TECHNICAL STANDARDS – Issue version 1 (2020)
NAMCATS: Part 140

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1. GENERAL

1.1 Section 227 of the Civil Aviation Act, 2016 (Act no. 6 of 2016 – hereinafter "the Act") empowers the Executive Director of Civil Aviation to issue technical standards for civil aviation "on such matters as may be prescribed". Section 227(3) of the Act further empowers the Executive Director of Civil Aviation to incorporate into a technical standard any international aviation standard or any amendment without publishing the text of such standard or any amendment "by mere reference" to the title, number and year of issue of such standard or amendment or to any other particulars by which such standard or amendment is sufficiently identified.

1.2 By way of Government Notice 293/2018 published in Government Gazette 6763 dated 8th November 2018, NAMCARS (amendment 2018) provides for Part 140 "Safety Management Systems and Related Matters". This Part 140 provides for the issue of technical standards as NAMCATS-60. The Executive Director of Civil Aviation has, pursuant to the empowerment mentioned above, issued technical standards relating to NAMCAR Part 140 (Safety Management Systems and Related Matters) to be known as NAM-CATS-SMS.

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1.4 To the extent possible, each reference to a technical standard in this document, is a reference to the corresponding regulation in the Namibian Civil Aviation Regulations.

Example: *(1) Technical standard 140.02.2 refers to regulation 140 of Subpart 02 of the Part 2 (2) Technical standard 140.02 refers to either the whole, or more than one specific regulation, of Subpart 02 of Part 2.*

1.5 Where there is any perceived disparity of meaning or inconsistency between these technical standards and the regulations, the provisions of the regulations will take precedence.

1.6 Where there is a difference between a standard and procedure prescribed in an ICAO document and the Civil Aviation Technical Standards (CATS), the CATS standard will prevail.

2. GUIDANCE MATERIAL

2.1 Guidelines and recommendations in support of any Technical Standard are contained in schedules or appendices to, and/ or compliance notes inserted throughout, technical standards. These guidelines, upon release, are intended to provide recommendations and guidance to

illustrate a means, but not necessarily the only means of complying with the regulations and technical standards. They may explain certain regulatory requirements by providing interpretive and explanatory materials. It is expected that service providers will document internal actions in their own operational manuals, to put into effect those, or similarly adequate, practices.

3. AMENDMENTS TO THE TECHNICAL STANDARDS

3.1 The NCAA Safety Division, Safety Promotion and Quality (SPQ) Department has responsibility for the technical content of this technical standard.

3.2 This Technical Standard is issued, and may only be amended, under the authority of the Executive Director of Civil Aviation.

3.3 Requests for changes to the content of this Technical Standard must be forwarded to the Executive Director and may come from:

(a) technical areas within NCAA; or
(b) aviation industry service providers or operators; or
(c) pilots and ATC staff,

and for it to be dealt with in accordance with the relevant Sub-Part of Part 3 of the NAMCARS.

3.4 The need to change the content of this technical standard may arise for any of the following reasons:

(a) to ensure safety;
(b) to ensure standardisation;
(c) to respond to changed NCAA regulations or standards;
(d) to respond to changes initiated by ICAO; or
(e) to accommodate proposed initiatives or new technologies, and for it to meet the validity and other requirements set out accordance with the relevant Sub-Part of Part 3 of the NAMCARS.

3.5 NCAA may approve trials of new procedures or technologies to develop appropriate standards.

4. INTERNATIONAL STANDARDS

4.1 Based on the empowering provisions to the Executive Director in section 227 to incorporate into a technical standard any international aviation standard or any amendment without stating the text of such standard or amendment, by mere reference to the title, number and year of issue of such standard or amendment, or to any other particulars by which such standard or amendment is sufficiently identified the Technical Standards herein provide for the following international standards, recommended practices and procedures, as amended from time to time, are incorporated into the technical standards contained in this document:

(a) ICAO Annex 19 – Safety Management;
(b) ICAO Safety Management Manual (Doc 9859)

4.2 Differences from ICAO Standards, Recommended Practices and Procedures are published in the AIP.

These Technical Standards apply with immediate effect.
Further access is available on NCAA website: www.ncaa.com.na/resources
Enquiries: spq@ncaa.com.na

GORDON ELLIOT
INTERIM EXECUTIVE DIRECTOR

SCHEDULE

PART 140 – SAFETY MANAGEMENT SYSTEMS
AND
RELATED MATTERS (NAM-CATS-SMS)

Contents

Applicability
140.01.1

1. ***Compliance Note.*** *The Standards contained in this document is applicable to safety management functions related to, or in direct support of, the safe operation of aircraft and must apply to the following participants, service providers or holders of aviation documents:*
   1.1. an air operator;
   1.2. an aircraft maintenance organisation;
   1.3. a provider of air navigation services inclusive of an area control service where air navigation facilities are situated or from where such services are provided;
   1.4. an aviation related facility which includes an airport or operator of an aviation related service, and which are related to or in support of the civil aviation system;
   1.5. an aviation training organisation whose activities impacts the safety of aircraft operations

2. *This Document also applies to international operations of large or turbojet aeroplanes for general aviation in terms of Part 91.*

Requirements of SMS
140.02.2

1. This section sets out the standards for the implementation and maintenance of an SMS and the minimum requirements for SMS implementation. The components and elements are those listed in sub regulation 140.02.2(1).

