GEN.130 to verify compliance with the applicable requirements. In case of any non-compliance, the DGCA Sri Lanka shall:

- (i) notify the organisation about the non-compliance and request further changes; and
- (ii) in case of level 1 or level 2 findings, act in accordance with AMC1 ORA.GEN.200(c), (e).

The organisation shall operate under the conditions prescribed by the DGCA Sri Lanka during such changes, as applicable.

- (c) All changes not requiring prior approval shall be managed and notified to the DGCA Sri Lanka as defined in the procedure approved by the DGCA Sri Lanka in accordance with below requirements,
- (1) Upon receiving an application for the initial issue of a certificate for an organisation, the DGCA Sri Lanka shall verify the organisation's compliance with the applicable requirements.
 - (2) When satisfied that the organization is in compliance with the applicable requirements, the DGCA Sri Lanka shall issue the certificate(s). The certificate(s) shall be issued for one year. The privileges and scope of the activities that the organisation is approved to conduct shall be specified in the terms of approval attached to the certificate(s).
 - (3) To enable an organisation to implement changes without prior DGCA Sri Lanka approval in accordance with this part, the DGCA Sri Lanka shall approve the procedure submitted by the organisation defining the scope of such changes and describing how such changes will be managed and notified.

AMC1 ORA.GEN.130 Changes to organisations

APPLICATION TIME FRAMES

- (a) The application for the amendment of an organisation certificate should be submitted at least 30 days before the date of the intended changes.
- (b) In the case of a planned change of a nominated person, the organisation should inform the DGCA Sri Lanka at least 10 days before the date of the proposed change.
- (c) Unforeseen changes should be notified at the earliest opportunity, in order to enable the DGCA Sri Lanka to determine continued compliance with the applicable requirements and to amend, if necessary, the organisation certificate and related terms of approval.

GM1 ORA.GEN.130(a) Changes to organisations

GENERAL

- (a) Typical examples of changes requiring prior approval which may affect the certificate or the terms of approval are listed below:
 - (1) the name of the organisation;
 - (2) the organisation's principal place of business;
 - (3) the organisation's scope of activities;

- (4) additional locations of the organisation;
 - (5) the accountable manager;
 - (6) any of the persons referred to in ORA.GEN.210(a) and (b);
 - (7) the organisation's documentation as required by this Implementing Standard, safety policy and procedures;
 - (8) the facilities.
- (b) Prior approval by the DGCA Sri Lanka is required for any changes to the organisation's procedure describing how changes not requiring prior approval will be managed and notified to the DGCA Sri Lanka.
 - (c) Changes requiring prior approval may only be implemented upon receipt of formal approval by the DGCA Sri Lanka.

GM2 ORA.GEN.130(a) Changes to organisations

CHANGE OF NAME OF THE ORGANISATION

A change of name requires the organisation to submit a new application as a matter of urgency. Where this is the only change to report, the new application can be accompanied by a copy of the documentation previously submitted to the DGCA Sri Lanka under the previous name, as a means of demonstrating how the organisation complies with the applicable requirements.

GM1 ORA.GEN.130(c) Changes to organisations

GENERAL

Typical examples of changes not requiring prior approval are to the following items:

- (a) flight simulation training device (FSTD) operator's technical personnel;
- (b) change in schedule of preventive maintenance; and
- (c) list of instructors.

It is recommended that all information on changes not requiring prior approval be included as annexes to the approved training organisation (ATO)'s and FSTD operator's.

ORA.GEN.135 Validity

- (a) The organisation's certificate shall remain valid for one year subject to:
 - (1) the organisation remaining in compliance with the relevant requirements of Regulations and its Implementing Standards, taking into account the provisions related to the handling of findings as specified under ORA.GEN.150;
 - (2) the DGCA Sri Lanka being granted access to the organisation as defined in ORA.GEN.140 to determine continued compliance with the relevant requirements of Regulations and its Implementing Standards; and
 - (3) the certificate not being surrendered or revoked.
- (b) Upon revocation or surrender the certificate shall be returned to the DGCA Sri Lanka without delay.

ORA.GEN.140 Access

For the purpose of determining compliance with the relevant requirements of Regulations and its Implementing Standards, the organisation shall grant access to any facility, aircraft, document, records, data, procedures or any other material relevant to its activity subject to certification, whether it is contracted or not, to any person authorised by DGCA Sri Lanka.

ORA.GEN.150 Findings

After receipt of notification of findings, the organisation shall:

- (a) identify the root cause of the non-compliance;
- (b) define a corrective action plan; and
- (c) demonstrate corrective action implementation to the satisfaction of the DGCA Sri Lanka and within a period as agreed.

AMC1 ORA.GEN.150(b) Findings

GENERAL

The corrective action plan defined by the organisation should address the effects of the non-conformity, as well as its root-cause.

GM1 ORA.GEN.150 Findings

GENERAL

- (a) Corrective action is the action to eliminate or mitigate the root cause(s) and prevent recurrence of an existing detected non-compliance or other undesirable condition or situation.
- (b) Proper determination of the root cause is crucial for defining effective corrective actions.

ORA.GEN.155 Immediate reaction to a safety problem

The organisation shall implement any safety measures, including Airworthiness Directives (ADs) and Service Bulletins (SBs) mandated by the DGCA Sri Lanka.

ORA.GEN.160 Occurrence reporting

- (a) The organisation shall report to the DGCA Sri Lanka, and to any other organisation required by the State of the operator to be informed, any accident, serious incident and occurrence as defined in Regulations and the applicable Implementing Standards.
- (b) Without prejudice to paragraph (a) the organisation shall report to the DGCA Sri Lanka and to the organisation responsible for the design of the aircraft any incident, malfunction, technical defect, exceeding of technical limitations and any occurrence that

would highlight inaccurate, incomplete or ambiguous information contained in the type certificate data sheet established in accordance with applicable Regulations and Requirements or other irregular circumstance that has or may have endangered the safe operation of the aircraft and that has not resulted in an accident or serious incident.

- (c) The reports referred in paragraphs (a) and (b) shall be made in a form and manner established by the DGCA Sri Lanka and contain all pertinent information about the condition known to the organisation.
- (d) Reports shall be made as soon as practicable, but in any case within 72 hours of the organisation identifying the condition to which the report relates, unless exceptional circumstances prevent this.
- (e) Where relevant, the organisation shall produce a follow-up report to provide details of actions it intends to take to prevent similar occurrences in the future, as soon as these actions have been identified. This report shall be produced in a form and manner established by the DGCA Sri Lanka.

AMC1 ORA.GEN.160 Occurrence reporting

GENERAL

The organisation should report all occurrences defined as specified by Implementing Standard 06 on occurrence reporting in civil aviation.

SECTION II – Management

ORA.GEN.200 Management system

- (a) The organisation shall establish, implement and maintain a management system that includes:
 - (1) clearly defined lines of responsibility and accountability throughout the organisation, including a direct safety accountability of the accountable manager;
 - (2) a description of the overall philosophies and principles of the organization with regard to safety, referred to as the safety policy;
 - (3) the identification of aviation safety hazards entailed by the activities of the organisation, their evaluation and the management of associated risks, including taking actions to mitigate the risk and verify their effectiveness;
 - (4) maintaining personnel trained and competent to perform their tasks;
 - (5) documentation of all management system key processes, including a process for making personnel aware of their responsibilities and the procedure for amending this documentation;
 - (6) a function to monitor compliance of the organisation with the relevant requirements. Compliance monitoring shall include a feedback system of findings to the accountable manager to ensure effective implementation of corrective actions as necessary; and
 - (7) any additional requirements that are prescribed in the relevant subparts of this Implementing Standard or other Implementing Standards .
- (b) The management system shall correspond to the size of the organisation and the nature and complexity of its activities, taking into account the hazards and associated risks inherent in these activities.
- (c) Notwithstanding point (a), in an organisation providing training only for the PPL, GPL or BPL and the associated ratings or certificates, safety risk management and compliance monitoring defined in points (a)(3) and (a)(6) may be accomplished by an organisational review, to be performed at least once every calendar year. The DGCA Sri Lanka shall be notified about the results of this review by the organisation without undue delay.

AMC1 ORA.GEN.200(a)(1);(2);(3);(5) Management system

NON-COMPLEX ORGANISATIONS - GENERAL

- (a) Safety risk management may be performed using hazard checklists or similar risk management tools or processes, which are integrated into the activities of the organisation.
- (b) The organisation should manage safety risks related to a change. The management of change should be a documented process to identify external and internal change that may have an adverse effect on safety. It should make use of the organisation's existing hazard identification, risk assessment and mitigation processes.
- (c) The organisation should identify a person who fulfils the role of safety manager and who is responsible for coordinating the safety management system. This person may be the accountable manager or a person with an operational role in the organisation.

- (d) Within the organisation, responsibilities should be identified for hazard identification, risk assessment and mitigation.
- (e) The safety policy should include a commitment to improve towards the highest safety standards, comply with all applicable legal requirements, meet all applicable standards, consider best practices and provide appropriate resources.
- (f) The organisation should, in cooperation with other stakeholders, develop, coordinate and maintain an emergency response plan (ERP) that ensures orderly and safe transition from normal to emergency operations and return to normal operations. The ERP should provide the actions to be taken by the organisation or specified individuals in an emergency and reflect the size, nature and complexity of the activities performed by the organisation.

AMC1 ORA.GEN.200(a)(1) Management system

COMPLEX ORGANISATIONS - ORGANISATION AND ACCOUNTABILITIES

The management system of an organisation should encompass safety by including a safety manager and a safety review board in the organisational structure.

- (a) Safety manager
 - (1) The safety manager should act as the focal point and be responsible for the development, administration and maintenance of an effective safety management system.
 - (2) The functions of the safety manager should be to:
 - (i) facilitate hazard identification, risk analysis and management;
 - (ii) monitor the implementation of actions taken to mitigate risks, as listed in the safety action plan;
 - (iii) provide periodic reports on safety performance;
 - (iv) ensure maintenance of safety management documentation;
 - (v) ensure that there is safety management training available and that it meets acceptable standards;
 - (vi) provide advice on safety matters; and
 - (vii) ensure initiation and follow-up of internal occurrence / accident investigations.
- (b) Safety review board
 - (1) The Safety review board should be a high level committee that considers matters of strategic safety in support of the accountable manager's safety accountability.
 - (2) The board should be chaired by the accountable manager and be composed of heads of functional areas.
 - (3) The safety review board should monitor:
 - (i) safety performance against the safety policy and objectives;
 - (ii) that any safety action is taken in a timely manner; and
 - (iii) the effectiveness of the organisation's safety management processes.

- (c) The safety review board should ensure that appropriate resources are allocated to achieve the established safety performance.
- (d) The safety manager or any other relevant person may attend, as appropriate, safety review board meetings. He/she may communicate to the accountable manager all information, as necessary, to allow decision making based on safety data.

GM1 ORA.GEN.200(a)(1) Management system

SAFETY MANAGER

- (a) Depending on the size of the organisation and the nature and complexity of its activities, the safety manager may be assisted by additional safety personnel for the performance of all safety management related tasks.
- (b) Regardless of the organisational set-up it is important that the safety manager remains the unique focal point as regards the development, administration and maintenance of the organisation's safety management system.

GM2 ORA.GEN.200(a)(1) Management system

COMPLEX ORGANISATIONS - SAFETY ACTION GROUP

- (a) A safety action group may be established as a standing group or as an ad-hoc group to assist or act on behalf of the safety review board.
- (b) More than one safety action group may be established depending on the scope of the task and specific expertise required.
- (c) The safety action group should report to and take strategic direction from the safety review board and should be comprised of managers, supervisors and personnel from operational areas.
- (d) The safety action group should:
 - (1) monitor operational safety;
 - (2) resolve identified risks;
 - (3) assess the impact on safety of operational changes; and
 - (4) ensure that safety actions are implemented within agreed timescales.
- (e) The safety action group should review the effectiveness of previous safety recommendations and safety promotion.

AMC1 ORA.GEN.200(a)(2) Management system

COMPLEX ORGANISATIONS - SAFETY POLICY

- (a) The safety policy should:
 - (1) be endorsed by the accountable manager;
 - (2) reflect organisational commitments regarding safety and its proactive and systematic management;
 - (3) be communicated, with visible endorsement, throughout the organisation; and

- (4) include safety reporting principles.
- (b) The safety policy should include a commitment:
 - (1) to improve towards the highest safety standards;
 - (2) to comply with all applicable legislation, meet all applicable standards and consider best practices;
 - (3) to provide appropriate resources;
 - (4) to enforce safety as one primary responsibility of all managers; and
 - (5) not to blame someone for reporting something which would not have been otherwise detected.
- (c) Senior management should:
 - (1) continually promote the safety policy to all personnel and demonstrate their commitment to it;
 - (2) provide necessary human and financial resources for its implementation; and
 - (3) establish safety objectives and performance standards.

GM1 ORA.GEN.200(a)(2) Management system

SAFETY POLICY

The safety policy is the means whereby the organisation states its intention to maintain and, where practicable, improve safety levels in all its activities and to minimise its contribution to the risk of an aircraft accident as far as is reasonably practicable.

The safety policy should state that the purpose of safety reporting and internal investigations is to improve safety, not to apportion blame to individuals.

AMC1 ORA.GEN.200(a)(3) Management system

COMPLEX ORGANISATIONS - SAFETY RISK MANAGEMENT

- (a) Hazard identification processes
 - (1) Reactive and proactive schemes for hazard identification should be the formal means of collecting, recording, analysing, acting on and generating feedback about hazards and the associated risks that affect the safety of the operational activities of the organisation.
 - (2) All reporting systems, including confidential reporting schemes, should include an effective feedback process.
- (b) Risk assessment and mitigation processes
 - (1) A formal risk management process should be developed and maintained that ensures analysis (in terms of likelihood and severity of occurrence), assessment (in terms of tolerability) and control (in terms of mitigation) of risks to an acceptable level.
 - (2) The levels of management who have the authority to make decisions regarding the tolerability of safety risks, in accordance with (b)(1), should be specified.

(c) Internal safety investigation

- (1) The scope of internal safety investigations should extend beyond the scope of occurrences required to be reported to the DGCA Sri Lanka.

(d) Safety performance monitoring and measurement

- (1) Safety performance monitoring and measurement should be the process by which the safety performance of the organisation is verified in comparison to the safety policy and objectives.
- (2) This process should include:
 - (i) safety reporting;
 - (ii) safety studies, that is, rather large analyses encompassing broad safety concerns;
 - (iii) safety reviews including trends reviews, which would be conducted during introduction and deployment of new technologies, change or implementation of procedures, or in situations of structural change in operations;
 - (iv) safety audits focussing on the integrity of the organisation's management system, and periodically assessing the status of safety risk controls; and
 - (v) safety surveys, examining particular elements or procedures of a specific operation, such as problem areas or bottlenecks in daily operations, perceptions and opinions of operational personnel and areas of dissent or confusion.

(e) The management of change

The organisation should manage safety risks related to a change. The management of change should be a documented process to identify external and internal change that may have an adverse effect on safety. It should make use of the organisation's existing hazard identification, risk assessment and mitigation processes.

(f) Continuous improvement

The organisation should continuously seek to improve its safety performance. Continuous improvement should be achieved through:

- (1) proactive and reactive evaluations of facilities, equipment, documentation and procedures through safety audits and surveys;
- (2) proactive evaluation of individuals' performance to verify the fulfilment of their safety responsibilities; and
- (3) reactive evaluations in order to verify the effectiveness of the system for control and mitigation of risk.

(g) The emergency response plan (ERP)

- (1) An ERP should be established that provides the actions to be taken by the organisation or specified individuals in an emergency. The ERP should reflect the size, nature and complexity of the activities performed by the organisation.
- (2) The ERP should ensure:
 - (i) an orderly and safe transition from normal to emergency operations;
 - (ii) safe continuation of operations or return to normal operations as soon as practicable; and
 - (iii) coordination with the emergency response plans of other organisations, where appropriate.

GM1 ORA.GEN.200(a)(3) Management system

INTERNAL OCCURRENCE REPORTING SCHEME

- (a) The overall purpose of the scheme is to use reported information to improve the level of safety performance of the organisation and not to attribute blame.
- (b) The objectives of the scheme are to:
 - (1) enable an assessment to be made of the safety implications of each relevant incident and accident, including previous similar occurrences, so that any necessary action can be initiated; and
 - (2) ensure that knowledge of relevant incidents and accidents is disseminated, so that other persons and organisations may learn from them.
- (c) The scheme is an essential part of the overall monitoring function and it is complementary to the normal day-to-day procedures and 'control' systems and is not intended to duplicate or supersede any of them. The scheme is a tool to identify those instances where routine procedures have failed.
- (d) All occurrence reports judged reportable by the person submitting the report should be retained as the significance of such reports may only become obvious at a later date.

GM4 ORA.GEN.200(a)(3) Management system

SAFETY RISK ASSESSMENT – RISK REGISTER

The results of the assessment of the potential adverse consequences or outcome of each hazard may be recorded by the ATO in a risk register, an example of which is provided below.

Hazard		Incident Sequence Description	Existing Controls	Outcome(Pre-Mitigation)			Additional Mitigation required	Outcome(Post-Mitigation)			Actions and Owners	Monitoring And review Requirements
No	Description			Severity	Likelihood	Risk		Severity	Likelihood	Risk		

AMC1 ORA.GEN.200(a)(4) Management system

TRAINING AND COMMUNICATION ON SAFETY

- (a) Training
 - (1) All personnel should receive safety training as appropriate for their safety responsibilities.
 - (2) Adequate records of all safety training provided should be kept.
- (b) Communication
 - (1) The organisation should establish communication about safety matters that:
 - (i) ensures that all personnel are aware of the safety management activities as appropriate for their safety responsibilities;

- (ii) conveys safety critical information, especially relating to assessed risks and analysed hazards;
 - (iii) explains why particular actions are taken; and
 - (iv) explains why safety procedures are introduced or changed.
- (2) Regular meetings with personnel where information, actions and procedures are discussed may be used to communicate safety matters.

GM1 ORA.GEN.200(a)(4) Management system

TRAINING AND COMMUNICATION ON SAFETY

The safety training programme may consist of self-instruction via a media (newsletters, flight safety magazines), class-room training, e-learning or similar training provided by training service providers.