2. The following requirements must be met when addressing safety policy, safety oversight, and objectives elements.

   2.1. Management commitment-

   2.1.1. The participant, document holder or service provider must define the organization's safety policy which must signed by the accountable executive of the organization.
   2.1.2. The safety policy must reflect organizational commitments regarding safety; must include a clear statement about the provision of the necessary resources for the implementation of the safety policy; and must be communicated, with visible endorsement, throughout the organization.
   2.1.3. The safety policy must include the safety reporting procedures; must clearly indicate which types of operational behaviours are unacceptable; and must include the conditions under which disciplinary action would not apply.
   2.1.4. The safety policy must be periodically reviewed to ensure it remains relevant and appropriate to the organization.

   2.2. Safety accountability and responsibilities-

   2.2.1. The participant, document holder or service provider must identify the accountable executive who, irrespective of other functions, shall have ultimate responsibility and accountability, on behalf of the organization, for the implementation and maintenance of the SMS.

2.2.2. The organization must also identify the accountabilities of all members of management, irrespective of other functions, as well as of employees, with respect to the safety performance of the SMS.

2.2.3. Safety responsibilities, accountabilities and authorities must be documented and communicated throughout the organization and must include a definition of the levels of management with authority to make decisions regarding safety risk tolerability.

2.3. Appointment of key safety personnel

2.3.1. The participant, document holder or service provider must appoint a safety manager to be the responsible individual and focal point for the implementation and maintenance of an effective SMS.

2.4. Coordination of Emergency Response Planning (ERP)

2.4.1. The participant, document holder or service provider must ensure that an emergency response plan that provides for the orderly and efficient transition from normal to emergency operations and the return to normal operations is properly coordinated with the emergency response plans of those organizations it must interface with during the provision of its services.

2.4.2. An ERP must include:

2.4.2.1. Planned actions to minimize indirect or consequential damage upon the occurrence of a crisis or emergency situation.

2.4.2.2. Provision for preservation of aviation product, services, and equipment to avoid subsequent safety and quality and continuity problems, where applicable.

2.4.2.3. Recovery actions as well as procedures for orderly transition from normal to emergency operations

2.4.2.4. Designation of emergency authority

2.4.2.5. Assignment of emergency roles and responsibilities

2.4.2.6. Authorization of key personnel for actions contained in the plan

2.4.2.7. Coordination procedures with contractors or operators where applicable

2.4.2.8. Criteria for safe continuation of operations, or return to normal operations

2.5. SMS documentation

2.5.1. The participant, document holder or service provider must develop an SMS implementation plan, endorsed by senior management of the organization that defines the organization's approach to the management of safety in a manner that meets the organization's safety objectives.

2.5.2. The organisation must develop and maintain SMS documentation describing the safety policy and objectives, the SMS requirements, the SMS processes and procedures, the accountabilities, responsibilities and authorities for processes and procedures, and the SMS outputs.

2.5.3. Also, as part of the SMS documentation, the organisation must develop and maintain a safety management system manual (SMSM), to communicate its approach to the management of safety throughout the organization.

2.5.4. A SMS Manual must include the following contents—

2.5.4.1. Document Control
2.5.4.2. SMS Regulatory Requirements
2.5.4.3. Scope of the Safety Management System
2.5.4.4. Safety Policy
2.5.4.5. Safety Objectives and Goals
2.5.4.6. Safety Accountabilities and Key Personnel
2.5.4.7. Non-Punitive Reporting Policy
2.5.4.8. Safety Reporting
2.5.4.9. Hazard Identification and Risk Assessment
2.5.4.10. Safety Performance Monitoring and Measurement
2.5.4.11. Safety Investigations
2.5.4.12. SMS and Safety Training
2.5.4.13. SMS Audit and Safety Review
2.5.4.14. SMS Data and Records Management
2.5.4.15. Management of Change
2.5.4.16. Emergency Response Plan

2.5.5. A SMS manual must preferably be a stand-alone manual by itself.

3. Safety risk management

3.1. Hazard identification

3.1.1. The participant, document holder or service provider must develop and maintain a formal process that ensures that hazards in operations are identified.

3.1.2. Hazard identification must be based on a combination of reactive, proactive, and predictive methods of safety data collection.

3.2. Safety risk assessment and mitigation

3.2.1. The participant, document holder or service provider must develop and maintain a formal process that ensures analysis, assessment, and control of the safety risks in _ operations.

3.2.2. The methodology for assessing risk may vary according to the organisation, but must include the following features:

3.2.2.1. establishment of the acceptable level of risk, according to the ‘as low as reasonably practical’ (ALARP) principle;
3.2.2.2. an assessment of risk-taking account of the severity of safety outcome and probability of occurrence;
3.2.2.3. an assessment of the tolerability of the risk;
3.2.2.4. a determination whether the risk can be tolerated, eliminated, or mitigated to a tolerable level; and
3.2.2.5. further assessment of residual risks and any new risks introduced as a result of mitigation measures.

4. Safety assurance

4.1. Safety performance monitoring and measurement

4.1.1. The participant, document holder or service provider must develop and maintain the means to verify the safety performance of the organization and to validate the effectiveness of safety risk controls.

4.1.2. The safety performance of the organization must be verified in reference to the safety performance indicators and safety performance targets of the SMS.

4.2. Management of change

4.2.1. The participant, document holder or service provider must develop and maintain a formal process to identify changes within the organization which may affect established processes and services; to describe the arrangements to ensure safety performance before implementing changes; and to eliminate or modify safety risk controls that are no longer needed or effective due to changes in the operational environment.

4.2.2. Changes which may affect safety include, but are not limited to:

4.2.2.1. organizational expansion, contraction, and re-structuring;

4.2.2.2. changes to internal systems, processes or procedures that support delivery of the products and services;

4.2.2.3. changes to the operating environment;

4.2.2.4. changes of operational equipment, systems, and technology.

4.3. Continuous improvement of the SMS

4.3.1. The participant, document holder or service provider must develop and maintain a formal process to identify the causes of substandard performance of the SMS, determine the implications of substandard performance of the SMS in operations, and eliminate or mitigate such causes.

5. Safety Promotion

5.1. Training and education

5.1.1. The participant, document holder or service provider must develop and maintain a safety training programme that ensures that personnel are trained and competent to perform their SMS duties.

5.1.2. The scope of the safety training programme must be appropriate to each individual's involvement in the SMS.

5.1.3. Safety training and education curricula must consist of the following:

5.1.3.1. organizational safety policies, goals, and objectives;

5.1.3.2. organizational safety roles and responsibilities related to safety;

5.1.3.3. basic safety risk management principles;

5.1.3.4. safety reporting systems;

5.1.3.5. safety management support (including evaluation and audit programs);

5.1.3.6. lines of communication for dissemination of safety information;

5.1.3.7. a validation process that measures the effectiveness of training; and

5.1.3.8. documented initial indoctrination and recurrent training requirements.

5.2. Safety communication

5.2.1. The participant, document holder or service provider must develop and maintain formal means for safety communication that ensures that all personnel are fully aware of the SMS, conveys safety-critical information, and explains why particular safety actions are taken and why safety procedures are introduced or changed.

Implementation of SMS
140.02.3

1. The objective of this section is to set the manner and requirements for the phase implementation of SMS. The participant, document holder or service provider must apply the following measures when implementing the phases.

2. The requirements for the implementation for each of the phases are;
   2.2 Phase 1 (6/12 months)
   2.3 Phase 2 (6/12 months)
   2.4 Phase 3 (18 months)
   2.5 Phase 4 (18 months)

3. **Phase I**

3.1 Management Commitment and Responsibility - Element 1.1(i), the participant, document holder or service provider must:

3.1.1 Identify the Accountable Executive and the safety accountabilities of managers.

3.1.2 Establish a SMS implementation team that must comprise of representatives from the relevant departments.

3.1.3 The function of the implementation team amongst others is:

3.1.3.1 Conduct a gap analysis of the organisations current systems and processes

3.1.3.2 Develop the SMS implementation plan.

3.1.3.3 Ensure the adequate SMS training & technical expertise of the team to establish effective Implementation of the SMS elements and related processes.

3.1.3.4 Monitor and report on the progress of the SMS implementation and providing regular updates and coordination with the SMS Accountable Executive

3.2 SMS Implementation Plan - Element 1.5(i), the participant, document holder or service provider must:

3.2.1 Develop an SMS implementation plan on how the organization will implement the SMS on the basis of the identified system and process gaps resulting from the gap analysis.

3.2.2 An example of a basic SMS implementation plan is in Appendix 2 to this Chapter.

3.3 Appointment of Key Safety Personnel - Element 1.3, the participant, document holder or service provider must:

3.3.1 Appoint the key SMS person (safety/ quality function) within the organization that will be responsible for administering the SMS on behalf of the Accountable Executive.
3.3.2 Establish the safety services office.