AMC1 ORA.GEN.200(a)(5) Management system

ORGANISATION'S MANAGEMENT SYSTEM DOCUMENTATION

- (a) The organisation's management system documentation should at least include the following information:
- (1) a statement signed by the accountable manager to confirm that the organisation will continuously work in accordance with the applicable requirements and the organisation's documentation as required by this Part;
 - (2) the organisation's scope of activities;
 - (3) the titles and names of persons referred to in ORA.GEN.210(a) and (b);
 - (4) an organisation chart showing the lines of responsibility between the persons referred to in ORA.GEN.210;
 - (5) a general description and location of the facilities referred to in ORA.GEN.215;
 - (6) procedures specifying how the organisation ensures compliance with the applicable requirements;
 - (7) the amendment procedure for the organisation's management system documentation.
- (b) The organisation's management system documentation may be included in a separate manual or in (one of) the manual(s) as required by the applicable Subpart(s). A cross reference should be included.

GM1 ORA.GEN.200(a)(5) Management system

ORGANISATION'S MANAGEMENT SYSTEM DOCUMENTATION

- (a) It is not required to duplicate information in several manuals. The information may be contained in any of the organisation manuals (e.g. operations manual, training manual), which may also be combined.
- (b) The organisation may also choose to document some of the information required to be documented in separate documents (e.g. procedures). In this case, it should ensure that manuals contain adequate references to any document kept separately. Any such

documents are then to be considered an integral part of the organisation's management system documentation.

AMC1 ORA.GEN.200(a)(5) Management system

COMPLEX ORGANISATIONS – ORGANISATION'S SAFETY MANAGEMENT MANUAL

- (a) The safety management manual (SMM) should be the key instrument for communicating the approach to safety for the whole of the organisation. The SMM should document all aspects of safety management, including the safety policy, objectives, procedures and individual safety responsibilities.
- (b) The contents of the safety management manual should include all of the following:
 - (1) scope of the safety management system;
 - (2) safety policy and objectives;
 - (3) safety accountability of the accountable manager;
 - (4) safety responsibilities of key safety personnel;
 - (5) documentation control procedures;
 - (6) hazard identification and risk management schemes;
 - (7) safety action planning;
 - (8) safety performance monitoring;
 - (9) incident investigation and reporting;
 - (10) emergency response planning;
 - (11) management of change (including organisational changes with regard to safety responsibilities);
 - (12) safety promotion.
- (c) The SMM may be contained in (one of) the manual(s) of the organisation.

AMC1 ORA.GEN.200(a)(6) Management system

COMPLIANCE MONITORING - GENERAL

- (a) Compliance monitoring

The implementation and use of a compliance monitoring function should enable the organisation to monitor compliance with the relevant requirements of this Implementing Standard and other applicable Implementing Standards.

 - (1) The organisation should specify the basic structure of the compliance monitoring function applicable to the activities conducted.
 - (2) The compliance monitoring function should be structured according to the size of the organisation and the complexity of the activities to be monitored.
- (b) Organisations should monitor compliance with the procedures they have designed to ensure safe activities. In doing so, they should as a minimum, and where appropriate, monitor:

- (1) privileges of the organisation;
 - (2) manuals, logs, and records;
 - (3) training standards;
 - (4) management system procedures and manuals.
- (c) Organisational set up
- (1) To ensure that the organisation continues to meet the requirements of this Part and other applicable Parts, the accountable manager should designate a compliance monitoring manager. The role of the compliance monitoring manager is to ensure that the activities of the organisation are monitored for compliance with the applicable regulatory requirements, and any additional requirements as established by the organisation, and that these activities are being carried out properly under the supervision of the relevant head of functional area.
 - (2) The compliance monitoring manager should be responsible for ensuring that the compliance monitoring programme is properly implemented, maintained and continually reviewed and improved.
 - (3) The compliance monitoring manager should:
 - (i) have direct access to the accountable manager;
 - (ii) not be one of the other persons referred to in ORA.GEN.210(b);
 - (iii) be able to demonstrate relevant knowledge, background and appropriate experience related to the activities of the organisation; including knowledge and experience in compliance monitoring; and
 - (iv) have access to all parts of the organisation, and as necessary, any contracted organisation.
 - (4) In the case of a non-complex organisation, this task may be exercised by the accountable manager provided he/she has demonstrated having the related competence as defined in (c)(3)(iii).
 - (5) In the case the same person acts as compliance monitoring manager and as safety manager, the accountable manager, with regards to his/her direct accountability for safety, should ensure that sufficient resources are allocated to both functions, taking into account the size of the organisation and the nature and complexity of its activities.
 - (6) The independence of the compliance monitoring function should be established by ensuring that audits and inspections are carried out by personnel not responsible for the function, procedure or products being audited.
- (d) Compliance monitoring documentation
- (1) Relevant documentation should include the relevant part(s) of the organisation's management system documentation.
 - (2) In addition, relevant documentation should also include the following:
 - (i) terminology;
 - (ii) specified activity standards;
 - (iii) a description of the organisation;
 - (iv) the allocation of duties and responsibilities;
 - (v) procedures to ensure regulatory compliance;

- (vi) the compliance monitoring programme, reflecting:
 - (A) schedule of the monitoring programme;
 - (B) audit procedures;
 - (C) reporting procedures;
 - (D) follow-up and corrective action procedures; and
 - (E) recording system.
 - (vii) the training syllabus referred to in (e)(2);
 - (viii) document control.
- (e) Training
- (1) Correct and thorough training is essential to optimise compliance in every organisation. In order to achieve significant outcomes of such training, the organisation should ensure that all personnel understand the objectives as laid down in the organisation's management system documentation.
 - (2) Those responsible for managing the compliance monitoring function should receive training on this task. Such training should cover the requirements of compliance monitoring, manuals and procedures related to the task, audit techniques, reporting and recording.
 - (3) Time should be provided to train all personnel involved in compliance management and for briefing the remainder of the personnel.
 - (4) The allocation of time and resources should be governed by the volume and complexity of the activities concerned.

GM1 ORA.GEN.200(a)(6) Management system

COMPLIANCE MONITORING - GENERAL

- (a) The organisational set-up of the compliance monitoring function should reflect the size of the organisation and the nature and complexity of its activities. The compliance monitoring manager may perform all audits and inspections himself/herself or appoint one or more auditors by choosing personnel having the related competence as defined in AMC1 ORA.GEN.200(a)(6) point (c)(3)(iii), either from within or outside the organisation.
- (b) Regardless of the option chosen it must be ensured that the independence of the audit function is not affected, in particular in cases where those performing the audit or inspection are also responsible for other functions within the organisation.
- (c) In case external personnel are used to perform compliance audits or inspections:
 - (1) any such audits or inspections are performed under the responsibility of the compliance monitoring manager; and
 - (2) the organisation remains responsible to ensure that the external personnel has relevant knowledge, background and experience as appropriate to the activities being audited or inspected; including knowledge and experience in compliance monitoring.

- (d) The organisation retains the ultimate responsibility for the effectiveness of the compliance monitoring function in particular for the effective implementation and follow-up of all corrective actions.

GM2 ORA.GEN.200(a)(6) Management system

COMPLEX ORGANISATIONS - COMPLIANCE MONITORING PROGRAMME FOR ATOs

- (a) Typical subject areas for compliance monitoring audits and inspections for approved training organisations (ATOs) should be the following:
- (1) facilities;
 - (2) actual flight and ground training;
 - (3) technical standards.
- (b) ATOs should monitor compliance with the training and operations manuals they have designed to ensure safe and efficient training. In doing so, they should, where appropriate, additionally monitor the following:
- (1) training procedures;
 - (2) flight safety;
 - (3) flight and duty time limitations, rest requirements and scheduling;
 - (4) aircraft maintenance/operations interface.

GM3 ORA.GEN.200(a)(6) Management system

AUDIT AND INSPECTION

- (a) 'Audit' means a systematic, independent and documented process for obtaining evidence and evaluating it objectively to determine the extent to which requirements are complied with.
- (b) 'Inspection' means an independent documented conformity evaluation by observation and judgement accompanied as appropriate by measurement, testing or gauging, in order to verify compliance with applicable requirements.

AMC1 ORA.GEN.200(b) Management system

SIZE, NATURE AND COMPLEXITY OF THE ACTIVITY

- (a) An organisation should be considered as complex when it has a workforce of more than 20 full time equivalents (FTEs) involved in the activity subject to Regulations and its Implementing Standards.
- (b) Organisations with up to 20 full time equivalents (FTEs) involved in the activity subject to Regulations and its Implementing Standards, may also be considered complex based on an assessment of the following factors:
- (1) in terms of complexity, the extent and scope of contracted activities subject to the approval;
 - (2) in terms of risk criteria, whether any of the following are present:

- (i) operations requiring the following specific approvals: performance based navigation (PBN), low visibility operation (LVO), extended range operations with two-engined aeroplanes (ETOPS), helicopter hoist operation (HHO), helicopter emergency medical service (HEMS), night vision imaging system (NVIS) and dangerous goods (DG);
 - (ii) different types of aircraft used;
 - (iii) the environment (offshore, mountainous area etc.);
- (c) Regardless of the criteria mentioned in (a) and (b), the following organisations should always be considered as non-complex:
 - (1) Approved Training Organisations (ATOs) only providing training for the private pilot licence (PPL), sailplane/glider pilot licence (GPL) or balloon pilot licence (BPL) and the associated ratings and certificates;
- (d) Regardless of the criteria mentioned in (a) and (b), the organisations that provide training in the following areas should always be considered as complex:
 - (1) full flight simulators (FFSs); or
 - (2) multi-pilot (MP) type rating; or
 - (3) zero-flight-time training (ZFTT); or
 - (4) complex aircraft; or
 - (5) different categories of aircraft; or
 - (6) instructor certificates for point (2) and (4) aircraft; or
 - (7) two or more aerodromes/operating sites.

AMC1 ORA.GEN.200(c) Management system

ATOs PROVIDING TRAINING ONLY FOR THE PPL, GPL AND BPL AND THE ASSOCIATED RATINGS OR CERTIFICATES – ORGANISATIONAL REVIEW

- (a) The primary objective of the organisational review is to enable the organisation to ensure that its management system remains effective by verifying that it:
 - (1) has continually identified its aviation safety hazards;
 - (2) has effectively mitigated the associated risks; and
 - (3) monitors compliance with the applicable requirements.
- (b) Safety risk management should:
 - (1) be performed using internal safety or occurrence reports, hazard checklists, risk registers or similar risk management tools or processes, integrated into the activities of the organisation;
 - (2) in particular address safety risks related to a change; making use of the existing hazard identification, risk assessment and mitigation tools or processes; and
 - (3) include provisions for emergency response or a formal Emergency Response Plan (ERP).
- (c) As part of the management system documentation required by ORA.GEN.200(a)(5), the organisation should describe the organisational review programme and related responsibilities. Persons responsible for the organisational review should have a thorough knowledge of the applicable requirements and of the organisation's procedures.

- (d) The status of all corrective and risk mitigation actions should be monitored by the person responsible for the organisational review programme and implemented within a specified time frame. Action closure should be recorded by the person responsible for the organisational review programme, along with a summary of the action taken.
- (e) The results of the organisational review, including all non-compliance findings and new risks identified during the review, should be presented to the accountable manager and the person or group of persons nominated in accordance with ORA.GEN.210(b) prior to notification to the DGCA Sri Lanka. All level 1 findings in the sense of following* should be immediately notified to the DGCA Sri Lanka and all necessary actions immediately taken.

* (a) The DGCA Sri Lanka for oversight will have a system to analyse findings for their safety significance.

The DGCA Sri Lanka shall verify:

- (1) compliance with the requirements applicable to organisations or persons prior to the issue of an organisation certificate, approval, FSTD qualification certificate or personnel licence, certificate, rating, or attestation, as applicable;
- (2) continued compliance with the requirements applicable to the persons holding licences, ratings and certificates, the organisations it has certified, the holders of a FSTD qualification and the organisations from which it received a declaration;
- (3) implementation of appropriate safety measures mandated by the DGCA Sri Lanka.
- (b) A level 1 finding shall be issued by the DGCA Sri Lanka when any significant non-compliance is detected with the applicable requirements and its Implementing Standards, with the organisation's training and procedure manual or with the terms of an approval or certificate which lowers safety or seriously hazards flight safety.

The level 1 findings shall include:

- (1) failure to give the DGCA Sri Lanka access to the organisation's facilities as defined in ORA.GEN.140 during normal operating hours and after two written requests;
- (2) obtaining or maintaining the validity of the organisation certificate by falsification of submitted documentary evidence;
- (3) evidence of malpractice or fraudulent use of the organisation certificate; and
- (4) the lack of an accountable manager.
- (c) A level 2 finding shall be issued by the DGCA Sri Lanka when any non-compliance is detected with the applicable requirements of and its Implementing Standards, with the organisation's training and procedure manual or with the terms of an approval or certificate which could lower safety or hazard flight safety.
- (d) When a finding is detected during oversight or by any other means, the DGCA Sri Lanka shall, without prejudice to any additional action required by Regulation and its Implementing Standards, communicate the finding to the organisation in writing and request corrective action to address the non-compliance(s) identified. Where relevant, the DGCA Sri Lanka shall inform the State in which the aircraft is registered.
 - (1) In the case of level 1 findings the DGCA Sri Lanka shall take immediate and appropriate action to prohibit or limit activities and, if appropriate, it shall take action to revoke the certificate or specific approval or to limit or suspend it in

whole or in part, depending upon the extent of the level 1 finding, until successful corrective action has been taken by the organisation.

- (2) In the case of level 2 findings, the DGCA Sri Lanka shall:
 - (i) grant the organisation a corrective action implementation period appropriate to the nature of the finding that in any case initially shall not be more than 3 months. At the end of this period, and subject to the nature of the finding, the DGCA Sri Lanka may extend the 3-month period subject to a satisfactory corrective action plan agreed by the DGCA Sri Lanka; and
 - (ii) assess the corrective action and implementation plan proposed by the organisation and, if the assessment concludes that they are sufficient to address the non-compliance(s), accept these.
- (3) Where an organisation fails to submit an acceptable corrective action plan, or to perform the corrective action within the time period accepted or extended by the DGCA Sri Lanka, the finding shall be raised to a level 1 finding and action taken as laid down in (d)(1).
- (4) The DGCA Sri Lanka shall record all findings it has raised or that have been communicated to it and, where applicable, the enforcement measures it has applied, as well as all corrective actions and date of action closure for findings.
- (f) Based on the results of the organisational review, the accountable manager should determine the need for and initiate, as appropriate, further actions to address deficiencies in or further improve the organisation's management system.

GM1 ORA.GEN.200(c) Management system

ATOs PROVIDING TRAINING ONLY FOR THE PPL, GPL OR BPL AND THE ASSOCIATED RATINGS OR CERTIFICATES – ORGANISATIONAL REVIEW PROGRAMME

- (a) The organisational review programme may consist of:
 - (1) checklist(s) covering all items necessary to be addressed in order to ensure that the organisation identified its aviation safety hazards, effectively mitigates the associated risks and ensures effective compliance with the applicable requirements. These should address all procedures described in the management system documentation and training manual; and
 - (2) a schedule for the accomplishment of the different checklist items, with each item being checked at least once within any 12-month period. The organisation may choose to conduct one full review annually or to conduct several partial reviews.
- (b) Performance of organisational reviews:

Each review item may be addressed using an appropriate combination of:

 - (1) review of training records, training documentation;
 - (2) review of internal safety reports (e.g. notified difficulties in using current procedures and training material, etc.);
 - (3) review of the risk register and hazard checklists, as applicable;
 - (4) sample check of training courses;
 - (5) witnessing of examinations, as appropriate;

- (6) interview of the personnel involved; and
- (7) review of the feedback provided by students and customers.
- (c) It is recommended that internal safety reports and occurrence reports be reviewed on a continual basis with the aim of identifying possible corrective and risk mitigation actions.

GM2 ORA.GEN.200(c) Management system

ATOs PROVIDING TRAINING ONLY FOR THE PPL, GPL OR BPL AND THE ASSOCIATED RATINGS OR CERTIFICATES – ORGANISATIONAL REVIEW ITEMS

The following provides a list of typical items for an organisational review checklist, to be adapted as necessary to cover all relevant procedures described in the management system documentation and training manual:

- (a) Terms of approval
Check that:
 - (1) no training has been performed outside the terms of approval;
 - (2) changes not requiring prior approval have been properly managed.
- (b) Training syllabi and course material
Check that:
 - (1) training syllabi and course materials are in compliance with the applicable requirements, as last amended;
 - (2) training practices are in compliance with the documentation; and
 - (3) instructor training practices are standardised.
- (c) Training equipment and tools
Check that all equipment and tools other than aircraft and FSTDs are present and meet the criteria defined in the training manual.
- (d) Facilities
Check that the facilities meet the criteria defined in the training manual.
- (e) Training aircraft and FSTDs
Check that the training aircraft and FSTDs meet the criteria defined in the training manual.
- (f) Personnel
Check that:
 - (1) the current accountable manager and other nominated persons are correctly identified;
 - (2) the organisation chart accurately indicates lines of responsibility and accountability throughout the organisation;
 - (3) the organisation remains in compliance with the applicable requirements, in case the number of personnel has decreased or if the activity has increased;
 - (4) the qualification of all new personnel (or personnel with new functions) has been appropriately assessed;

- (5) staff involved in any safety management-related processes and tasks has been properly trained; and
- (6) staff has been trained, as necessary, to cover changes in regulations, in DGCA Sri Lanka publications, in the organisation, its management system documentation and in associated procedures, etc.
- (g) Contracted activities (In case the organisation has contracted activities):
 - (1) Check that new providers have been assessed prior to the establishment of any contract;
 - (2) For existing providers approved for such activities: check the authorisation and approval status of the contracted organisation; and
 - (3) For existing providers not approved for such activities: check that the service provided conforms to the applicable requirements of this Implementing Standard.
- (h) Training and communication on safety

Check that:

 - (1) all personnel are aware of safety management policies, processes and tasks;
 - (2) safety-related documentations and publications are available; and
 - (3) safety-critical information derived from internal safety or occurrence reporting and hazard identification have been timely communicated to all staff concerned.
- (i) Management system documentation

Check that:

 - (1) the documentation is adequate and updated;
 - (2) staff are aware of the safety policy; and
 - (3) staff can easily access such documentation when needed.
- (j) Record-keeping

Check that:

 - (1) the records cover all the training activities and management system processes; and
 - (2) minimum record-keeping periods (random checks) are complied with.
- (k) Emergency response provisions or ERP

Check that:

 - (1) emergency response information is up to date and readily available; and
 - (2) all staff are aware of emergency response information or the ERP, as applicable (random checks).
- (l) Internal safety or occurrence reporting procedures
 - (1) Check the number of reports received since the last review;
 - (2) Check that:
 - (i) internal reporting and external occurrence reporting are performed in accordance with reporting procedures;
 - (ii) the safety or occurrence reports are analysed; and
 - (iii) feedback is provided to reporters.
- (m) Other risk management tools or processes implemented

- (1) As applicable, check that:
 - (i) records of hazards and risks are assessed; in particular following analysis of safety or occurrence reports and when significant changes occur (regulations, personnel, training aircraft, training courses, etc.);
 - (ii) the risks are assessed and the risk mitigation actions followed up and recorded;
 - (iii) any risk that has been found acceptable is duly justified; and
 - (iv) the assumptions made for the risk assessment remain valid;
- (2) Verify the effectiveness of all risk mitigation actions initiated since the last organisational review.