3.4 Training and Education - Element 4.1(i), the participant, document holder or service provider must:
3.4.1 Conduct training needs analysis;
3.4.2 Organize and set up schedules for appropriate training for all staff according to their individual responsibilities and involvement in the SMS;
3.4.3 Develop safety training that includes;
3.4.4 initial job-specific training, and
3.4.5 recurrent training;
3.4.6 Identify the costs associated with training;
3.4.7 Develop a validation process that measures the effectiveness of training; and
3.4.8 Establish safety training record system.

3.5 Safety Communication - Element 4.2(i), the participant, document holder or service provider must:
3.5.1 Initiate a mechanism or medium for safety communication.

4 **Phase II**

4.1 Management Commitment and Responsibility - Element 1.1(ii), the participant, document holder or service provider must:
4.1.1 Develop a safety policy.
4.1.2 Have the Accountable Executive sign the safety policy.
4.1.3 Communicate the safety policy through the organization.
4.1.4 Establish a review schedule for the safety policy to ensure it remains relevant and appropriate to the organization.
4.1.5 Establish safety objectives for the SMS, by developing safety performance standards in terms of:
4.1.5.1 safety performance indicators;
4.1.5.2 safety performance targets and alert levels, and
4.1.5.3 action plans.
4.1.6 Establish the SMS requirements for subcontractors:
4.1.6.1 establish a procedure to write SMS requirements into the contracting process; and
4.1.6.2 establish the SMS requirements in the bidding documentation.

4.2 Safety Accountabilities - Element 1.2, the participant, document holder or service provider must:
4.2.1 Define safety accountabilities and communicate those through the organization.
4.2.2 Establish the Safety Action Group (SAG)
4.2.3 Establish Safety/SMS coordination committee.

4.2.4 Define clear functions of the Safety Action Group (SAG) and the Safety/SMS coordination committee

4.2.5 Establish lines of communication between the safety services office, the Accountable Executive, the Safety Action Group (SAG) and the Safety/SMS coordination committee

4.2.6 Appoint the Accountable Executive as the chairperson of the Safety/SMS coordination committee

4.2.7 Develop a schedule of meetings for the safety services office to meet with the Safety/SMS coordination committee and SAG as needed.

4.3 Coordination of the Emergency Response Plan - ERP Element 1.4, the participant, document holder or service provider must:

4.3.1 Review the outline of the ERP related to the delegation of authority and assignment of emergency responsibilities.

4.3.2 Establish coordination procedures for action by key personnel during the emergency and of return to normal operations.

4.3.3 Identify external entities that will interact with the organisation during emergency situations.

4.3.4 Assess their respective ERPs.

4.3.5 Establish coordination between the different ERPs.

5 **Phase III**

5.1 Hazard identification - Element 2.1(i), the participant, document holder or service provider must:

5.1.1 Establish a voluntary reporting procedure.

5.1.2 Establish program/ schedule for systematic Hazard Identification and Risk Mitigation (HIRM) performance/ review on all applicable aviation safety related processes/ equipment.

5.1.3 Establish process for prioritization and assignment of identified hazards for risk mitigation

5.2 Safety Risk Assessment and Mitigation - Element 2.2, the participant, document holder or service provider must:

5.2.1 Establish safety risk management procedure, including their approval and periodic review process.

5.2.2 Develop and adopt safety risk matrices relevant to the organisations operational or production processes.

5.2.3 Adopted safety risk matrices and associated instructions should be included in the organisations SMS or Risk management training materials.

5.3 Safety Performance Monitoring and Measurement - Element 3.1(i), the participant, document holder or service provider must:

5.3.1 Establish internal occurrence reporting and investigation procedure. This may include mandatory or major defect reports (MDR) where applicable.

5.3.2 Establish safety data collection, processing, and analysis for high consequence outcomes.

5.3.3 Establish high-consequence safety indicators (initial ALoSP) and their associated target and alert settings. *Examples of high consequence safety indicators are such as accident rates, serious incident rates and monitoring of high-risk noncompliance outcomes.*

5.3.4 Agreement reached with the NCAA on safety performance indicators and safety performance targets.

5.4 The Management of Change - Element 3.2, the participant, document holder or service provider must:

5.4.1 Establish a formal process for the management of change that considers:

5.4.1.1 Vulnerability of systems and activities;

5.4.1.2 Stability of systems and operational environments;

5.4.1.3 Regulatory, industry and technological changes

5.4.1.4 Ensure management of change procedures do address impact on existing safety performance and risk mitigation records before implementing new changes.

5.4.2 Establish procedures to ensure that safety assessment of new aviation safety related operations, processes and equipment are conducted before they are commissioned.

5.5 Continuous Improvement of the SMS - Element 3.3(i), the participant, document holder or service provider must:

5.5.1 Develop forms for internal evaluations.

5.5.2 Define an internal audit process.

5.5.3 Define an external audit process.

5.5.4 Define a schedule for evaluation of facilities, equipment, documentation, and procedures, to be completed through audits and surveys.

5.5.5 Develop documentation relevant to operational safety assurance.

6 Phase IV

6.1 Management Commitment and Responsibility - Element 1.1(iii), the participant, document holder or service provider must:

6.1.1 Enhance existing disciplinary procedure/ policy with consideration of unintentional errors/ mistakes from deliberate/ gross violations.

6.2 Hazard Identification - Element 2.1(ii), the participant, document holder or service provider must:

6.2.1 Integrate the hazards identified from occurrence investigation reports with the voluntary reporting system.

6.2.2 Integrate hazard identification & risk management procedures with sub-contractor or customer SMS where applicable

6.2.3 Develop process for prioritizing collected hazards for risk mitigation based on areas of greater need or concern.

6.3 Safety Performance Monitoring and Measurement - Element 3.1(ii), the participant, document holder or service provider must:

6.3.1 Enhance safety data collection & processing system to include lower consequence events;

6.3.2 Establish lower consequence safety/ quality indicators with target/ alert levels monitoring as appropriate

6.3.3 (mature ALoSP); and

6.3.4 Agreement reached with the NCAA oversight authority on lower consequence safety performance indicators and safety performance target/ alert levels.

6.4 Continuous Improvement of the SMS - Element 3.3(ii), the participant, document holder or service provider must:

6.4.1 Establish or integrate SMS audit into existing internal & external audit programs

6.4.2 Establish other operational SMS review/ survey programs where appropriate

6.5 Training and Education - Element 4.1(ii), the participant, document holder or service provider must;

6.5.1 Completed SMS training program for all relevant personnel.

6.6 Safety Communication - Element 4.2(ii), the participant, document holder or service provider must;

6.6.1 Establish mechanisms to promote safety information sharing and exchange internally and externally.

Key safety personnel

140.03.2

1. The participant, document holder or service provider must appoint a safety manager who is responsible for the implementation and maintenance of the SMS.

2. The qualifications and experience requirements and the fit and proper testing of any key safety personnel nominee will be at the discretion of the Executive Director and will include matters relevant to the standards prescribed in this part.

3. The fit and proper person test must include, as a minimum, the following elements:
   3.1 A review of the applicant's related experience within the transport industry,
   3.2 An assessment of the applicant's knowledge of the applicable civil aviation system regulatory requirements,
   3.3 A declaration by the applicant of his/her compliance history with transport safety regulatory requirements,
   3.4 A declaration by the applicant regarding his/her history of any physical or mental health problem, disability, or incapacity or of any serious behavioral problem,
   3.5 A declaration by the applicant regarding any transport safety offence, and
   3.6 Assessment of any other factors which the Director deems necessary to consider.

4. The safety manager's functions must include, but not limited to:
   4.1 managing the SMS implementation plan on behalf of the accountable executive;
   4.2 performing/facilitating hazard identification and safety risk analysis;
   4.3 monitoring corrective actions and evaluating their results;
   4.4 providing periodic reports on the organization's safety performance;
   4.5 maintaining records and safety documentation;
   4.6 planning and facilitating staff safety training;
   4.7 providing independent advice on safety matters;
   4.8 monitoring safety concerns in the aviation industry and their perceived impact on the organisations operations;
   4.9 coordinating and communicating (on behalf of the accountable executive) with the NCAA and other State agencies as necessary on issues relating to safety; and
   4.10 coordinating and communicating (on behalf of the accountable executive) with international organisations on issues relating to safety.

5. The selection criteria for a safety manager must include, but not limited to:
   5.1 professional integrity and the ability to maintain safety priorities in the face of potential commercial, political, and personal pressures;
   5.2 experience in aviation safety in the capacity of an aviation safety investigator /quality management;
   5.3 technical background to understand the systems that support operations;
   5.4 an extensive knowledge of safety management systems (SMS) and have completed SMS training.
   5.5 An understanding of risk management principles and techniques to support the SMS;
   5.6 sound knowledge of aviation regulatory frameworks, including relevant civil aviation regulations
   5.7 Experience and qualifications in conducting safety/quality audits and inspections;
   5.8 inter-personal skills;
   5.9 computer literacy, analytical and problem-solving skills;
   5.10 project management skills; and
   5.11 oral and written communications skills.

6. After induction, the safety manager must be imparted with knowledge of the organization's operations, procedures, and activities as well as the applicable ICAO Standards and Recommended Practices (SARPS).

Appendix A

Reportable Safety Occurrences

1. The objective of this section is to give guidance on Mandatory Reportable Safety Occurrences or Mandatory Occurrence Report (MOR).