ORA.GEN.205 Contracted activities

- (a) Contracted activities include all activities within the organisation's scope of approval that are performed by another organisation either itself certified to carry out such activity or if not certified, working under the contracting organisation's approval. The organisation shall ensure that when contracting or purchasing any part of its activity, the contracted or purchased service or product conforms to the applicable requirements.
- (b) When the certified organisation contracts any part of its activity to an organisation that is not itself certified in accordance with this Part to carry out such activity, the contracted organisation shall work under the approval of the contracting organisation. The contracting organisation shall ensure that the DGCA Sri Lanka is given access to the contracted organisation, to determine continued compliance with the applicable requirements.

AMC1 ORA.GEN.205 Contracted activities

RESPONSIBILITY WHEN CONTRACTING ACTIVITIES

- (a) The organisation may decide to contract certain activities to external organisations.
- (b) A written agreement should exist between the organisation and the contracted organisation clearly defining the contracted activities and the applicable requirements.
- (c) The contracted safety related activities relevant to the agreement should be included in the organisation's safety management and compliance monitoring programmes.
- (d) The organisation should ensure that the contracted organisation has the necessary authorisation or approval when required, and commands the resources and competence to undertake the task.

GM1 ORA.GEN.205 Contracted activities

RESPONSIBILITY WHEN CONTRACTING ACTIVITIES

- (a) Regardless of the approval status of the contracted organisation, the contracting organisation is responsible to ensure that all contracted activities are subject to hazard identification and risk management as required by ORA.GEN.200(a)(3) and to compliance monitoring as required by ORA.GEN.200(a)(6).

- (b) When the contracted organisation is itself certified to carry out the contracted activities, the organisation's compliance monitoring should at least check that the approval effectively covers the contracted activities and that it is still valid.
- (c) If the organisation requires the contracted organisation to conduct an activity which exceeds the contracted organisation's terms of approval, this will be considered as the contracted organisation working under the approval of the contracting organisation.

ORA.GEN.210 Personnel requirements

- (a) The organisation shall appoint an accountable manager, who has the authority for ensuring that all activities can be financed and carried out in accordance with the applicable requirements. The accountable manager shall be responsible for establishing and maintaining an effective management system.
- (b) A person or group of persons shall be nominated by the organisation, with the responsibility of ensuring that the organisation remains in compliance with the applicable requirements. Such person(s) shall be ultimately responsible to the accountable manager.
- (c) The organisation shall have sufficient qualified personnel for the planned tasks and activities to be performed in accordance with the applicable requirements.
- (d) The organisation shall maintain appropriate experience, qualification and training records to show compliance with paragraph (c).
- (e) The organisation shall ensure that all personnel are aware of the rules and procedures relevant to the exercise of their duties.

ORA.GEN.215 Facility requirements

The organisation shall have facilities allowing the performance and management of all planned tasks and activities in accordance with the applicable requirements.

AMC1 ORA.GEN.215 Facility requirements

ATOs PROVIDING TRAINING FOR the CPL, MPL AND ATPL AND THE ASSOCIATED RATINGS AND CERTIFICATES

- (a) For ATOs providing flight training, the following flight operations accommodation should be available:
 - (1) an operations room with facilities to control flying operations;
 - (2) a flight planning room with the following facilities:
 - (i) appropriate current maps and charts;
 - (ii) current aeronautical information service (AIS) information;
 - (iii) current meteorological information;
 - (iv) communications to air traffic control (ATC) and the operations room;
 - (v) any other flight safety related material.
 - (3) adequate briefing rooms/cubicles of sufficient size and number;

- (4) suitable offices for the supervisory personnel and room(s) to allow flight instructors to write reports on students, complete records and other related documentation;
- (5) furnished crew-room(s) for instructors and students.
- (b) For ATOs providing theoretical knowledge training, the following facilities for theoretical knowledge instruction should be available:
 - (1) adequate classroom accommodation for the current student population;
 - (2) suitable demonstration equipment to support the theoretical knowledge instruction;
 - (3) a radiotelephony training and testing facility;
 - (4) a reference library containing publications giving coverage of the syllabus;
 - (5) offices for the instructional personnel.

AMC2 ORA.GEN.215 Facility requirements

ATOs PROVIDING TRAINING FOR THE PPL, GPL OR BPL AND THE ASSOCIATED RATINGS AND CERTIFICATES

- (a) The following flight operations accommodation should be available:
 - (1) a flight planning room with the following facilities:
 - (i) appropriate current aviation maps and charts;
 - (ii) current AIS information;
 - (iii) current meteorological information;
 - (iv) communications to ATC (if applicable);
 - (v) any other flight safety related material.
 - (2) adequate briefing room(s)/cubicles of sufficient size and number;
 - (3) suitable office(s) to allow flight instructors to write reports on students, complete records and other related documentation;
 - (4) suitable rest areas for instructors and students, where appropriate to the training task;
 - (5) in the case of ATOs providing training for the BPL only, the flight operations accommodation listed in (a)(1) to (a)(4) may be replaced by other suitable facilities when operating outside aerodromes.
- (b) The following facilities for theoretical knowledge instruction should be available:
 - (1) adequate classroom accommodation for the current student population;
 - (2) suitable demonstration equipment to support the theoretical knowledge instruction;
 - (3) suitable office(s) for the instructional personnel.
- (c) A single room may be sufficient to provide the functions listed in (a) and (b).

ORA.GEN.220 Record-keeping

- (a) The organisation shall establish a system of record-keeping that allows adequate storage and reliable traceability of all activities developed, covering in particular all the elements indicated in ORA.GEN.200.

- (b) The format of the records shall be specified in the organisation's procedures.
- (c) Records shall be stored in a manner that ensures protection from damage, alteration and theft.

AMC1 ORA.GEN.220(b) Record-keeping

GENERAL

- (a) The record-keeping system should ensure that all records are accessible whenever needed within a reasonable time. These records should be organised in a way that ensures traceability and retrievability throughout the required retention period.
- (b) Records should be kept in paper form or in electronic format or a combination of both. Records stored on microfilm or optical disc format are also acceptable. The records should remain legible throughout the required retention period. The retention period starts when the record has been created or last amended.
- (c) Paper systems should use robust material which can withstand normal handling and filing. Computer systems should have at least one backup system which should be updated within 24 hours of any new entry. Computer systems should include safeguards against the ability of unauthorised personnel to alter the data.
- (d) All computer hardware used to ensure data backup should be stored in a different location from that containing the working data and in an environment that ensures they remain in good condition. When hardware or software changes take place, special care should be taken that all necessary data continues to be accessible at least through the full period specified in the relevant Subpart. In the absence of such indication, all records should be kept for a minimum period of 5 years.

GM1 ORA.GEN.220(b) Record-keeping

RECORDS

Microfilming or optical storage of records may be carried out at any time. The records should be as legible as the original record and remain so for the required retention period.

SUBPART ATO – APPROVED TRAINING ORGANISATIONS

SECTION I – General

ORA.ATO.100 Scope

This Subpart establishes the requirements to be met by organisations providing training for pilot licences and associated ratings and certificates.

GM1 ORA.ATO.100 Scope

The content of this Section contains the requirements applicable to all ATOs providing training for pilot licences and the associated ratings and certificates.

It is applicable to ATOs providing training for:

- (a) the PPL, GPL and BPL and the associated ratings and certificates; and
- (b) the commercial pilot licence (CPL), multi-crew pilot licence (MPL) and airline transport pilot licence (ATPL) and the associated ratings and certificates.

ORA.ATO.105 Application

- (a) Applicants for the issue of a certificate as an approved training organisation (ATO) shall provide the DGCA Sri Lanka with:
 - (1) the following information:
 - (i) name and address of the training organisation;
 - (ii) date of intended commencement of activity;
 - (iii) personal details and qualifications of the head of training (HT), the flight instructor(s), flight simulation training instructors and the theoretical knowledge instructor(s);
 - (iv) name(s) and address(es) of the aerodromes(s) and/or operating site(s) at which the training is to be conducted;
 - (v) list of aircraft to be operated for training, including their group, class or type, registration, owners and category of the certificate of airworthiness, if applicable
 - (vi) list of flight simulation training devices (FSTDs) that the training organisation intends to use, if applicable;
 - (vii) the type of training that the training organisation wishes to provide and the corresponding training programme; and
 - (2) the operations and training manuals .
- (b) In the case of a change to the certificate, applicants shall provide the DGCA Sri Lanka with the relevant parts of the information and documentation referred to in (a).

AMC1 ORA.ATO.105 Application

Application forms have been published in SLCAP 3090, Appendix A and L.

ORA.ATO.110 Personnel requirements

- (a) An HT shall be nominated. The HT shall have extensive experience as an instructor in the areas relevant for the training provided by the ATO and shall possess sound managerial capability.
- (b) The HT's responsibilities shall include:
 - (1) ensuring that the training provided is in compliance with Implementing Standard 72
 - (2) ensuring the satisfactory integration of flight training in an aircraft or a flight simulation training device (FSTD) and theoretical knowledge instruction; and
 - (3) supervising the progress of individual students.
- (c) Theoretical knowledge instructors shall have:
 - (1) practical background in aviation in the areas relevant for the training provided and have undergone a course of training in instructional techniques; or
 - (2) previous experience in giving theoretical knowledge instruction and an appropriate theoretical background in the subject on which they will provide theoretical knowledge instruction.
- (d) Flight instructors and flight simulation training instructors shall hold the qualifications required by Implementing Standard 72 for the type of training that they are providing.

AMC1 ORA.ATO.110(b) Personnel requirements

HEAD OF TRAINING

The nominated head of training (HT) should have the overall responsibility to ensure that the training is in compliance with the appropriate requirements. In an ATO providing training courses for different aircraft categories, the HT shall be assisted by one or more nominated deputy HT(s) for certain flight training courses.

AMC1 ORA.ATO.110(c) Personnel requirements

THEORETICAL KNOWLEDGE INSTRUCTORS

Theoretical knowledge instructors should, before appointment, prove their competency by giving a test lecture based on material they have developed for the subjects they are to teach.

ORA.ATO.120 Record-keeping

The following records shall be kept throughout the course and for a period of five years after the completion of the training:

- (a) details of ground, flight, and simulated flight training given to individual students;
- (b) detailed and regular progress reports from instructors including assessments, and regular progress flight tests and ground examinations; and
- (c) information on the licences and associated ratings and certificates of the students, including the expiry dates of medical certificates and ratings.

AMC1 ORA.ATO.120(a);(b) Record-keeping

ATOs PROVIDING TRAINING ONLY FOR THE PPL, GPL OR BPL AND THE ASSOCIATED RATINGS AND CERTIFICATES

The details of ground, flight and flight instruction by using FSTD given to a specific individual student and the detailed progress reports from instructors may be kept also in a student's progress card. This progress card should contain all the exercises of the training syllabus. The instructor should sign this card if a certain exercise has been completed or a specific assessment has been conducted.

ORA.ATO.125 Training programme

- (a) A training programme shall be developed for each type of course offered.
- (b) The training programme shall comply with the requirements of Implementing Standard 72.

AMC1 ORA.ATO.125 Training programme

GENERAL

Flight training in an FSTD and theoretical knowledge instruction should be phased in such a manner as to ensure that students are able to apply to flight exercises the knowledge gained on the ground. Arrangements should be made so that problems encountered during instruction can be resolved during subsequent training.

AMC2 ORA.ATO.125 Training programme

TYPE RATING COURSES – AEROPLANES

- (a) Introduction
 - (1) When developing the training programme for a type rating course, in addition to complying with the standards included in the type certificate data sheet (TCDS), as established in accordance with applicable Regulations published by DGCA Sri Lanka, the ATO should also follow any further recommendations contained therein.
 - (2) The type rating course should, as far as possible, provide for a continual process of ground, FSTD and flight training to enable the student to assimilate the knowledge and skills required to operate a specific aircraft type safely and efficiently. The student's ability to do this should be determined by the demonstration of a satisfactory level of theoretical knowledge of the aircraft determined by progressive checking of knowledge and examination, progressive assessment by

the ATO during flight training and the successful completion of a practical skill test with an examiner.

- (3) The type rating course should normally be conducted as a single, fulltime course of study and training. However, in the situation where the course is intended to enable a pilot to fly a further aircraft type while continuing to fly a current type, such as to enable mixed fleet flying with the same operator, some elements of the theoretical knowledge course conducted by self-study may be undertaken while the student continues to fly the current type.

(b) Variants

- (1) Familiarisation training: Where an aeroplane type rating also includes variants of the same aircraft type requiring familiarisation training, the additional familiarisation training may be included in the theoretical knowledge training of the initial type rating course. Flight training should be conducted on a single variant within the type.
- (2) Differences training: Where an aeroplane type rating also includes variants of the same aircraft type for which difference training is required, the initial training course should be directed towards a single variant. Additional training to operate other variants within the same type rating should be completed after successful completion of the initial type rating course. However, elements of this differences training may be undertaken at appropriate stages of the initial course, with the agreement of the DGCA Sri Lanka.

(c) Programme of theoretical knowledge and flight training

- (1) The training programme should specify the time allocated to theoretical knowledge training, FSTD training and, if not approved for zero flight time training (ZFTT), the aeroplane. The initial type rating course should be programmed on the basis that the student has the minimum licensing and experience requirements for entry to the course. For a first type rating on a multi-pilot aeroplane (MPA), the course should also provide for consolidation and type-specific training in those elements of basic multi-crew cooperation (MCC) training relevant to the type or variant.
- (2) If the ATO wishes to provide a training course that includes credit for previous experience on similar types of aircraft, such as those with common systems or operating procedures with the new type, the entry requirements to such courses should be specified by the ATO and should define the minimum level of experience and qualification required of the flight crew member.
- (3) The ATO is permitted to contract elements of training to a third party training provider. In such cases the contracted organisation should normally be approved to conduct such training. When the contracted organisation is not an ATO, the DGCA Sri Lanka should, within the approval process of the ATO, include the contracted organisation and be satisfied that the standard of training intended to be given meets the requirements. The other obligations of the ATO, such as student progress monitoring and an adequate management system, can be exercised by the ATO seeking approval and which retains responsibility for the whole course.

GROUND TRAINING

(d) Syllabus

The ground training syllabus should provide for the student to gain a thorough understanding of the operation, function and, if appropriate, abnormal and emergency

operation of all aircraft systems. This training should also include those systems essential to the operation of the aircraft, such as ‘fly-by-wire’ flight control systems, even if the flight crew have little or no control of their normal or abnormal operation.

(e) Theoretical knowledge instruction

The theoretical knowledge instruction training should meet the general objectives of (but not be limited to) giving the student:

- (1) a thorough knowledge of the aircraft structure, powerplant and systems, and their associated limitations, including mass and balance, aircraft performance and flight planning considerations;
- (2) a knowledge of the positioning and operation of the cockpit controls and indicators for the aircraft and its systems;
- (3) an understanding of system malfunctions, their effect on aircraft operations and interaction with other systems; and
- (4) the understanding of normal, abnormal and emergency procedures.

(f) Facilities and training aids

The ATO should provide adequate facilities for classroom instruction and have available appropriately qualified and experienced instructors. Training aids should enable students to gain practical experience of the operation of systems covered by the theoretical knowledge syllabus and, in the case of multi-pilot aeroplanes, enable such practical application of the knowledge to be carried out in a multi-crew environment. Facilities should be made available for student self-study outside the formal training programme.

(g) Computer-based training (CBT)

CBT provides a valuable source of theoretical instruction, enabling the students to progress at their own pace within specified time limits. Many such systems ensure that syllabus subjects are fully covered and progress can be denied until a satisfactory assimilation of knowledge has been demonstrated. Such systems may allow self-study or distance learning, if they incorporate adequate knowledge testing procedures. When CBT is used as part of the theoretical knowledge instruction phase, the student should also have access to a suitably qualified instructor able to assist with areas of difficulty for the student.

(h) Self-study and distance learning

Elements of the theoretical knowledge syllabus may be adequately addressed by distance learning, if approved, or self-study, particularly when utilising CBT. Progress testing, either by self-assessed or instructor-evaluated means should be included in any self-study programme. If self-study or distance learning is included in the theoretical knowledge training, the course should also provide for an adequate period of supervised consolidation and knowledge testing.

(i) Progress tests and final theoretical knowledge examination

- (1) The theoretical knowledge training programme should provide for progressive testing of the assimilation of the required knowledge. This testing process should also provide for retesting of syllabus items so that a thorough understanding of the required knowledge is assured. This should be achieved by intervention by a qualified instructor or, if using CBT with a self-testing facility, and by further testing during the supervised consolidation phase of the ground course.
- (2) The final theoretical knowledge examination should cover all areas of the theoretical knowledge syllabus. The final examination should be conducted as a supervised written (including computer-based) knowledge test without reference

to course material. The pass mark of 75% assumes the achievement of satisfactory levels of knowledge during the progressive phase tests of the course. The student should be advised of any areas of lack of knowledge displayed during the examination and, if necessary, given remedial instruction. A successful pass of the theoretical knowledge course and final examination should be a pre-requisite for progression to the flight training phase of the type rating course, unless otherwise determined in the TCDS established in accordance with applicable CAASL Regulations.

FLIGHT TRAINING

(j) Flight simulation training devices (FSTDs)

A type rating course for a multi-pilot aeroplane should include FSTD training.