2. Occurrences to be reported are those where the safety of operation was or could have been endangered or which could have led to an unsafe condition.

3. If in the view of the reporter an occurrence did not endanger the safety of the operation but if repeated in different but likely circumstances would create a hazard, then a report should be compiled.

4. What is considered to be reportable on one class of product, part or appliance may not be relevant to another and the absence or presence of a single factor, human or technical, can transform an occurrence into an accident or serious incident.

5. Any other occurrences, which are considered by those involved to meet the criteria below, should also be reported.

Reportable Occurrences Related to Aircraft Flight Operations:

1.1 Operation of the aircraft

1.1.1 Avoidance manoeuvres:

1.1.1.3 risk of collision with another aircraft, terrain or other object or an unsafe situation unless avoidance action had been taken;

1.1.1.4 an avoidance manoeuvre required to avoid a collision with another aircraft, terrain, or other object;

1.1.1.5 an avoidance manoeuvre to avoid other unsafe situations.

1.1.2 Take-off or landing incidents, including precautionary or forced landings.

1.1.3 Incidents such as under-shooting, overrunning, or running off the side of runways.

1.1.4 Take-offs, rejected take-offs, landings, or attempted landings on a closed, occupied, or incorrect runway.

1.1.5 Runway incursions.

1.1.6 Inability to achieve predicted performance during take-off or initial climb.

1.1.7 Critically low fuel quantity or inability to transfer fuel or use total quantity of usable fuel.

1.1.8 Loss of control (including partial or temporary) regardless of cause.

1.1.9 Occurrences close to or above V1 resulting from or producing a hazardous or potentially hazardous situation (e.g. rejected take-off, tail strike, engine-power loss etc.).

1.1.10 Go around producing a hazardous or potentially hazardous situation.

1.1.11 Unintentional significant deviation from airspeed, intended track or altitude (more than 300 ft) regardless of cause.

1.1.12 Descent below decision height/altitude or minimum descent height/altitude without the required visual reference.

1.1.13 Loss of position awareness relative to actual position or to other aircraft.

1.1.14 Breakdown in communication between flight crew "CRM" (crew resource management) or between flight crew and other parties (cabin crew, ATC [air traffic control] engineering).

1.1.15 Heavy landing - a landing deemed to require a "heavy landing check".

1.1.16 Exceedance of fuel imbalance limits.

1.1.17 Incorrect setting of an "SSR" (secondary surveillance radar) code or of an altimeter subscale.

1.1.18 Incorrect programming of, or erroneous entries into, equipment used for navigation or performance calculations, or use of incorrect data.

1.1.19 Incorrect receipt or interpretation of radio-telephony messages.

1.1.20 Fuel system malfunctions or defects, which had an effect on fuel supply and/or distribution.

1.1.21 Aircraft unintentionally departing from a paved surface.

1.1.22 Collision between an aircraft and any other aircraft, vehicle, or other ground object.

1.1.23 Inadvertent and/or incorrect operation of any controls.

1.1.24 Inability to achieve the intended aircraft configuration for any flight phase (e.g. landing gear and gear doors, flaps, stabilisers, slats etc.).

1.1.25 A hazard or potential hazard which arises as a consequence of any deliberate simulation of failure conditions for training, system checks or training purposes.

1.1.26 Abnormal vibration.

1.1.27 Operation of any primary warning system associated with manoeuvring the aircraft e.g. configuration warning, stall warning (stick shaker), over-speed warning etc. unless:

1.1.27.3 the crew conclusively established that the indication was false and provided that the false warning did not result in difficulty or hazard arising from the crew response to the warning; or

1.1.27.4 operated for training or test purposes.

1.1.28 "GPWS" (ground proximity warning system)/"TAWS" (terrain awareness and warning system) "warning" when:

1.1.28.3 the aircraft comes into closer proximity to the ground than had been planned or anticipated; or

1.1.28.4 the warning is experienced in instrument meteorological conditions or at night and is established as having been triggered by a high rate of descent (mode 1); or

1.1.28.5 the warning results from failure to select landing gear or landing flaps by the appropriate point on the approach (mode 4); or

1.1.28.6 any difficulty or hazard arises or might have arisen as a result of crew response to the "warning" e.g. possible reduced separation from other traffic. This could include warning of any mode or type i.e. genuine, nuisance or false.

1.1.29 GPWS/TAWS "alert" when any difficulty or hazard arises or might have arisen as a result of crew response to the "alert".

1.1.30 "ACAS" (air collision advisory system) "RA"s (resolution advisories).