The amount of training required when using FSTDs will depend on the complexity of the aeroplane concerned, and to some extent on the previous experience of the pilot. Except for those courses giving credit for previous experience (c.2.), a minimum of 32 hours of FSTD training should be programmed for a crew of a multi-pilot aeroplane, of which at least 16 hours should be in an FFS operating as a crew. FFS time may be reduced if other qualified FSTDs used during the flight training programme accurately replicate the cockpit environment, operation and aeroplane response. Such FSTDs may typically include flight management computer (FMC) training devices using hardware and computer programmes identical to those of the aeroplane.

(k) Aeroplane training with FFS

(1) with the exception of courses approved for ZFTT, certain training exercises normally involving take-off and landing in various configurations should be completed in the aeroplane rather than in an FFS. Unless otherwise specified in the TCDS established in accordance with applicable CAASL Regulations, this take-off and landing training should include:

- (A) at least four landings in the case of MPAs where the student pilot has more than 500 hours of MPA experience in aeroplanes of similar size and performance or, in all other cases, at least six landings;
- (B) at least one full-stop landing; and
- (C) one go-around with all engines operating.

This aeroplane training may be completed after the student pilot has completed the FSTD training and has successfully undertaken the type rating skill test, provided it does not exceed 2 hours of the flight training course.

(2) courses approved for ZFTT

- (i) During the specific simulator session before line flying under supervision (LIFUS), consideration should be given to varying conditions, for example:
 - (A) runway surface conditions;
 - (B) runway length;
 - (C) flap setting;
 - (D) power setting;
 - (E) crosswind and turbulence conditions; and
 - (F) maximum take-off mass (MTOM) and maximum landing mass (MLM).

- (ii) At least one landing should be conducted as full-stop landing. The session should be flown in normal operation. Special attention should be given to the taxiing technique.
 - (iii) A training methodology should be agreed with the DGCA Sri Lanka that ensures the trainee is fully competent with the exterior inspection of the aeroplane before conducting such an inspection un-supervised.
 - (iv) The LIFUS should be performed as soon as possible after the specific FFS session.
 - (v) The licence endorsement should be entered on the licence after the skill test, but before the first four take-offs and landings in the aeroplane. At the discretion of the DGCA Sri Lanka, provisional or temporary endorsement and any restriction should be entered on the licence.
 - (vi) Where a specific arrangement exists between the ATO and the commercial air transport operator, the operator proficiency check (OPC) and the ZFTT specific details should be conducted using the operator's standard operating procedures (SOPs).
- (3) All training exercises should be designed to remain within the training envelope as determined by the ATO (Note: Further guidance regarding the training envelope can be found in GM1 ORA.ATO.125 point (f)).
- (l) Aeroplane without FFS
- (1) Flight training conducted solely in an aeroplane without the use of FSTDs cannot cover the crew resource management (CRM) and multicrew cockpit (MCC) aspects of MPA flight training, and for safety reasons cannot cover all emergency and abnormal aircraft operation required for the training and skill test. In such cases, the ATO should demonstrate to the DGCA Sri Lanka that adequate training in these aspects can be achieved by other means. For training conducted solely on an MPA where two pilots are trained together without the use of an FSTD, a minimum of 8 hours of flight training as pilot flying (PF) for each pilot should normally be required. For training on a single-pilot aeroplane, 10 hours of flight training should normally be required. It is accepted that for some relatively simple single or multi-engine aircraft without systems such as pressurisation, flight management system (FMS) or electronic cockpit displays, this minimum may be reduced.
 - (2) Aeroplane training normally involves an inherent delay in achieving an acceptable flight situation and configuration for training to be carried out in accordance with the agreed syllabus. These could include ATC or other traffic delay on the ground prior to take-off, the necessity to climb to height or transit to suitable training areas and the unavoidable need to physically reposition the aircraft for subsequent or repeat manoeuvres or instrument approaches. In such cases it should be ensured that the training syllabus provides adequate flexibility to enable the minimum amount of required flight training to be carried out.
- (la) Additional UPRT training as per point FCL.725.A(c) in Implementing Standard 72 should include the elements and components in table 1.

Table 1: Elements and respective components of upset prevention training

Elements and components		TK instruction	FSTD/ Aeroplane training
A.	Aerodynamics		
1.	General aerodynamic characteristics	•	
2.	Aeroplane certification and limitations	•	
3.	Aerodynamics (high and low altitudes)	•	•
4.	Aeroplane performance (high and low altitudes)	•	•
5.	AoA and stall awareness	•	•
6.	Stick shaker or other stall-warning device activation (as applicable)	•	•
7.	Stick pusher (as applicable)	•	•
8.	Mach effects (if applicable to the aeroplane type)	•	•
9.	Aeroplane stability	•	•
10.	Control surface fundamentals	•	•
11.	Use of trims	•	•
12.	Icing and contamination effects	•	•
13.	Propeller slipstream (as applicable)	•	•
B.	Causes of and contributing factors to upsets		
1.	Environmental	•	
2.	Pilot-induced	•	
3.	Mechanical (aeroplane systems)	•	
C.	Safety review of accidents and incidents relating to aeroplane upsets		
1.	Safety review of accidents and incidents relating to aeroplane upsets	•	
D.	G-load awareness and management		
1.	Positive/negative/increasing/decreasing G-loads	•	•
2.	Lateral G awareness (sideslip)	•	•
3.	G-load management	•	•
E.	Energy management		
1.	Kinetic energy vs potential energy vs effect of thrust-drag ratio on the total energy	•	•
F.	Flight path management		
1.	Relationship between pitch, power and performance	•	•
2.	Performance and effects of differing power plants (if applicable)	•	•
3.	Manual and automation inputs for guidance and control	•	•
4.	Type-specific characteristics	•	•
5.	Management of go-arounds from various stages during the approach	•	•
6.	Automation management	•	•
7.	Proper use of rudder	•	•
G.	Recognition		

Elements and components		TK instruction	FSTD/ Aeroplane training
1.	Type-specific examples of physiological, visual and instrument clues during developing and developed upsets	•	•
2.	Pitch/power/roll/yaw	•	•
3.	Effective scanning (effective monitoring)	•	•
4.	Type-specific stall protection systems and cues	•	•
5.	Criteria for identifying stalls and upsets	•	•
H.	System malfunction (including immediate handling and subsequent operational considerations, as applicable)		
1.	Flight control defects	•	•
2.	Engine failure (partial or full)	•	•
3.	Instrument failures	•	•
4.	Loss of reliable airspeed (see also point (lb) of this AMC)	•	•
5.	Automation failures	•	•
6.	Fly-by-wire (FBW) protection degradations	•	•
7.	Stall protection system failures including icing alerting systems	•	•

(lb) Flight path management (manual or automatic, as appropriate) during unreliable airspeed indication and other failures at high altitude in aeroplanes with a maximum cruising altitude above FL300

The following training elements should be integrated into type rating training courses for aeroplanes with a maximum cruising altitude above FL300:

Element	TK instruction	FSTD / Aeroplane training
Basic flight physics principles concerning flight at high altitude, with a particular emphasis on the relative proximity of the critical Mach number and the stall, pitch behaviour, and an understanding of the reduced stall angle of attack when compared with low altitude flight.	•	•
Interaction of the automation (autopilot, flight director, auto-throttle/auto-thrust) and the consequences of failures inducing disconnection of the automation.	•	•
Consequences of an unreliable airspeed and other failures indication at high altitude and the need for the flight crew to promptly identify the failure and react with appropriate (minimal) control inputs to keep the aircraft in a safe envelope.	•	•
Degradation of FBW flight control laws/modes and its consequence on aircraft stability and flight envelope protections, including stall warnings.	•	•

Element	TK instruction	FSTD / Aeroplane training
Practical training, using appropriate simulators, on manual handling at high altitude in normal and in non-normal flight control laws/modes, with particular emphasis on pre-stall buffet, the reduced stall angle of attack when compared with low altitude flight, and the effect of pitch inputs on the aircraft trajectory and energy state.		•
The requirement to promptly and accurately apply the stall recovery procedure, as provided by the aircraft manufacturer, at the first indication of an impending stall. Differences between high-altitude and low-altitude stalls must be addressed.	•	•
Procedures for taking over and transferring manual control of the aircraft, especially for FBW aeroplanes with independent side-sticks.	•	•
Task sharing and crew coordination in high workload/stress conditions with appropriate call-out and acknowledgement to confirm changes to the aircraft flight control law/mode.	•	•

SKILL TEST

- (m) Upon completion of the flight training, the pilot will be required to undergo a skill test with an examiner to demonstrate adequate competency of aircraft operation for issue of the type rating. The skill test should be separate from the flight training syllabus, and provision for it cannot be included in the minimum requirements or training hours of the agreed flight training programme. The skill test may be conducted in an FFS, the aeroplane or, in exceptional circumstances, a combination of both.

COURSE COMPLETION CERTIFICATE

- (n) The HT, or a nominated representative, should certify that all training has been carried out before an applicant undertakes a skill test for the type rating to be included in the pilot's licence. If an ATO is unable to provide certain elements of the training that is required to be carried out on an aircraft the ATO may issue such a certificate confirming the completion of the ground training or the training in an FSTD.

AMC3 ORA.ATO.125 Training programme

TYPE RATING COURSES – HELICOPTERS

- (a) Introduction
- (1) when developing the training programme for a type rating course, in addition to complying with the standards included in the TCDS as established for the applicable type, the ATO should also follow any further recommendations contained therein.
 - (2) the course should, as far as possible, provide for integrated ground, FSTD and flight training designated to enable the student to operate safely and qualify for the grant of a type rating. The course should be directed towards a helicopter type, but where variants exist, all flying and ground training forming the basis of the course should relate to a single variant.

(b) Variants

- (1) Familiarisation training: where a helicopter type rating also includes variants of the same aircraft type requiring familiarisation training, the additional familiarisation training may be included in the theoretical knowledge training of the initial type rating course.
- (2) Differences training: where a helicopter type rating also includes variants of the same aircraft type for which difference training is required, the initial training course should be directed towards a single variant. Additional training to operate other variants within the same type rating should be completed after successful completion of the initial type rating course, although elements of this differences training may be undertaken at appropriate stages of the initial course, with the agreement of the DGCA Sri Lanka.

(c) Training in helicopter and FSTDs

The training programme should specify the amounts of flight training in the helicopter type and in FSTDs (FFSs, flight training devices (FTDs), or other training devices (OTDs)). Where a suitable FFS is geographically remote from the normal training base, the DGCA Sri Lanka may agree to some additional training being included in the programme at a remote facility.

(d) Skill test

The content of the flight training programme should be directed towards the skill test for that type. The practical training given in Implementing Standard 72 should be modified as necessary.

The skill test may be completed in a helicopter, in an FFS or partially in a helicopter and in an FSTD. The use of an FSTD for skill tests is governed by the level of approval of the flight simulator and the previous experience of the candidate. Where an FSTD is not available, abnormal operations of systems should not be practised in a helicopter other than as allowed for in the skill test form for the type.

(e) Phase progress tests and final theoretical knowledge examination

Prior to the final theoretical knowledge examination covering the whole syllabus, the training programme should provide for phase progress tests associated with each phase of theoretical knowledge instruction. The phase progress tests should assess the candidate's knowledge on completion of each phase of the training programme.

(f) Facilities: ground school equipment, training facilities and aids

The ATO should provide, as a minimum, facilities for classroom instruction. Additional classroom training aids and equipment including, where appropriate, computers, should reflect the content of the course and the complexity of the helicopter. For multi-engine and multi-pilot helicopters, the minimum level of ground training aids should include equipment that provides a realistic cockpit working environment. Task analysis and the latest state-of-the-art training technology is encouraged and should be fully incorporated into the training facilities wherever possible. Facilities for self and supervised testing should be available to the student.

(g) Training devices

An FTD or OTD may be provided to supplement classroom training in order to enable students to practice and consolidate theoretical instruction. Where suitable equipment is not available, or is not appropriate, a helicopter or flight simulator of the relevant variant should be available. If an FTD represents a different variant of the same helicopter type for which the student is being trained, then differences or familiarisation training is required.

(h) Computer-based training (CBT)

Where CBT aids are used as a training tool, the ATO should ensure that a fully qualified ground instructor is available at all times when such equipment is being used by course students. Other than for revision periods, CBT lessons should be briefed and debriefed by a qualified ground instructor.

(i) Theoretical knowledge instruction

The theoretical knowledge instruction training should meet the general objectives of giving the student:

- (1) a thorough knowledge of the helicopter structure, transmissions, rotors and equipment, powerplant and systems, and their associated limitations;
- (2) a knowledge of the positioning and operation of the cockpit controls and indicators for the helicopter and its systems;
- (3) a knowledge of performance, flight planning and monitoring, mass and balance, servicing and optional equipment items;
- (4) an understanding of system malfunctions, their effect on helicopter operations and interaction with other systems; and
- (5) the understanding of normal, abnormal and emergency procedures and giving the student the understanding of potential control problems near the edge of the handling envelope. In particular, the phenomenon of 'servo transparency' (also known as 'jack stall') should be covered for those helicopter types where it is a known problem.

The amount of time and the contents of the theoretical instruction will depend on the complexity of the helicopter type involved and, to some extent, on the previous experience of the student.

(j) Flight training

(1) FSTDs

The level of qualification and the complexity of the type will determine the amount of practical training that may be accomplished in an FSTD, including completion of the skill test. Prior to undertaking the skill test, a student should demonstrate competency in the skill test items during the practical training.

(2) Helicopter (with FSTD)

With the exception of courses approved for ZFTT, the amount of flight time in a helicopter should be adequate for completion of the skill test.

(3) Helicopters (without FSTD)

Whenever a helicopter is used for training, the amount of flight time practical training should be adequate for the completion of the skill test. The amount of flight training will depend on the complexity of the helicopter type involved and, to some extent, on the previous experience of the applicant.

GM1 ORA.ATO.125 Training programme

UPSET PREVENTION AND RECOVERY TRAINING (UPRT)

(a) General

The objective of the UPRT is to ensure that pilots are competent to prevent or recover from a developing or developed aeroplane upset. Prevention training prepares pilots to

avoid upsets whereas recovery training prepares pilots to prevent an accident once an upset condition has developed.

(b) Human factors

Threat and Error Management (TEM) and Crew Resource Management (CRM) principles should be integrated into the UPRT. In particular, the surprise and startle effect as well as the importance of resilience development should be emphasised.

Training should also emphasise that an actual upset condition may expose pilots to significant physiological and psychological challenges, such as visual illusions, spatial disorientation and unusual G-forces, with the objective of developing strategies to deal with such challenges.

(c) Development of training scenarios

During the development of training scenarios, the ATO should ensure that all of the following is avoided:

- (a) negative training and negative transfer of training; and
- (b) training utilising predictive scenarios.

Please refer to Revision 2 of the Airplane Upset Recovery Training Aid (AURTA) for further guidance on the development of training scenarios.

(d) Additional guidance

Specific guidance to the UPRT elements and exercises is available in:

- (1) the latest revision of the ICAO Doc 10011 ‘Manual on Aeroplane Upset Prevention and Recovery Training’;
- (2) Revision 3 of the Airplane Upset Prevention and Recovery Training Aid (AUPRTA); and
- (3) the Flight Safety Foundation publication ‘A Practical Guide for Improving Flight Path Monitoring’, November 2014.

(e) Training platform

- (1) When designing a training course, ATOs should select aeroplanes that are suitable for all the required training exercises. Where certain exercises require particular capabilities, then an ATO may consider the use of different aeroplanes for different exercises. Examples include basic UPRT or instrument flight training and the advanced UPRT course.
- (2) For basic UPRT training conducted during the CPL or ATP courses, it is not anticipated that aerobatic category aeroplanes will be required or that aircraft need to be certificated for intentional spins. Aeroplanes with a maximum bank angle limitation may not be suitable for exercises such as steep turns or recovery from spiral dive.
- (3) For the advanced UPRT course (FCL.745 in Implementing Standard 72), the use of an aeroplane certificated in the aerobatic category will provide the greatest safety margin. Aeroplanes certificated in the normal or utility category may also be suitable provided the exercises used during the training take into account the capabilities of the aeroplane and are planned to remain within the training envelope for the aeroplane, as determined by the ATO (see point (f)).

(f) Training envelope

The training envelope is the envelope within which all training exercises will be carried out. It should be specified by the ATO in terms of the range of attitudes, speed and g-loads that can be used for training, taking into account:

- (1) the training environment;
- (2) the capabilities of the instructors; and
- (3) in the case of training in FSTDs, the limitations of the FSTD (as per IS72 - GM3 FCL.010 for the FSTD training envelope); and
- (4) in the case of training in aeroplanes, the capabilities and certification of the aircraft, while considering a margin of safety in order to ensure that unintentional deviations from the training envelope will not exceed aircraft limitations. Different training envelopes may be specified for different aeroplane types even within a single training course.

ORA.ATO.130 Training manual and operations manual

- (a) The ATO shall establish and maintain a training manual and operations manual containing information and instructions to enable personnel to perform their duties and to give guidance to students on how to comply with course requirements.
- (b) The ATO shall make available to staff and, where appropriate, to students the information contained in the training manual, the operations manual and the ATO's approval documentation.
- (c) The operations manual shall establish flight time limitation schemes for flight instructors, including the maximum flying hours, maximum flying duty hours and minimum rest time between instructional duties in accordance with Implementing Standard 15 and Implementing Standard 50.

ORA.ATO.135 Training aircraft and FSTDs

- (a) The ATO shall use an adequate fleet of training aircraft or FSTDs appropriately equipped for the training courses provided.
- (b) The ATO shall only provide training in FSTDs when it demonstrates to the DGCA Sri Lanka:
 - (1) the adequacy between the FSTD specifications and the related training programme;
 - (2) that the FSTDs used comply with the relevant requirements of Implementing Standard 72;
 - (3) in the case of full flight simulators (FFSs), that the FFS adequately represents the relevant type of aircraft; and
 - (4) that it has put in place a system to adequately monitor changes to the FSTD and to ensure that those changes do not affect the adequacy of the training programme.
- (c) If the aircraft used for the skill test is of a different type to the FFS used for the visual flight training, the maximum credit shall be limited to that allocated for flight and navigation procedures trainer II (FNPT II) for aeroplanes and FNPT II/III for helicopters in the relevant flight training programme.

AMC1 ORA.ATO.135 Training aircraft and FSTDs

ALL ATOs

- (a) The number of training aircraft may be affected by the availability of FSTDs.
- (b) Each training aircraft should be:
 - (1) equipped as required in the training specifications concerning the course in which it is used;
 - (2) except in the case of balloons or single-seat aircraft, fitted with primary flight controls that are instantly accessible by both the student and the instructor (for example dual flight controls or a centre control stick). Swing-over flight controls should not be used.
- (c) The fleet should include, as appropriate to the courses of training:
 - (1) aircraft suitably equipped to simulate instrument meteorological conditions (IMC) and for the instrument flight training required. For flight training and testing for the instrument rating, an adequate number of IFR-certificated aircraft should be available;
 - (2) in the case of aeroplanes and sailplanes/gliders, aircraft suitable for demonstrating stalling and spin avoidance;
 - (3) for the flight instructor (FI) training courses on aeroplanes and sailplanes/gliders, aircraft suitable for spin recovery at the developed stage;
 - (4) in the case of helicopters, helicopters suitable for autorotation demonstration;
 - (5) in the case of a non-complex ATO, one aircraft fulfilling all the required characteristics for a training aircraft might be sufficient;
 - (6) each FSTD should be equipped as required in the training specifications concerning the course in which it is used.

ORA.ATO.140 Aerodromes and operating sites

When providing flight training on an aircraft, the ATO shall use aerodromes or operating sites that have the appropriate facilities and characteristics to allow training of the manoeuvres relevant, taking into account the training provided and the category and type of aircraft used.

AMC1 ORA.ATO.140 Aerodromes and operating sites

GENERAL

- (a) Except in the case of balloons, the base aerodrome or operating site and any alternative base aerodromes at which flight training is being conducted should have at least the following facilities:
 - (1) at least one runway or final approach and take-off area (FATO) that allows training aircraft to make a normal take-off or landing within the performance limits of all the aircraft used for the training flights.
 - (2) a wind direction indicator that is visible at ground level from the ends of each runway or at the appropriate holding points;

- (3) adequate runway electrical lighting if used for night training;
 - (4) an air traffic service, except for uncontrolled aerodromes or operating sites where the training requirements may be satisfied safely by another acceptable means of air-to-ground communication.
- (b) In addition to (a), for helicopters, training sites should be available for:
- (1) confined area operation training;
 - (2) simulated engine off autorotation; and
 - (3) sloping ground operation.
- (c) In the case of balloons, the take-off sites used by the ATO should allow a normal take-off and clearing of all obstacles in the take-off flight path by at least 50 ft.

ORA.ATO.145 Pre-requisites for training

The ATO shall ensure that the students meet all the pre-requisites for training established in Implementing Standard 72, Implementing Standard 36, and, if applicable, as defined in the mandatory part of the TCDS established in accordance with the applicable CAASL Regulations.

AMC1 ORA.ATO.145 Pre-requisites for training

ENTRANCE REQUIREMENTS

ATOs providing training for other than the PPL, GPL or BPL and the associated ratings and certificates should establish entrance requirements for students in their procedures. The entrance requirements should ensure that the students have enough knowledge, particularly of physics and mathematics, to be able to follow the courses.

SECTION II

Additional requirements for ATOs providing training for CPL, MPL and ATPL and the associated ratings and certificates

ORA.ATO.210 Personnel requirements

- (a) Head of training (HT). The nominated HT shall have extensive experience in training as an instructor for professional pilot licences and associated ratings or certificates.
- (b) Chief flight instructor (CFI). The ATO providing flight instruction shall nominate a CFI who shall be responsible for the supervision of flight and flight simulation training instructors and for the standardisation of all flight instruction and flight simulation instruction. The CFI shall hold the highest professional pilot licence and associated ratings related to the flight training courses conducted and hold an instructor certificate with the privilege to instruct for at least one of the training courses provided.
- (c) Chief theoretical knowledge instructor (CTKI). The ATO providing theoretical knowledge instruction shall nominate a CTKI who shall be responsible for the supervision of all theoretical knowledge instructors and for the standardisation of all theoretical knowledge instruction. The CTKI shall have extensive experience as a theoretical knowledge instructor in the areas relevant for the training provided by the ATO.

AMC1 ORA.ATO.210 Personnel requirements

GENERAL

- (a) The management structure should ensure supervision of all grades of personnel by persons having the experience and qualities necessary to ensure the maintenance of high standards. Details of the management structure, indicating individual responsibilities, should be included in the ATOs operations manual.
- (b) The ATO should demonstrate to the DGCA Sri Lanka that an adequate number of qualified, competent staff is employed.
- (c) In the case of an ATO offering integrated courses, the HT, the chief flying instructor (CFI) and the chief theoretical knowledge instructor (CTKI) should be employed full-time or part-time, depending upon the scope of training offered.
- (d) In the case of an ATO offering only one of the following:
 - (1) modular courses,
 - (2) type rating courses,
 - (3) theoretical knowledge instruction,
 the positions of HT, CFI and CTKI may be combined and filled by one or two persons with extensive experience in the training conducted by the training organisation, full-time or part-time, depending upon the scope of training offered.

- (e) In the case of an ATO that provides flight training only, no CTKI function is required in the ATO. In the case of an ATO that provides theoretical-knowledge instruction only, no CFI function is required in the ATO.
- (f) The ratio of all students to flight instructors, excluding the HT, should not exceed 6:1.
- (g) Class numbers in ground subjects involving a high degree of supervision or practical work should not exceed 28 students.

THEORETICAL KNOWLEDGE INSTRUCTORS

- (h) The theoretical knowledge instruction for type or class ratings should be conducted by instructors holding the appropriate type or class rating, or having appropriate experience in aviation and knowledge of the aircraft concerned.
- (i) For this purpose, a flight engineer, a maintenance engineer or a flight operations officer should be considered as having appropriate experience in aviation and knowledge of the aircraft concerned.

AMC2 ORA.ATO.210 Personnel requirements

QUALIFICATION OF HEAD OF TRAINING AND CHIEF FLIGHT INSTRUCTOR

- (a) Head of training (HT)

The nominated HT should hold or have held in the 3 years prior to first appointment as HT, a professional pilot licence and associated ratings or certificates issued in accordance with Implementing Standard 72, related to the flight training courses provided.

- (b) Chief flight instructor (CFI)

- (1) The CFI may delegate standardisation and supervision to the flight instructors. In all cases it is the CFI who is ultimately responsible for ensuring quality and standards.

- (2) The CFI should, have completed 1 000 hours of flight time as pilot-in-command (PIC).

At least 500 of those hours should be on flying instructional duties related to the flying courses provided, of which 200 hours may be instrument ground time.

ORA.ATO.225 Training programme

- (a) The training programme shall include a breakdown of flight and theoretical knowledge instruction, presented in a week-by-week or phase layout, a list of standard exercises and a syllabus summary.
- (b) The content and sequence of the training programme shall be specified in the training manual.

ORA.ATO.230 Training manual and operations manual

- (a) The training manual shall state the standards, objectives and training goals for each phase of training that the students are required to comply with and shall address the following subjects:

- training plan,
 - briefing and air exercises,
 - flight training in an FSTD, if applicable,
 - theoretical knowledge instruction, and
- (b) The operations manual shall provide relevant information to particular groups of personnel, as flight instructors, flight simulation training instructors, theoretical knowledge instructors, operations and maintenance personnel, and shall include general, technical, route and staff training information.

AMC1 ORA.ATO.230(a) Training manual and operations manual

TRAINING MANUAL

Training manual for use at an ATO to conduct integrated or modular flight training courses should include the following:

- (a) The training plan:

(1) The aim of the course (ATP, CPL/IR, CPL, etc. as applicable)	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.
(2) Pre-entry requirements	(i) Minimum age, educational requirements (including language), medical requirements; (ii) Any individual Member State requirements.
(3) Credits for previous experience	To be obtained from the competent authority before training begins.
(4) Training syllabi	As applicable, the flying syllabus (single-engine or multiengine, as applicable), the flight simulation training syllabus and the theoretical knowledge training syllabus.
(5) The time scale and scale, in weeks, for each syllabus	Arrangements of the course and the integration of syllabi time.
(6) Training programme	(i) The general arrangements of daily and weekly programmes for flying, theoretical knowledge training and training in FSTDs, if applicable; (ii) Bad weather constraints; (iii) Programme constraints in terms of maximum student training times, (flying, theoretical knowledge, on FSTDs), for example per day, week or month; (iv) Restrictions in respect of duty periods for students; (v) Duration of dual and solo flights at various stages; (vi) Maximum flying hours in any day or night; (vii) Maximum number of training flights in any day or night; (viii) Minimum rest period between duty periods.

(7) Training records	<ul style="list-style-type: none"> (i) Rules for security of records and documents; (ii) Attendance records; (iii) The form of training records to be kept; (iv) Persons responsible for checking records and students' log books; (v) The nature and frequency of record checks; (vi) Standardisation of entries in training records; (vii) Rules concerning log book entries.
(8) Safety training	<ul style="list-style-type: none"> (i) Individual responsibilities; (ii) Essential exercises; (iii) Emergency drills (frequency); (iv) Dual checks (frequency at various stages); (v) Requirement before first solo day, night or navigation etc. if applicable.
(9) Assessments, tests and examinations	<ul style="list-style-type: none"> (i) Flying: <ul style="list-style-type: none"> (A) progress checks; (B) skill tests. (ii) Theoretical knowledge: <ul style="list-style-type: none"> (A) progress tests; (B) theoretical knowledge examinations. (C) Area 100 KSA assessments. (iii) Authorisation for test; (iv) Rules concerning refresher training before retest; (v) Test and assessment reports and records; (vi) Procedures for examination paper preparation, type of question and assessment, standard required for 'pass'; (vii) Procedure for question analysis and review and for raising replacement papers; (viii) Examination resit procedures.
(10) Training effectiveness	<ul style="list-style-type: none"> (i) Individual responsibilities; (ii) General assessment; (iii) Liaison between departments; (iv) Identification of unsatisfactory progress (individual students); (v) Actions to correct unsatisfactory progress; (vi) Procedure for changing instructors; (vii) Maximum number of instructor changes per student; (viii) Internal feedback system for detecting training deficiencies; (ix) Procedure for suspending a student from training; (x) Discipline; (xi) Reporting and documentation.
(11) Standards and level of performance at various stages	<ul style="list-style-type: none"> (i) Individual responsibilities; (ii) Standardisation; (iii) Standardisation requirements and procedures; (iv) Application of test criteria.

(b) Briefing and air exercises:

(1) 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 subtitles.
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(2) Air exercise reference list	An abbreviated list of the above exercises giving only main and subtitles for quick reference, and preferably in flip-card form to facilitate daily use by instructors.
(3) Course structure: phase of training	A statement of how the course will be divided into phases, indication of how the above air exercises 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 syllabus hours for each phase and for groups of exercises within each phase should be stated and when progress tests are to be conducted, etc.
(4) Course structure: integration of syllabi	The manner in which theoretical knowledge and flight training in an aircraft or an FSTD 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 flight training.
(5) Student progress	The requirement for student progress and include a brief but specific statement of what a student is expected to be able to do and the standard of proficiency he/she 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, etc. as necessary before significant exercises, for example night flying.
(6) Instructional methods	The ATO requirements, particularly in respect of pre- and post-flying briefing, adherence to syllabi and training specifications, authorisation of solo flights, etc.
(7) Progress tests	The instructions given to examining staff in respect of the conduct and documentation of all progress tests.
(8) Glossary of terms	Definition of significant terms as necessary.
(9) Appendices	(i) Progress test report forms; (ii) Skill test report forms; (iii) ATO certificates of experience, competence, etc. as required.

(c) Flight training in an FSTD, if applicable: Structure generally as for (b)

(d) Theoretical knowledge instruction:

(1) Structure of the theoretical knowledge course	A statement of the structure of the course, including the general sequence of the topics to be taught in each subject, the time allocated to each topic, the breakdown per subject and an example of a course schedule. Distance learning courses should include instructions of the material to be studied for individual elements of the course.
(2) Lesson plans	A description of each lesson or group of lessons including teaching materials, training aids, progress test organisation and inter-connection of topics with other subjects.
(3) Teaching materials	Specification of the training aids to be used (for example study materials, course manual references, exercises, self-study materials, demonstration equipment).

(4) Student progress	The requirement for student progress, including a brief but specific statement of the standard that must be achieved and the mechanism for achieving this, before application for theoretical knowledge examinations.
(5) Progress testing	The organisation of progress testing in each subject, including topics covered, evaluation methods and documentation.
(6) Review procedure	The procedure to be followed if the standard required at any stage of the course is not achieved, including an agreed action plan with remedial training if required.
(7) Appendices	(i) Examples of Area 100 KSA summative assessments; (ii) Area 100 KSA mental maths test example.

AMC2 ORA.ATO.230(a) Training manual and operations manual

THEORETICAL KNOWLEDGE COURSE DESIGN REQUIREMENTS

An ATO that delivers theoretical knowledge instruction for professional pilot licences should ensure that:

- the courses are designed and developed using the instructional systems design (ISD) methodology, which is supported by a robust and effective management system;
- the courses include a standardised and dynamic assessment and testing system;
- instructors that deliver KSA instruction have received appropriate training covering at least learning styles, teaching methods, facilitation techniques, threat and error management (TEM), the applicable competencies, and the content of the subject(s) and exercises that they are to deliver;
- the recurrent training of instructors is conducted at least annually;
- the instructors that are responsible for assessing Area 100 KSA have received appropriate training regarding the assessment(s) that they are to conduct, and are to be standardised to ensure that the assessment grades awarded are consistent across the ATO; this standardisation should include at least familiarisation with the performance indicators, the ATO's word pictures for grading, and the ATO's debriefing system; and
- recurrent standardisation training is conducted at least annually to ensure continued inter-rater reliability.

AMC3 ORA.ATO.230(a) Training manual and operations manual

AREA KSA 100 02 AND 100 03 LEARNING OBJECTIVES, ASSESSMENTS AND RECORDS

- An ATO that delivers theoretical knowledge instruction for professional pilot licences should ensure that for the learning objectives (LOs) in topics 100 02 and 100 03 of Area 100 KSA there are at least two summative assessments and at least one formative assessment. The summative assessments are to be documented in the student's training records. Both the summative assessments and the formative assessment(s) should be debriefed.

- (b) The formative assessment(s) should:
- (1) be designed such that the student has the opportunity to ask questions and develop competencies in most of the LOs in 100 02 and 100 03 of Area 100 KSA;
 - (2) be conducted during the training; the ATO may in addition conduct a formative evaluation (continuous assessment) over a specified phase of the course; and
 - (3) be conducted by an instructor that is trained to deliver the formative assessment.
- (c) The summative assessments should:
- (1) be designed so that they collectively give the student the opportunity to demonstrate competency in all LOs in 100 02 and 100 03 of Area 100 KSA; each individual summative assessment may address some of the LOs in 100 02 and 100 03 of Area 100 KSA;
 - (2) be satisfactorily completed before the student is recommended by the ATO for their first attempt to take the final theoretical knowledge examination paper, and the outcome of the assessments should be included in the student's training record;
 - (3) require that for a student to be considered that they have achieved a 'Satisfactory' standard, they:
 - (i) meet at least 35 % (which defines the term 'some' used in the word pictures) of the indicators relevant to the assessment exercise, in each competency;
 - (ii) have an overall positive effect on the outcome or completion of the exercise without any external input from the instructor, or where the assessment requires the instructor to facilitate the exercise, without the instructor providing any knowledge or corrective input to assist in the completion of the exercise; and
 - (4) be conducted by an instructor that is trained to deliver the summative assessments.
- (d) The training manual should include the following elements regarding the theoretical knowledge training and assessment of the LOs in topics 100 02 and 100 03 of Area 100 KSA:
- (1) the positions, or range of positions, of the formative assessment exercise(s) and summative assessment exercises in the training programme;
 - (2) a description of the summative assessments, including a matrix that shows which Area 100 KSA LOs are covered in each exercise;
 - (3) the grading system of the Area 100 KSA summative assessment and a description of the ATO's minimum required standard;
 - (4) the template for the information about Area 100 KSA to be included in the student's training record, which should include at least the dates and result ('Pass' or 'Fail') of the summative assessments and the date and score of the mental maths test;
 - (5) the method of assessment debrief for each summative and formative assessment;
 - (6) for a student who performs below the satisfactory standard in a summative assessment(s), the method to further develop the student's competencies and how to conduct the reassessment.
- (e) Access to the information on Area 100 KSA kept in the student's training records should be restricted to the student and authorised ATO personnel, and should not be disclosed outside the ATO. The information on the record should first be de-identified before it is used to support course design improvements.

AMC4 ORA.ATO.230(a) Training manual and operations manual

AREA 100 04 LEARNING OBJECTIVES: MENTAL MATHS TEST AND RECORDS

- (a) An ATO that delivers theoretical knowledge instruction for professional pilot licences should ensure that at least one KSA mental maths test is conducted and the outcome(s) documented in the student's training records.
- (b) The mental maths test(s) may be written or oral in format and should, where possible, be scenario-based, with at least two questions per LO in topic 100 04 of Area 100 KSA.
- (c) The minimum score to pass the Area 100 KSA mental maths test(s) should be 75 % of the marks allocated to a test. However, a higher pass mark may be defined by the ATO.
- (d) The mental maths test(s) should be satisfactorily completed before the student is recommended by the ATO for their first attempt to take their final theoretical knowledge examination paper.

GM1 ORA.ATO.230(a) Training manual and operations manual

ASSESSMENT OF STUDENTS IN AREA 100 KSA

- (a) The Area 100 KSA formative assessment(s) and summative assessments may include but not be limited to: written planning exercises combining multiple subjects; practical exercises using training devices (if available); scenario-based oral board (viva voce); scenario-based communications exercises; written assignments or project work; and preparation and delivery of group or individual presentations.
- (b) The format of formative and summative assessment debriefs should be effective, highlighting the student's strengths and weaknesses and enabling future improvement.

GM2 ORA.ATO.230(a) Training manual and operations manual

AREA 100 KSA WORD PICTURES

- (a) 'Word pictures' are a proven assessment tool that standardises pilot core competencies, and can be used to assess student's competency in the Area 100 KSA LOs in topics 100 02 and 100 03. Word pictures describe the student's performance. Each word picture is associated with a numerical grade; within the range of grades, the minimum acceptable standard is defined. Additionally, a word picture describing performance that falls below the minimum satisfactory standard should be included in the range, as well as additional word pictures that relate to grades which exceed this minimum satisfactory standard.

Word pictures enable the standardisation of the assessment performance and facilitate inter-rater reliability within an ATO.