1.1.31 Jet or prop blast incidents resulting in considerable damage or severe injury.

1.1.32 Landing at the wrong airfield.

1.2 Emergencies

1.2.1 Fire, explosion, smoke or toxic or noxious fumes, even though fires were extinguished.

1.2.2 The use of any non-standard procedure by the flight or cabin crew to deal with an emergency when:

1.2.2.3 the procedure exists but is not used;

1.2.2.4 the procedure does not exist;

1.2.2.5 the procedure exists but is incomplete or inappropriate;

1.2.2.6 the procedure is incorrect;

1.2.2.7 the incorrect procedure is used.

1.2.3 Inadequacy of any procedures designed to be used in an emergency, including when being used for maintenance, training, or test purposes.

1.2.4 An event leading to an emergency evacuation.

1.2.5 Depressurisation.

1.2.6 The use of any emergency equipment or prescribed emergency procedures in order to deal with a situation.

1.2.7 An event leading to the declaration of an emergency ("Mayday" or "PAN").

1.2.8 Failure of any emergency system or equipment, including all exit doors and lighting, to perform satisfactorily, including when being used for maintenance, training, or test purposes.

1.2.9 Events requiring any use of emergency oxygen by any crew member.

1.3 Crew incapacitation

1.3.1 Incapacitation of any member of the flight crew, including that which occurs prior to departure if it is considered that it could have resulted in incapacitation after take-off.

1.3.2 Incapacitation of any member of the cabin crew which renders them unable to perform essential emergency duties.

1.4 Injury

1.4.1 Occurrences which have or could have led to significant injury to passengers or crew, but which are not considered reportable as an accident.

1.5 Meteorology

1.5.1 A lightning strike which resulted in damage to the aircraft or loss or malfunction of any essential service.

1.5.2 A hail strike which resulted in damage to the aircraft or loss or malfunction of any essential service.

1.5.3 Severe turbulence encounter, an encounter resulting in injury to occupants or deemed to require a "turbulence check" of the aircraft.

1.5.4 A windshear encounter.

1.5.5 Icing encounter resulting in handling difficulties, damage to the aircraft or loss or malfunction of any essential service.

1.6 Security

1.6.1 Unlawful interference with the aircraft including a bomb threat or hijack.

1.6.2 Difficulty in controlling intoxicated, violent, or unruly passengers.

1.6.3 Discovery of a stowaway.

1.7 Other occurrences

1.7.1 Repetitive instances of a specific type of occurrence which in isolation would not be considered "reportable" but which due to the frequency with which they arise, form a potential hazard.

1.7.2 A bird strike which resulted in damage to the aircraft or loss or malfunction of any essential service.

1.7.3 Wake-turbulence encounters.

1.7.4 Any other occurrence of any type considered to have endangered or which might have endangered the aircraft or its occupants on board the aircraft or persons on the ground.

2. **List of Reportable Occurrences Related to Airworthiness;**

2.1 Structural

2.1.1 damage to a "PSE" (principal structural element) that has not been designated as damage-tolerant (life-limited element). PSEs are those which contribute significantly to carrying flight, ground, and pressurisation loads, and the failure of which could result in a catastrophic failure of the aircraft;

2.1.2 defect or damage exceeding admissible damages to a PSE that has been designated as damage-tolerant;

2.1.3 damage to or defect exceeding allowed tolerances of a structural element, the failure of which could reduce the structural stiffness to such an extent that the required flutter, divergence, or control reversal margins are no longer achieved;

2.1.4 damage to or defect of a structural element, which could result in the liberation of items of mass that may injure occupants of the aircraft;

2.1.5 damage to or defect of a structural element, which could jeopardise proper operation of systems. ***See paragraph 2.2 below;***
2.1.6 loss of any part of the aircraft structure in flight.
2.1.7 Suspected Unapproved parts.

2.2 Systems

2.2.1 The following general criteria for reportable occurrences applicable to all systems are proposed:
2.2.1.3 loss, significant malfunction or defect of any system, subsystem or set of equipment when standard operating procedures, drills etc. could not be satisfactorily accomplished;
2.2.1.4 inability of the crew to control the system, for example:
2.2.1.4.1 uncommanded actions,
2.2.1.4.2 incorrect and/or incomplete response, including limitation of movement or stiffness,
2.2.1.4.3 runaway, and
2.2.1.4.4 mechanical disconnection or failure.
2.2.2 failure or malfunction of the exclusive function(s) of the system (one system could integrate several functions);
2.2.3 interference within or between systems;
2.2.4 failure or malfunction of the protection device or emergency system associated with the system;
2.2.5 loss of redundancy of the system;
2.2.6 any occurrence resulting from unforeseen behaviour of a system.
2.2.7 for aircraft types with single main systems, subsystems or sets of equipment:
2.2.7.3 loss, significant malfunction or defect in any main system, subsystem or set of equipment.
2.2.8 for aircraft types with multiple independent main systems, subsystems or sets of equipment:
2.2.8.3 the loss, significant malfunction, or defect of more than one main system, subsystem or set of equipment.
2.2.9 operation of any primary warning system associated with aircraft systems or equipment unless the crew conclusively established that the indication was false, provided that the false warning did not result in difficulty or hazard arising from the crew response to the warning;
2.2.10 leakage of hydraulic fluids, fuel, oil, or other fluids which resulted in a fire hazard or possible hazardous contamination of aircraft structure, systems or equipment, or risk to occupants;
2.2.11 malfunction or defect of any indication system when this results in the possibility of misleading indications to the crew;
2.2.12 any failure, malfunction, or defect if it occurs at a critical phase of the flight and is relevant to the system operation;
2.2.13 significant shortfall of the actual performances compared to the approved performance which resulted in a hazardous situation