- (b) This GM provides two examples of word pictures.
- (c) The most commonly used word pictures are shown in Section A below. They are based on performance indicators, which explain what the student should demonstrate in order to attain the specific Area 100 KSA LOs that are addressed by the assessment exercise. Word pictures are formed of elements that contain the following:
 - (1) HOW MANY of the performance indicators were observed and, where relevant, HOW OFTEN;

- (2) HOW WELL the competency was demonstrated in the assessment exercise to have an overall positive effect on the outcome or completion of the assessment exercise;
- (3) the level of success in the OUTCOME of the assessment exercise.
- (d) An ATO could establish its own set of word picture descriptions as long as they are comparable in the grading of each competency, similar to the ‘Communication’ and ‘Application of knowledge, UPRT and resilience’ word pictures example in Section B below.
- (e) The advantage of word pictures is that they provide meaningful and standard data to enable identification of individual, crew, class, instructor and ATO trends, which can be analysed in order to provide feedback for further improvement or development.
- (f) An ATO should ensure that the detailed information obtained through its grading in Area 100 KSA is de-identified before using it to support course improvement.

SECTION A — EXAMPLE 1

AREA 100 KSA WORD PICTURE GRADE LEVELS (USING INDICATORS)

- (g) The example shown below in this Section contains the most commonly used word pictures, which are formed of elements that contain the following:
 - (1) HOW MANY of the performance indicators in the table further below relevant to that summative assessment were observed in that competency (as a percentage);
 - (2) HOW WELL the competency was demonstrated in the assessment; and
 - (3) the level of success in the OUTCOME of the summative assessment.
- (h) In order to satisfactorily complete an Area KSA 100 summative assessment, the student should reach at least the minimum satisfactory level in each competency covered by that assessment. In case the student fails to reach the minimum satisfactory level in each competency, the student should repeat the summative assessment or another summative assessment that covers the competency(ies) where performance was previously assessed as unsatisfactory.

GM3 ORA.ATO.230(a) Training manual and operations manual

AREA 100 KSA EXERCISES AND ASSESSMENTS

Exercises and assessments are to be interwoven into the theoretical knowledge training, utilising a range of learning styles; they should address subject or cross-subject topics, with the application of threat and error management (TEM) and, where possible, be scenario-based. The exercises and assessments do not need to be confined to a classroom.

- (a) Area 100 KSA exercises may be of short duration within a lesson, and the student’s performance in the exercises does not need to be recorded, although the main subject and KSA learning points are likely to be discussed (or for distance learning, reviewed) within a post exercise debrief or lesson summary. To allow for flexibility and development, the exercises do not need to be specified in the training plan.
- (b) When a single formative assessment is specified in the training plan, it is likely to be extensive as it will cover many of the LOs in Area KSA 100 02 and 100 03. Alternatively,

an ATO may specify a number of shorter-duration formative assessments that each covers a narrower range of LOs, and these may build in terms of content difficulty.

- (c) The exercises and formative and summative assessments may include but not be limited to: scenario planning exercises combining multiple subjects; practical exercises using training devices (where available); oral communication exercises; written assignments and/or project work; discussions; the preparation and delivery of group or individual presentations and discussions; and enable scenario-based content and individual, pair or group situation(s).
- (d) The type of assessment and the environment should be recorded in the ATO's training plan.

GM4 ORA.ATO.230(a) Training manual and operations manual

AREA 100 KSA INSTRUCTION AND ASSESSMENT TRAINING

- (a) The following material has been developed to provide additional guidance to organisations to help them develop an effective KSA 100 instruction and assessment training programme that satisfies the provisions in AMC2 ORA.ATO.230(a), (c) to (f).
- (b) An ATO should ensure that an instructor who conducts the Area 100 KSA formative assessment(s) has received adequate training to be familiar with the:
 - (1) relevant competencies and performance indicators;
 - (2) Area 100 KSA Learning Objectives (LOs);
 - (3) formative assessment(s) that they will conduct including: the applicable LOs, purpose and content of the assessment(s) and position(s) in the training plan, assessment resources, assessment environment;
 - (4) Area 100 KSA grading system, including familiarisation with the performance indicators and the ATO's word pictures; and
 - (5) student debrief methods and procedure.
- (c) An ATO should ensure that an instructor who conducts the Area 100 KSA summative assessments has received adequate training to be familiar with:
 - (1) the summative assessments that they will conduct including: the applicable LOs, purpose and content of the exercise(s) and position(s) in the training plan, assessment resources, assessment environment, and the minimum acceptable level;
 - (2) the assessment feedback, evaluation and development process; and
 - (3) KSA candidate appeal procedure.
- (d) An Area 100 KSA instruction and assessment course should include practical training on the conduct of an assessment, including grading to achieve inter-rater reliability, and the debrief under supervision.

GM5 ORA.ATO.230(a) Training manual and operations manual

INSTRUCTIONAL SYSTEMS DESIGN

- (a) The instructional systems design (ISD) provides a systematic and iterative process for course design based on educational best practices. There are several effective ISD models in use today, with the analyse, design, develop, implement and evaluate (ADDIE) framework being generic to all.

The purpose of using ISD to design training courses is to facilitate the students' efficient and effective acquisition of knowledge and skills based on current training needs.

- (b) To provide evidence of the effective use of the ISD methodology in the design and continued development of their course(s), an ATO may use documentation and records that relate to the ISD phases.
- (d) ADDIE model example. The 'analysis', 'design', 'development', 'implementation' and 'evaluation' phases of the ADDIE model are shown below with brief phase descriptions.

AMC1 ORA.ATO.230(b) Training manual and operations manual

OPERATIONS MANUAL FOR ALL ATOs

The operations manual for use at an ATO conducting integrated or modular flight training courses should include the following:

- (a) General:
 - (1) a list and description of all volumes in the operations manual;
 - (2) administration (function and management);
 - (3) responsibilities (all management and administrative staff);
 - (4) student discipline and disciplinary action;
 - (5) approval or authorisation of flights;
 - (6) preparation of flying programme (restriction of numbers of aircraft in poor weather);
 - (7) command of aircraft;
 - (8) responsibilities of the PIC;
 - (9) carriage of passengers;
 - (10) aircraft documentation;
 - (11) retention of documents;
 - (12) flight crew qualification records (licences and ratings);
 - (13) revalidation (medical certificates and ratings);
 - (14) flight duty period and flight time limitations (flying instructors);
 - (15) flight duty period and flight time limitations (students);
 - (16) rest periods (flight instructors);
 - (17) rest periods (students);
 - (18) pilots' log books;
 - (19) flight planning (general);
 - (20) safety (general): equipment, radio listening watch, hazards, accidents and incidents (including reports), safety pilots etc..
- (b) Technical:
 - (1) aircraft descriptive notes;

- (2) aircraft handling (including checklists, limitations, maintenance and technical logs, in accordance with relevant requirements, etc.);
 - (3) emergency procedures;
 - (4) radio and radio navigation aids;
 - (5) allowable deficiencies (based on the master minimum equipment list (MMEL), if available).
- (c) Route:
- (1) performance (legislation, take-off, route, landing etc.);
 - (2) flight planning (fuel, oil, minimum safe altitude, navigation equipment etc.);
 - (3) loading (load sheets, mass, balance and limitations);
 - (4) weather minima (flying instructors);
 - (5) weather minima (students – at various stages of training);
 - (6) training routes or areas.
- (d) Personnel training
- (1) appointments of persons responsible for standards/competence of flight personnel;
 - (2) initial training;
 - (3) refresher training;
 - (4) standardisation training;
 - (5) proficiency checks;
 - (6) upgrading training;
 - (7) ATO personnel standards evaluation.

SECTION III

Additional requirements for ATOs providing specific types of training

Chapter 1 – Distance Learning Course

ORA.ATO.300 General

The ATO may be approved to conduct modular course programmes using distance learning in the following cases:

- (a) modular courses of theoretical knowledge instruction;
- (b) courses of additional theoretical knowledge for a class or type rating; or
- (c) courses of approved pre-entry theoretical knowledge instruction for a first type rating for a multi-engined helicopter.

AMC1 ORA.ATO.300 General

DISTANCE LEARNING

- (a) A variety of methods is open to ATOs to present course material. It is, however, necessary for ATOs to maintain comprehensive records in order to ensure that students make satisfactory academic progress and meet the time constraints laid down in Implementing Standard 72 for the completion of modular courses.
- (b) The following are given as planning guidelines for ATOs developing the distance learning element of modular courses:
 - (1) an assumption that a student will study for at least 15 hours per week;
 - (2) an indication throughout the course material of what constitutes a week's study;
 - (3) a recommended course structure and order of teaching;
 - (4) one progress test for each subject for every 15 hours of study, which should be submitted to the ATO for assessment. Additional self-assessed progress tests should be completed at intervals of five to 10 study hours;
 - (5) appropriate contact times throughout the course when a student can have access to an instructor by telephone, fax, email or the Internet;
 - (6) measurement criteria to determine whether a student has satisfactorily completed the appropriate elements of the course to a standard that, in the judgement of the HT, or CGI, will enable them to be entered for the Implementing Standard 72 theoretical examinations with a good prospect of success;
 - (7) if the ATO provides the distance learning by help of IT solutions, for example the Internet, instructors should monitor students' progress by appropriate means.
- (c) Where an assessment (e.g. planning, written, scenario or practical exercise, or other assessment) is conducted outside the classroom via distance learning, the ATO should have a procedure or process in place to establish that the student themselves have completed the assessment and that the assessment method(s) for that particular exercise has (have) been effective.

ORA.ATO.305 Classroom instruction

- (a) An element of classroom instruction shall be included in all subjects of modular distance learning courses.
- (b) The amount of time spent in actual classroom instruction shall not be less than 10 % of the total duration of the course.
- (c) To this effect, classroom accommodation shall be available either at the principal place of business of the ATO or within a suitable facility elsewhere.

AMC1 ORA.ATO.305(b) Classroom instruction

Classroom instruction delivered by an instructor to a student may include video conferencing appropriate to the task if the necessary level of communication is ensured and appropriate equipment and tools are available.

ORA.ATO.310 Instructors

All instructors shall be fully familiar with the requirements of the distance learning course programme.

Chapter 2 – Zero Flight-Time Training

ORA.ATO.330 General

- (a) Approval for zero flight-time training (ZFTT), as specified in Implementing Standard 72, shall only be given to ATOs that also have the privileges to conduct commercial air transport operations or ATOs having specific arrangements with commercial air transport operators.
- (b) Approval for ZFTT shall only be given if the operator has at least 90 days of operational experience on the aeroplane type.
- (c) In the case of ZFTT provided by an ATO having a specific arrangement with an operator, the 90 days of operational experience requirements will not apply if the type rating instructor (TRI(A)) involved in the additional take-offs and landings, as required in relevant Implementing Standards, has operational experience on the aeroplane type.

AMC1 ORA.ATO.330 General

INITIAL APPROVAL

For an initial approval to conduct ZFTT, the operator should have held an air operator's certificate for commercial air transport for at least 1 year. This period may be reduced where the operator and the ATO have experience of type rating training.

ORA.ATO.335 Full flight simulator

- (a) The FFS approved for ZFTT shall be serviceable according to the management system criteria of the ATO.
- (b) The motion and the visual system of the FFS shall be fully serviceable, in accordance with the applicable certification specifications for FSTD as mentioned in ORA.FSTD.205.

Chapter 3 – Multi-crew pilot licence (MPL) courses

ORA.ATO.350 General

The privileges to conduct MPL integrated training courses and MPL instructor courses shall only be given to the ATO if it also has the privilege to conduct commercial air transport operations or a specific arrangement with a commercial air transport operator.

SUBPART FSTD

REQUIREMENTS FOR ORGANISATIONS OPERATING FLIGHT SIMULATION TRAINING DEVICES (FSTDs) AND THE QUALIFICATION OF FSTDs

SECTION I – Requirements for organisations operating FSTDs

ORA.FSTD.100 General

- (a) The applicant for an FSTD qualification certificate shall demonstrate to the DGCA Sri Lanka that it has established a management system in accordance with ORA.GEN Section II. This demonstration shall ensure that the applicant has, directly or through contract, the capability to maintain the performance, functions and other characteristics specified for the FSTD's qualification level and to control the installation of the FSTD.
- (b) If the applicant is the holder of a qualification certificate issued in accordance with this Implementing standard, the FSTD specifications shall be detailed:
 - (1) in the terms of the ATO certificate; or
 - (2) in the case of an AOC holder, in the training manual.

AMC1 ORA.FSTD.100 General

COMPLIANCE MONITORING PROGRAMME – ORGANISATIONS OPERATING FSTDs

- (a) Introduction.
 - (1) The purpose of this AMC is to provide additional and specific information to an organisation operating FSTDs on how to establish a compliance monitoring programme (CMP) that enables compliance with the applicable requirements.
- (b) Compliance monitoring programme
 - (1) Typical subject areas for inspections are the following:
 - (i) actual FSTD operation;
 - (ii) maintenance;
 - (iii) technical standards
 - (iv) FSTD safety features.
- (c) Audit scope
 - (1) Organisations operating FSTDs are required to monitor compliance with the procedures they have designed to ensure specified performance and functions. In doing so they should as a minimum, and where appropriate, monitor the following:

- (i) organisation;
- (ii) plans and objectives;
- (iii) maintenance procedures;
- (iv) FSTD qualification level;
- (v) supervision;
- (vi) FSTD technical status;
- (vii) manuals, logs and records;
- (viii) defect deferral;
- (ix) personnel training;
- (x) aircraft modifications;
- (xi) FSTD configuration management.

AMC3 ORA.FSTD.100 General

COMPLIANCE MONITORING PROGRAMME – ORGANISATIONS OPERATING BASIC INSTRUMENT TRAINING DEVICES (BITDs)

- (a) The compliance monitoring programme together with a statement acknowledging completion of a periodic review by the accountable manager should include the following:
 - (1) a maintenance facility that provides suitable BITD hardware and software test and maintenance capability;
 - (2) a recording system in the form of a technical log in which defects, deferred defects and development work are listed, interpreted, actioned and reviewed within a specified time scale; and
 - (3) planned routine maintenance of the BITD and periodic running of the qualification test guide (QTG) with adequate manning to cover BITD operating periods and routine maintenance work.
- (b) A planned audit schedule and a periodic review should be used to verify that corrective action was carried out and that it was effective. The auditor should have adequate knowledge of BITDs.

GM1 ORA.FSTD.100 General

COMPLIANCE MONITORING – ORGANISATIONS OPERATING FSTDs – GENERAL

- (a) The concept of compliance monitoring (CM) is a fundamental requirement for organisations operating FSTDs. An effective CM function is vitally important in supporting operation of the devices, in a structured way, to ensure they remain in compliance with the technical standards published by DGCA Sri Lanka and continue to be effective training tools. An effective CM function is also essential to support any level of extended recurrent evaluation period as permitted by ORA.FSTD.225(b).
- (b) The following guidance has been developed to provide additional material to help both organisations operating FSTDs and DGCA Sri Lanka in developing effective CM that

satisfy the applicable requirements and ensure the highest standards of training are maintained.

- (c) Additional GM provide a compliance checklist for organisations operating FSTDs (GM2 ORA.FSTD.100) and guidance detailing the preparation for an evaluation by the DGCA Sri Lanka (GM3 ORA.FSTD.100). The compliance checklist should be used by the DGCA Sri Lanka as a standardised checklist for the elements that are expected in the CM function of an organisation operating FSTDs. The organisation should complete as a minimum the second column of the checklist by providing appropriate manual or procedure references for each of the identified elements of the CM function. Additional information can be provided in the third column to aid assessment of the checklist as appropriate. This would then be provided to the DGCA Sri Lanka. Use of this checklist should assist in ensuring a consistent approach by the DGCA Sri Lanka and also provide organisations operating FSTDs with additional guidance on all the elements of a CM function that the DGCA Sri Lanka will expect. The guidance is provided to help organisations operating FSTDs to prepare for authority visits.
- (d) The documentation of the CM may be electronic, provided the necessary controls can be demonstrated. This should include control of any paper copies that may be downloaded for use by individuals. It is recommended that any such copies are automatically designated as uncontrolled as part of the download process. Whilst electronic signatures on master documents may be accepted, with appropriate protections, a hardcopy master of the CM manual should be provided, with wet-ink signatures to be held by the applicant.
- (e) It should be recognised that whatever CM is developed, it will not be effective unless it becomes an integral part of the way in which the organisation works. It includes both the necessary procedures for maintaining compliance with all the applicable requirements and a compliance monitoring programme (CMP) to monitor the execution of these procedures. A successful CM will ensure that the highest training tool is available at all times. If the CM is viewed as an add-on to existing processes it will become a burden and it will never be wholly effective. It should also be noted that compliance control or inspection is only a small part of a CM. If the CM is working effectively, inspections such as fly-outs should become routine revealing little beyond day-to-day unserviceabilities. Systematic defects should be captured by the CMP.
- (f) The DGCA Sri Lanka should be satisfied that the accountable manager is able to adequately provide the required level of resources to properly support the FSTD. Detailed knowledge of FSTD requirement standards are not necessary, only sufficient to understand his/her responsibility for ensuring the FSTD is properly supported. The assessment of the compliance monitoring manager should concentrate on establishing that the nominee has sufficient knowledge and experience of both CM management and FSTD operations to operate a compliance monitoring system (CMS) within an organisation operating FSTDs. This is likely to require experience of working in the compliance monitoring field and sufficient knowledge of FSTDs and the technical standards with which they should comply.
- (g) If an organisation operating FSTDs is certified under any international quality standard it should assure that it fully covers the applicable organisation requirements of this Implementing Standard and the qualification basis.
- (h) For small organisations, it is perfectly acceptable to combine the roles of compliance monitoring manager and accountable manager. For other organisations that hold multiple certificates and may cover multiple sites, it is advantageous to have a common CM function with an overall compliance monitoring manager. However, it is essential, particularly where sites may be significantly separated geographically, that there is a nominated representative at each site and possibly for each certificate. These representatives should hold the delegated responsibility of the CM manager for the day-

to-day CM role at their site and in their function and have the necessary direct reporting line to the overall CM manager. It will also be necessary to ensure that local representatives are also acceptable to the local DGCA Sri Lanka. In many cases the local representatives may perform other functions in addition to this role. This is acceptable provided the necessary independence of any compliance monitoring activity is maintained.

- (i) CM, as a whole, begins with the requirements with which the system seeks to comply. These include both the technical standards published by DGCA Sri Lanka plus any other specific standards, for example health and safety regulations, and the compliance monitoring objectives, such as defect rates and rectification intervals and FSTD reliability targets. The CM should define the process by which these standards are made available to those who require them.
- (j) The next part of CM is that part which defines the day-to-day procedures or working practices by which the standards will be achieved. These procedures should include as a minimum defect reporting systems, defect rectification processes, tracking mechanisms, preventative maintenance programmes, spares handling, equipment calibration and configuration management of the device. They should include checks to assess the compliance of the performed actions. These procedures and standards should be made readily available to anybody involved in the maintenance and day-to-day operation of the FSTD.
- (k) The third part of CM is the method by which the organisation operating an FSTD confirms the device is maintained in compliance with the defined standards and is being operated in accordance with the defined procedures. This is the compliance monitoring programme (CMP) and includes the audit methods, reporting and corrective action procedures and feedback, management reviews and schedules for audits of all aspects of the FSTD operation.
- (l) Across all aspects of CM, and most important to it, are the people. CM includes the definition of the responsibilities of all staff and should include a declaration of the minimum levels of resource proposed for the direct support of the FSTD plus the levels of support and managerial staff proposed. The levels of resource can be affected by factors such as local health and safety regulations, existence of weekend and/or night usage of the device(s), etc. CM also includes definition of the skills and experience required for staff and leads to definition of any required training programmes. Training needs cover both technical training and audit training, including QTG running and checking and fly-out techniques for flight crew.
- (m) The documentation of CM may be provided in any number of documents provided there are appropriate cross-references in all documents such that the system is fully traceable in both directions from end to end. For all but small organisations at least two documents would be expected:
 - (1) Firstly, a CM manual containing the policy, terminology, organisational charts and responsibilities, an overview of all processes, within the system, including those for maintaining regulatory compliance such as QTG running and fly-outs (function and subjective testing), CMP including the audit schedule and audit procedures including reporting and corrective action procedures. In addition, the CM manual should include, either directly or by reference, the identification of skills and experience and associated training.
 - (2) Secondly, a procedures manual containing, as a minimum, software and hardware control procedures, configuration control procedures including, for example, control of training loads, updates to visual models, navigation and instructor operation station (IOS) databases, QTG running and checking procedures, fly-out

procedures, maintenance procedures including both defect rectification and preventative maintenance processes. Any standard forms and checklists should also be included.

- (n) The CM documentation also includes all records such as technical logs, QTG runs, fly-out reports and maintenance job cards.
- (o) For organisations with several certificates, separate and modular procedures manuals with a single CM manual covering all approvals, may be acceptable.
- (p) It is important to understand the difference between compliance assurance and compliance control. An effective CM will contain elements of both. Compliance control is normally done by inspection of the product; it provides confirmation at the time of the inspection that the product conforms to a defined standard.
- (q) The compliance assurance element is essential to ensure the standard is maintained throughout the periods between product (FSTD) inspections. Within a CMP, the processes are defined that are necessary to provide confidence that the FSTD(s) is/are being supported and maintained to the highest possible standard and in compliance with the relevant requirements. A programme of internal audits is then set in place to confirm that the processes are being followed and are effective. The DGCA Sri Lanka would normally oversee a certified organisation by process and system audit, however, in the case of FSTDs, authority oversight includes an inspection element in the form of the recurrent FSTD evaluation.
- (r) In addition to the normal process and system audits, the compliance assurance audit schedule should include the schedule for each FSTD for fly-outs and QTG running through the audit year.
- (s) The audit procedure should include, at least, the following: statement of scope, planning, initiation of audit, collection of evidence, analysis, reporting of findings, identification and agreement of corrective actions and feedback, including reporting significant findings to the DGCA Sri Lanka, where appropriate. The review of published material could include, in addition to the CM and procedures manuals, QTG records, fly-out reports, technical log sheets, maintenance records and configuration control records.
- (t) In addition to basic knowledge of FSTD requirements and operation, it is expected that auditors have received training in CM and audit techniques.
- (u) The routine fly-outs of the device are a specialised part of the audit programme. It is essential that the pilots tasked with carrying out these fly-outs are adequately experienced. They would be expected to be type rating instructor/examiner (TRI/TRE) qualified on the type, and should have experience of simulator evaluations carried out by the DGCA Sri Lanka. The assignment of such pilots can present difficulties, particularly for the independent organisation operating FSTDs not directly associated with an airline. It is vital for the organisation to ensure their users are aware of the importance of the fly-outs as part of the continued qualification of the device and the need to assist in the provision of suitably qualified pilots to carry them out. It is worth noting that simulator users are required to satisfy themselves that the training devices they use are assessed for continued suitability, as part of their own CMP. Involvement in fly-outs assists in meeting this need.
- (v) Whilst it is accepted that the number of audits required in an organisation with a single device will be significantly less than those in larger organisations with multiple devices, the CMP should still meet the same criteria, and cover all aspects of the operation within a 12 month period. The independence of the audit personnel should be maintained at all times. The audit programme, whether by full audit or by using a checklist system should still be sufficiently comprehensive to provide the necessary level of confidence that the

device is maintained and operated to the highest possible standard. This includes monitoring and review of corrective actions and feedback processes.

- (w) The successful use of sub-contractors who play a significant role in the provision of services, such as maintenance or engineering services, to an organisation operating FSTDs is reliant on the sub-contractor operating under the CM of the organisation. All requirements that an organisation is expected to meet are equally applicable to his/her sub-contractor. It is the organisation's responsibility to ensure that the sub-contractor complies with its CM.
- (x) It is essential that a proper understanding of the CM and how it applies to each and every staff member is provided by appropriate training to all, not just those directly involved in operating the CM, such as the accountable manager, the CM manager, representatives and the auditors. The training given to those directly involved in CM should cover the CM, audit techniques and applicable technical standards. CM familiarisation training should be an integral part of any induction training and recurrent training. Update training on technical standards for audit personnel, is also of particular importance.
- (y) Any effective CM will include measurement of its effectiveness. The organisation should develop performance measures that can be monitored against objectives. Such measures, often referred to as metrics, should be reviewed by the DGCA Sri Lanka as part of its oversight of the CM within the organisation and during recurrent evaluations. In addition they should form part of the data reviewed during scheduled management reviews as part of the CM.

GM2 ORA.FSTD.100 General

COMPLIANCE MONITORING – ASSESSMENT FOR ORGANISATIONS OPERATING FSTDs

COMPLIANCE MONITORING ASSESSMENT FOR ORGANISATIONS OPERATING FSTDs			
Organisation:			
Site Assessed:			
Date of Assessment:			
Accountable Manager:			
Compliance Monitoring Manager:			
Number and Type of FSTDs:			
CM Manual Reference:			
Audit Area	CM/Proc Ref	Comments	Satisfactory Y/N
1. ACCOUNTABLE MANAGER			
Has an accountable manager (AM) with overall responsibility for compliance monitoring (CM) been nominated?			

Does the accountable manager have corporate authority to ensure all necessary activities can be financed and carried out to the standard required by the DGCA Sri Lanka?			
Has a formal written compliance policy statement been established, included in the CM manual and signed by the accountable manager?			
2. COMPLIANCE MONITORING MANAGER			
Has a compliance monitoring manager (CM manager) been nominated?			
Are the posts of CM manager and AM combined? If so, is the independence of compliance audits assured?			
Does the CM manager have overall responsibility and authority to: a) verify that standards are met; and b) ensure that the compliance monitoring programme is established, implemented and maintained?			
Does the CM manager have direct access to the AM?			
Does the CM manager have access to all parts of the organisation operating an FSTD and as necessary any sub-contractor's organisation?			
3. COMPLIANCE MONITORING (CM)			
Has CM been established by the operator?			
Is CM properly documented? (see Section 4)			
Is the CM structured according to the size and complexity of the operator?			

Does the CM include the following as a minimum: a) monitoring of compliance with required technical standards; b) identification of corrective actions and person responsible for rectification; c) a feedback system to accountable manager to ensure corrective action are promptly addressed; d) reporting of significant noncompliances to the competent authority; e) a compliance monitoring programme to verify continued compliance with applicable requirements, standards and procedures.		a) b) c) d) e)	
Is the CM structured according to the size and complexity of the operator?			
Are the responsibilities of the CM manager defined to include, as a minimum: a) monitoring of corrective action programme; b) ensuring that the corrective actions contain the necessary elements; c) providing management with an independent assessment of corrective action, implementation and completion; d) evaluation of the effectiveness of the corrective action programme.		a) b) c) d)	
Are adequate financial, material and human resources in place to support CM?			
Are management evaluations/reviews of CM held at least quarterly?			
Does the management evaluation ensure that the CMS is working effectively and is it comprehensive and well documented?			

Does the compliance monitoring programme identify the processes necessary and the persons within the organisation who have the training, experience, responsibility and authority to carry out the following: a) schedule and perform quality inspections and audits, including unscheduled audits when required; b) identify and record any concerns or findings, and the evidence necessary to substantiate such concerns or findings; c) initiate or recommend solutions to concerns or findings through designated reporting channels; d) verify the implementation of solutions within specific timescales.		a) b) c) d)	
Is there sufficient auditor resource available and can their required level of independence be demonstrated?			
Do the auditors report directly to the compliance monitoring manager?			
Does the defined audit schedule cover the following areas, within each 12 month period? a) organisation b) plans and objectives c) maintenance procedures d) FSTD qualification level; e) supervision f) FSTD technical status g) manuals, logs and records h) defect deferral i) personnel training j) aircraft and simulator configuration management, including Airworthiness Directives		a) b) c) d) e) f) g) h) i) j)	
How are audit non-compliances recorded?			
Are procedures in place to ensure that corrective actions are taken in response to findings?			
Are records of the compliance monitoring programme: a) accurate b) complete and c) readily accessible?		a) b) c)	

Is there an acceptable and effective procedure for providing a briefing on the CM to all personnel?			
Is there an acceptable and effective procedure for ensuring that all those responsible for managing the CM receive training covering: a) an introduction to the concept of the CM; b) compliance management; c) the concept of compliance assurance; d) CM manuals; e) audit techniques; f) reporting and recording; g) how the CM supports continuous improvement within the organisation.		a) b) c) d) e) f) g)	
Are suitable training records maintained?			
Are activities within the CM sub-contracted out to external agencies?			
Do written agreements exist between the organisation and the sub-contractor clearly defining the services and standard to be provided?			
Are the procedures in place to ensure that the necessary authorisations/ approval when required are held by a sub-contractor?			
Are the procedures in place to establish that the subcontractor has the necessary technical competence?			
4. CM MANUAL			
What is the current status of the CM manual – amendment and issue date?			
Is there a procedure in place to control copies and the distribution of the CM manual?			
Is the CM manual signed by the accountable manager and the compliance monitoring manager?			

Does the CM manual include, either directly or by reference to other documents, the following: a) a description of the organisation; b) reference to appropriate FSTD technical standards; c) allocation of duties and responsibilities; d) audit procedures; e) reporting procedures; f) follow-up and corrective action procedures; g) document retention policy; h) training records		a) b) c) d) e) f) g) h)	
Is there a document retention policy covering: a) audit schedules; b) inspection and audit reports; c) responses to findings; d) corrective action reports; e) follow-up and closure reports; f) management evaluation reports.		a) b) c) d) e) f)	
Does the CM manual include, either directly or by reference to other documents, the following procedures for day to day operation of the FSTD: a) defect reporting systems; b) defect rectification processes; c) tracking mechanisms; d) preventative maintenance programmes; e) spares handling; f) equipment calibration; g) configuration management of the device including visual, IOS and navigation databases; h) configuration control system to ensure the continued integrity of the hardware and software qualified; i) QTG running and function and subjective tests.		a) b) c) d) e) f) g) h) i)	
Does the CM manual include, either directly or by reference to other documents, procedures for notification of the competent authorities of the following: a) any change in the organisation including company name, location, management; b) major changes to a qualified device; c) deactivation or relocation of a qualified device; d) major failures of a qualified device; e) major safety issue associated with the installation.		a) b) c) d) e)	

Does the CM manual define acceptable and effective procedures to ensure compliance with applicable health and safety regulations, including: a) safety briefings; b) fire/smoke detection and suppression; c) protection against electrical, mechanical, hydraulic and pneumatic hazards; d) other items as defined in AMC1 ORA.FSTD.115		a) b) c) d)	
Does the CM manual include acceptable and effective procedures for regularly checking FSTD safety features such as emergency stops and emergency lighting, and are such tests recorded?			
5. COMPLIANCE MEASURES			
Have compliance monitoring objectives been developed from the policy statement, and included either directly or by reference in the CMS manual?			
Does the CMS include processes to produce and review appropriate metrics data?			
Do these compliance measures track the following: a) FSTD availability; b) numbers of defects; c) open defects; d) defect closure rates; e) training session interrupt rates; f) training session compliance rating.		a) b) c) d) e) f)	
Do the compliance measures support the compliance objectives?			
Required actions/Comments Signature:..... Date:.....			

GM3 ORA.FSTD.100 General

COMPLIANCE MONITORING SYSTEM – GUIDANCE FOR ORGANISATIONS OPERATING FSTDs TO PREPARE FOR A DGCA SRI LANKA EVALUATION

(a) Introduction

The following material provides guidance on what is expected by the DGCA Sri Lanka to support the discussion during the preliminary briefing, which is a first step of any initial or recurrent evaluation of an FSTD carried out by a DGCA Sri Lanka.

This document has been developed as well to standardise working methods throughout Member States and to develop effective CM spot checks to satisfy the applicable requirements and therefore to ensure the highest standards of training are attained.

(b) Document form

Different document forms can be considered. Nevertheless, it appears that the best solution is a dossier, which includes all the information required by the DGCA Sri Lanka to perform an evaluation.

(c) Contents of the dossier for an initial evaluation:

- (1) type of FSTD and qualification level requested;
- (2) evaluation agenda: including date of evaluation, name of people involved for the competent authority, contact details for the FSTD operator, schedules for the subjective flight profile, QTG rerun;
- (3) FSTD identification and detailed technical specification including, type of FSTD, manufacturer, registration number, date of entry into service, host computer, visual system, motion system, type of IOS, simulated version(s), standards of all the aircraft computers, if applicable. Manuals needed for an evaluation (e.g. flight manuals, system manuals, acceptance test manual, IOS user manual etc. – if applicable) could already be provided as part of the dossier in an electronic format;
- (4) planned modifications;
- (5) subjective open defect(s);
- (6) airport visual databases including for each visual scene, name of the airport, IATA and ICAO codes, type of visual scene (specific or generic), additional capabilities (e.g. snow model, WGS 84 compliance, enhanced ground proximity warning system (EGPWS)); and
- (7) QTG status: the list should include for each QTG test available the status of the tests following the FSTD operator and competent authority reviews.

(d) Contents of the dossier for a recurrent evaluation:

- (1) type of FSTD and qualification level requested;
- (2) evaluation agenda, including date of evaluation, name of people involved for the competent authority, contact details for the operator, schedules for the subjective flight profile, QTG rerun and QTG review;
- (3) FSTD identification, including type of FSTD, manufacturer, registration number, date of entry into service, host computer, visual system, motion system, type of IOS, simulated version(s), standards of all the aircraft computers, if applicable;
- (4) status of items raised during the last evaluation and date of closure;

- (5) reliability data: training hours month by month during the past year, numbers of complaints mentioned in the technical log, training hours lost, availability rate;
- (6) operational data: a list of FSTD users over the previous 12 months should be provided, with number of training hours;
- (7) failure tabulation including categorisation of failures;
- (8) details of main failures leading to training interruption or multiple occurrences of some failures;
- (9) hardware and/or software updates or changes since last evaluation and planned hardware and/or software updates or changes;
- (10) subjective open defect(s);
- (11) airport visual databases including for each visual scene, name of the airport, IATA and ICAO codes, type of visual scene (specific or generic), additional capabilities (snow model, WGS 84 compliance, EGPWS);
- (12) QTG status: the list should include for each QTG test available, the date of run during the past year, any comment, and the status of the tests; and
- (13) results of scheduled internal audits and additional quality inspections (if any) since last evaluation and a summary of actions taken.

ORA.FSTD.105 Maintaining the FSTD qualification

- (a) In order to maintain the qualification of the FSTD, an FSTD qualification certificate holder shall run the complete set of tests contained within the master qualification test guide (MQTG) and functions and subjective tests progressively over a 12-month period.
- (b) The results shall be dated, marked as analysed and evaluated, and retained in accordance with ORA.FSTD.240, in order to demonstrate that the FSTD standards are being maintained.
- (c) A configuration control system shall be established to ensure the continued integrity of the hardware and software of the qualified FSTD.

ORA.FSTD.110 Modifications

- (a) The holder of an FSTD qualification certificate shall establish and maintain a system to identify, assess and incorporate any important modifications into the FSTDs it operates, especially:
 - (1) any aircraft modifications that are essential for training, testing and checking, whether or not enforced by an airworthiness directive; and
 - (2) any modification of an FSTD, including motion and visual systems, when essential for training, testing and checking, as in the case of data revisions.
- (b) Modifications of the FSTD hardware and software that affect handling, performance and systems operation or any major modifications of the motion or visual system shall be evaluated to determine the impact on the original qualification criteria. The organisation shall prepare amendments for any affected validation tests. The organisation shall test the FSTD to the new criteria.
- (c) The organisation shall inform the DGCA Sri Lanka in advance of any major changes to determine if the tests carried out are satisfactory. The DGCA Sri Lanka shall determine

if a special evaluation of the FSTD is necessary prior to returning it to training following the modification.

AMC1 ORA.FSTD.110 Modifications

GENERAL

- (a) The FSTD, where applicable, should be maintained in a configuration that accurately represents the aircraft being simulated. This may be a specific aircraft tail number or may be a representation of a common standard.
- (b) Users of the device should always establish a differences list for any device they intend to use, and to identify how any differences should be covered in training. In order to ensure each device is maintained in the appropriate configuration, the organisation operating an FSTD should have a system that ensures that all relevant airworthiness directives (ADs) are introduced where applicable on affected FSTDs.
- (c) ADs from both the State of Design of the aircraft and the State where the FSTD is located should be monitored. ADs from the State of Design of an aircraft are usually automatically applicable, unless specifically varied by the aircraft's State of Registry.
- (d) Where appropriate, ADs issued by States where users of the device have aircraft registered should also be monitored. In addition to ADs, the FSTD operator should also put in place processes that ensure all aircraft modifications are reviewed for any effect on training, testing and checking. This can be achieved by reviewing the aircraft manufacturer's service bulletins and may require a specific link to the aircraft manufacturer to be developed. In practice this link is often established through aircraft operators who use the device.
- (e) Organisations operating FSTDs should notify the DGCA Sri Lanka of major changes.
- (f) This does not imply that the DGCA Sri Lanka will always wish to directly evaluate the change. The DGCA Sri Lanka should be mindful of the potential burden placed on the organisation by a special evaluation and should always consider that burden when deciding if such an evaluation is necessary.
- (g) The organisation operating FSTDs should have an internal acceptance process for modifications, to be used when implementing all modifications, even if the DGCA Sri Lanka has made a decision to carry out an evaluation.

GM1 ORA.FSTD.110 Modifications

EXAMPLES OF MAJOR MODIFICATIONS

The following are examples of modifications that should be considered as major. This list is not exhaustive and modifications need to be classified on a case-by-case basis:

- (a) any change that affects the QTG;
- (b) introduction of new standards of equipment such as flight management and guidance computer (FMGC) and updated aerodynamic data packages;
- (c) re-hosting of the FSTD software;
- (d) introduction of features that model new training scenarios; e.g. airborne collision avoidance system (ACAS), EGPWS;
- (e) aircraft modifications that could affect the FSTD qualification; and

- (f) FSTD hardware or software modifications that could affect the handling qualities, performance or system representation.

ORA.FSTD.115 Installations

- (a) The holder of an FSTD qualification certificate shall ensure that:
 - (1) the FSTD is housed in a suitable environment that supports safe and reliable operation;
 - (2) all FSTD occupants and maintenance personnel are briefed on FSTD safety to ensure that they are aware of all safety equipment and procedures in the FSTD in case of an emergency; and
 - (3) the FSTD and its installations comply with the local regulations for health and safety.
- (b) The FSTD safety features, such as emergency stops and emergency lighting, shall be checked at least annually and recorded.

AMC1 ORA.FSTD.115 Installations

MINIMUM ELEMENTS FOR SAFE OPERATION

- (a) Introduction
 - (1) This AMC identifies those elements that are expected to be addressed, as a minimum, to ensure that the FSTD installation provides a safe environment for the users and operators of the FSTD under all circumstances.
- (b) Expected elements
 - (1) Adequate fire/smoke detection, warning and suppression arrangements should be provided to ensure safe passage of personnel from the FSTD.
 - (2) Adequate protection should be provided against electrical, mechanical, hydraulic and pneumatic hazards, including those arising from the control loading and motion systems, to ensure maximum safety of all persons in the vicinity of the FSTD.
 - (3) Other areas that should be addressed include the following:
 - (i) a two-way communication system that remains operational in the event of a total power failure;
 - (ii) emergency lighting;
 - (iii) escape exits and escape routes;
 - (iv) occupant restraints (seats, seat belts etc.);
 - (v) external warning of motion and access ramp or stairs activity;
 - (vi) danger area markings;
 - (vii) guard rails and gates;
 - (viii) motion and control loading emergency stop controls accessible from either pilot or instructor seats;
 - (ix) a manual or automatic electrical power isolation switch.

GM1 ORA.FSTD.115 Installations

GENERAL

- (a) The intent of ORA.FSTD.115 is to establish that the organisation operating an FSTD has all the necessary procedures in place to ensure that the FSTD installation remains in compliance with all requirements affecting the safety of the device and its users.
- (b) Based on experience, the DGCA Sri Lanka should pay particular attention to the quality of safety briefings on the FSTD provided to users and instructors, and to the execution of regular checks on the FSTD safety features.
- (c) It is recognised that certain checks, such as that of the emergency stop, can have adverse impact on the FSTD if carried out in full.
- (d) It is acceptable to develop a procedure that protects elements of the device by shutting them down in advance, in a more controlled manner, provided it can be shown that the procedure still demonstrates the whole device can be shut down by the operation of a single emergency stop button, when required.

ORA.FSTD.120 Additional equipment

Where additional equipment has been added to the FSTD, even though not required for qualification, it shall be assessed by the DGCA Sri Lanka to ensure that it does not adversely affect the quality of training.

SECTION II – Requirements for the qualification of FSTDs

ORA.FSTD.200 Application for FSTD qualification

- (a) The application for an FSTD qualification certificate shall be made in a form and manner established by the DGCA Sri Lanka:
- (1) in the case of basic instrument training devices (BITDs), by the BITD manufacturer;
 - (2) in all other cases, by the organisation intending to operate the FSTD.
- (b) Applicants for an initial qualification shall provide the DGCA Sri Lanka with documentation demonstrating how they will comply with the requirements established in this Regulation. Such documentation shall include the procedure established to ensure compliance with ORA.GEN.130 and ORA.FSTD.230.

AMC1 ORA.FSTD.200 Application for FSTD qualification

LETTER OF APPLICATION FOR INITIAL QUALIFICATION OF AN FSTD; EXCEPT BASIC INSTRUMENT TRAINING DEVICE (BITD)

A sample of letter of application is provided overleaf.

Part A

To be submitted not less than 3 months prior to requested qualification date

(Date)

(Office – DGCA Sri Lanka)

(Address)

(City)

(Country)

Type of FSTD	Aircraft Type/class	Qualification Level Sought				
		A	B	C	D	Sp./Cat
Full Flight Simulator						
FFS						
Flight Training Device		1	2	3		
FTD						
Flight and Navigation Procedures Trainer		I	II	III	II MCC	III MCC
FNPT						

Interim Qualification Level requested: YES/NO

Dear,

<Name of Applicant> requests the evaluation of its flight simulation training device <operator's identification of the FSTD> for qualification. The <FSTD manufacturer's name> FSTD with its <visual system and manufacturer's name, if applicable> visual system.

Evaluation is requested for the following configurations and engine fits as applicable:

e.g. 767 PW/GE and 757RR

1.....

2.....

3.....

Dates requested are: <date(s)> and the FSTD will be located at <place>.

The objective tests of the QTG will be submitted by <date> and in any event not less than 30 days before the requested evaluation date unless otherwise agreed with the **DGCA SriLanka**.

Comments:

.....

Signed.....

Print name:

Position/appointment held:

Email address:

Telephone number:.....

Part B

To be completed with attached QTG results

(Date)

We have completed tests of the FSTD and declare that it meets all applicable requirements except as noted below.

The following QTG tests still have to be provided:

Tests	Comments

(Add boxes as required)

It is expected that they will be completed and submitted 3 weeks prior to the evaluation date.

Signed

Print name:.....

Position/appointment held:
 E-mail address:
 Telephone number:

Part C

To be completed not less than 7 days prior to initial evaluation

(Date)

The FSTD has been assessed by the following evaluation team:

(Name) Qualification

 (Name) Qualification

 (Name) Qualification

 (Name) Pilot's Licence
 Nr.
 (Name) Flight Engineer's Licence No (if
 applicable)

- ☐ FFS/FTD: This team attests that the *<type of FSTD>* conforms to the aeroplane flight deck/helicopter cockpit configuration of *<name of aircraft operator (if applicable), type of aeroplane/helicopter>* aeroplane/helicopter within the requirements for *<type of FSTD and level>* and that the simulated systems and subsystems function equivalently to those in that aeroplane/helicopter. The pilot of this evaluation team has also assessed the performance and the flying qualities of the FSTD and finds that it represents the designated aeroplane/helicopter.
- ☐ FNPT: This team attest(s) that the *<type of FSTD>* represents the flight deck or cockpit environment of a *<aeroplane/helicopter or class of aeroplane/type of helicopter>* within the requirements for *<type of FSTD and level>* and that the simulated systems appear to function as in the class of aeroplane/type of helicopter. The pilot of this evaluation team has also assessed the performance and the flying qualities of the FSTD and finds that it represents the designated class of aeroplane/type of helicopter.

(Additional comments as required)

.....

Signed

Print name:
 Position/appointment held:
 E-mail address:
 Telephone number:

GM1 ORA.FSTD.200 Application for FSTD qualification

USE OF FOOTPRINT TESTS IN QUALIFICATION TEST SUBMISSION

(a) Introduction

- (1) Recent experience during initial qualification of some FFSs has required acceptance of increasing numbers of footprint tests. This is particularly true for FFSs of smaller or older aircraft types, where there may be a lack of aircraft flight test data. However, the large number of footprint tests offered in some QTGs has given rise to concern.
- (2) This guidance is applicable to FFS aeroplane, FTD aeroplane, FFS helicopter and FTD helicopter qualifications.

(b) Terminology

- (1) Footprint test - footprint test data are derived from a subjective assessment carried out on the actual FSTD requiring qualification. The assessment and validation of these data are carried out by a pilot appointed by the DGCA Sri Lanka. The resulting data are the footprint validation data for the FSTD concerned.

(c) Recommendation

- (1) It is permitted to use footprint data where flight test data is not available. Only when all other alternative possible sources of data have been thoroughly reviewed without success may a footprint test be acceptable, subject to a case-by-case review with the DGCA Sri Lanka concerned, and taking into consideration the level of qualification sought for the FSTD.
- (2) Footprint test data should be:
 - (i) constructed with initial conditions and FFS set up in the appropriate configuration (e.g. correct engine rating) for the required validation data;
 - (ii) a manoeuvre representative of the particular aircraft being simulated;
 - (iii) manually flown out by a type rated pilot who has current experience on type* and is deemed acceptable by the DGCA Sri Lanka**;
 - (iv) constructed from validation data obtained from the footprint test manoeuvre and transformed into an automatic test;
 - (v) an automatic test run as a fully integrated test with pilot control inputs; and
 - (vi) automatically run for the initial qualification and recurrent evaluations.

* In this context, 'current' refers to the pilot experience on the aircraft and not to the Implementing Standards 72.

** The same pilot should sign off the complete test as being fully representative.

- (3) A clear rationale should be included in the QTG for each footprint test. These rationales should be added to and clearly recorded within the validation data roadmap (VDR) in accordance with published requirements.
- (4) Where the number of footprint tests is deemed by the DGCA Sri Lanka to be excessive, the maximum level of qualification may be affected. The DGCA Sri Lanka should review each area of validation test data where the use of footprint tests as the basis for the validation data is proposed. Consideration should be given to the extent to which footprint tests are used in any given area.

For example, it would be unacceptable if all or the vast majority of takeoff tests were proposed as footprint tests, with little or no flight test data being presented. It should be recognised, therefore, that it may be necessary for new flight test data to be gathered if the use of footprint tests becomes excessive, not just overall, but also in specific areas.

- (5) For recurrent evaluation purposes an essential match is to be expected. Validation tests using footprint data which do not provide an essential match should be justified to the satisfaction of the DGCA Sri Lanka.

The DGCA Sri Lanka should be consulted at the point of definition of the aircraft data for qualification prior to the procurement of the device if footprint tests need to be used.

ORA.FSTD.205 Certification specifications for FSTDs

- (a) The DGCA Sri Lanka shall issue, Certification Specifications as standard means to show compliance of FSTDs with the Essential Requirements.
- (b) Such Certification Specifications shall be sufficiently detailed and specific to indicate to applicants the conditions under which qualifications will be issued.

ORA.FSTD.210 Qualification basis

- (a) The qualification basis for the issuance of an FSTD qualification certificate shall consist of:
 - (1) the applicable Certification Specifications established by the DGCA Sri Lanka that are effective on the date of the application for the initial qualification;
 - (2) the aircraft validation data defined by the mandatory part of the type certificate data sheet;
 - (3) any special conditions prescribed by the DGCA Sri Lanka if the related Certification Specifications do not contain adequate or appropriate standards for the FSTD because the FSTD has novel or different features to those upon which the applicable Certification Specifications are based.
- (b) The qualification basis shall be applicable for future recurrent qualifications of the FSTD, unless it is re-categorised.

ORA.FSTD.225 Duration and continued validity

- (a) The full flight simulator (FFS), flight training device (FTD) or flight and navigation procedures trainer (FNPT) qualification shall remain valid subject to:
 - (1) the FSTD and the operating organisation remaining in compliance with the applicable requirements;
 - (2) the DGCA Sri Lanka being granted access to the organisation as defined in ORA.GEN.140 to determine continued compliance with the relevant requirements; and
 - (3) the qualification certificate not being surrendered or revoked.

- (b) The period of 12 months established in (e),(2),(i) in this part(ORA.FSTD.225) may be extended up to a maximum of 36 months, in the following circumstances:
 - (1) the FSTD has been subject to an initial and at least one recurrent evaluation that has established its compliance with the qualification basis;
 - (2) the FSTD qualification certificate holder has a satisfactory record of successful regulatory FSTD evaluations during the previous 36 months;
 - (3) the DGCA Sri Lanka performs a formal audit of the compliance monitoring system defined in ORA.GEN.200(a)(6) of the organisation every 12 months; and
 - (4) an assigned person of the organisation with adequate experience reviews the regular reruns of the qualification test guide (QTG) and conducts the relevant functions and subjective tests every 12 months and sends a report of the results to the DGCA Sri Lanka.
- (c) A BITD qualification shall remain valid subject to regular evaluation for compliance with the applicable qualification basis by the DGCA Sri Lanka in accordance in (e) of this part(ORA .FSTD.225).
- (d) Upon surrender or revocation, the FSTD qualification certificate shall be returned to the DGCA Sri Lanka.
- (e)
 - (1) The DGCA Sri Lanka shall continuously monitor the organisation operating the FSTD to verify that:
 - (i) the complete set of tests in the MQTG is rerun progressively over a 12-month period;
 - (ii) the results of recurrent evaluations continue to comply with the qualification standards and are dated and retained; and
 - (iii) a configuration control system is in place to ensure the continued integrity of the hardware and software of the qualified FSTD.
 - (2) The DGCA Sri Lanka shall conduct recurrent evaluations of the FSTD in accordance with the procedures detailed in Implementing Standard 10. These evaluations shall take place:
 - (i) every year, in the case of a full flight simulator (FFS), flight training device (FTD) or flight and navigation procedures trainer (FNPT); the start for each recurrent 12-month period is the date of the initial qualification. The FSTD recurrent evaluation shall take place within the 60 days prior to the end of this 12-month recurrent evaluation period;
 - (ii) every 3 years, in the case of a BITD.

AMC1 ORA.FSTD.225(b)(4) Duration and continued validity

The assigned person should have experience in FSTDs and training. The person may have FSTD experience or training experience with an education in FSTD evaluation procedures only, provided the other element of expertise is available within the organisation and a procedure for undertaking the annual review and reporting to the DGCA Sri Lanka is documented within the compliance monitoring function.

ORA.FSTD.230 Changes to the qualified FSTD

- (a) The holder of an FSTD qualification certificate shall inform the DGCA Sri Lanka of any proposed changes to the FSTD, such as:
 - (1) major modifications;
 - (2) relocation of the FSTD; and
 - (3) any de-activation of the FSTD.

- (b) In case of an upgrade of the FSTD qualification level, the organisation shall apply to the DGCA Sri Lanka for an upgrade evaluation. The organisation shall run all validation tests for the requested qualification level. Results from previous evaluations shall not be used to validate FSTD performance for the current upgrade.

- (c) When an FSTD is moved to a new location, the organisation shall inform the DGCA Sri Lanka before the planned activity along with a schedule of related events.

Prior to returning the FSTD to service at the new location, the organisation shall perform at least one third of the validation tests, and functions and subjective tests to ensure that the FSTD performance meets its original qualification standard. A copy of the test documentation shall be retained together with the FSTD records for review by the DGCA Sri Lanka.

The DGCA Sri Lanka may perform an evaluation of the FSTD after relocation. The evaluation shall be in accordance with the original qualification basis of the FSTD.

- (d) If an organisation plans to remove an FSTD from active status for prolonged periods, the DGCA Sri Lanka shall be notified and suitable controls established for the period during which the FSTD is inactive.

The organisation shall agree with the DGCA Sri Lanka a plan for the de-activation, any storage and re-activation to ensure that the FSTD can be restored to active status at its original qualification level.

AMC1 ORA.FSTD.230(b) Changes to the qualified FSTD

UPDATING AND UPGRADING EXISTING FSTDs

- (a) An update is a result of a change to the existing device where it retains its existing qualification level. The change may be certified through a recurrent inspection or an extra inspection if deemed necessary by the DGCA Sri Lanka according to the applicable requirements in effect at the time of initial qualification.
- (b) If such a change to an existing device would imply that the performance of the device could no longer meet the requirements at the time of initial qualification, but that the result of the change would, in the opinion of the DGCA Sri Lanka, clearly mean an improvement to the performance and training capabilities of the device altogether, then the DGCA Sri Lanka might accept the proposed change as an update while allowing the device to retain its original qualification level.
- (c) An upgrade is defined as the raising of the qualification level of a device, or an increase in training credits, which can only be achieved by undergoing an initial qualification according to the latest applicable requirements.
- (d) As long as the qualification level of the device does not change, all changes made to the device should be considered to be updates pending approval by the DGCA Sri Lanka.

- (e) An upgrade, and consequent initial qualification according to the latest applicable requirements, is only applicable when the organisation requests another qualification level (re-categorisation) for the FSTD.

ORA.FSTD.235 Transferability of an FSTD qualification

- (a) When there is a change of the organisation operating an FSTD, the new organisation shall inform the DGCA Sri Lanka in advance in order to agree upon a plan of transfer of the FSTD.
- (b) The DGCA Sri Lanka may perform an evaluation in accordance with the original qualification basis of the FSTD.
- (c) When the FSTD no longer complies with its initial qualification basis, the organisation shall apply for a new FSTD qualification certificate.

ORA.FSTD.240 Record-keeping

The holder of an FSTD qualification certificate shall keep records of:

- (a) all documents describing and proving the initial qualification basis and level of the FSTD for the duration of the FSTD's lifetime; and
- (b) any recurrent documents and reports related to each FSTD and to compliance monitoring activities for a period of at least 5 years.

AMC1 ORA.FSTD.240 Record-keeping

FSTD RECORDS

- (a) FSTD records to be kept should include the following:
 - (1) for the lifetime of the device:
 - (i) the master QTG (MQTG) of the initial evaluation;
 - (ii) the qualification certificate of the initial evaluation; and
 - (iii) the initial evaluation report;
 - (2) for a period of at least 5 years (in paper or electronic format):
 - (i) recurrent QTG runs;
 - (ii) recurrent evaluation reports;
 - (iii) reports of internal functions and subjective testing;
 - (iv) technical log;
 - (v) CMS report;
 - (vi) audit schedule;
 - (vii) evaluation programme;
 - (viii) management evaluation reports;
 - (ix) obsolete procedures and forms.