(considering the accuracy of the performance-calculation method) including braking action, fuel consumption etc.; and

2.2.14 asymmetry of flight controls; e.g. flaps, slats, spoilers etc.

2.3 Aircraft Systems

2.3.1 The following subparagraphs give examples of reportable occurrences resulting from the application of the general criteria to specific aircraft systems listed above.

2.3.2 Air conditioning/ventilation

2.3.3 complete loss of avionics cooling;

2.3.4 depressurisation.

2.3.5 Autoflight system

2.3.5.1 failure of the autoflight system to achieve the intended operation while engaged;

2.3.5.2 significant reported crew difficulty to control the aircraft linked to autoflight system functioning;

2.3.5.3 failure of any autoflight system disconnect device;

2.3.5.4 uncommanded autoflight mode change.

2.3.6 Communications

2.3.6.1 failure or defect of passenger address system resulting in loss of or inaudible passenger address;

2.3.6.2 total loss of communication in flight.

2.3.7 Electrical system

2.3.7.1 loss of one electrical distribution system (AC/DC);

2.3.7.2 total loss or loss of more than one electrical generation system;

2.3.7.3 failure of the backup (emergency) electrical generation system.

2.3.8 Cockpit/Cabin/Cargo

2.3.8.1 pilot seat control loss during flight;

2.3.8.2 failure of any emergency system or equipment, including emergency evacuation signaling system, all exit doors, emergency lighting, etc.;

2.3.8.3 loss of retention capability of the cargo loading system.

2.3.9 Fire protection system

2.3.9.1 fire warnings, except those immediately confirmed as false;

2.3.9.2 undetected failure or defect of fire/smoke detection/protection system, which could lead to loss or reduced fire detection/protection;

2.3.9.3 absence of warning in case of actual fire or smoke.

2.3.10 Flight controls

2.3.10.1 asymmetry of flaps, slats, spoilers, etc.;

2.3.10.2 limitation of movement, stiffness or poor or delayed response in the operation of primary flight control systems or their associated tab and lock systems;

2.3.10.3 flight control surface runaway;

2.3.10.4 flight control surface vibration felt by the crew;

2.3.10.5 mechanical flight control disconnection or failure; and

2.3.10.6 significant interference with normal control of the aircraft or degradation of flying qualities.

2.3.11 Fuel system

2.3.11.1 fuel quantity indicating system malfunction resulting in total loss or wrong indication of fuel quantity on board;

2.3.11.2 leakage of fuel which resulted in major loss, fire hazard, significant contamination;

2.3.11.3 malfunction or defects of the fuel jettisoning system which resulted in inadvertent loss of significant quantity, fire hazard, hazardous contamination of aircraft equipment or inability to jettison fuel;

2.3.11.4 fuel system malfunctions or defects which had a significant effect on fuel supply and/or distribution; and

2.3.11.5 inability to transfer or use total quantity of usable fuel.

2.3.12 Hydraulics

2.3.12.1 loss of one hydraulic system (ETOPS only);

2.3.12.2 failure of the isolation system;

2.3.12.3 loss of more than one hydraulic circuit;

2.3.12.4 failure of the back-up hydraulic system;

2.3.12.5 inadvertent ram air turbine extension.

2.3.13 Ice detection/protection system

2.3.13.1 undetected loss or reduced performance of the anti-ice/de-ice system;

2.3.13.2 loss of more than one of the probe-heating systems;

2.3.13.3 inability to obtain symmetrical wing de-icing;

2.3.13.4 abnormal ice accumulation leading to significant effects on performance or handling qualities; and

2.3.13.5 crew vision significantly affected.

2.3.14 Indicating/warning/recording systems

2.3.14.1 malfunction or defect of any indicating system when the possibility of significant misleading indications to the crew

could result in an inappropriate crew action on an essential system;

2.3.14.2 loss of a red warning function on a system;

2.3.14.3 for glass cockpits: loss or malfunction of more than one display unit or computer involved in the display/warning function.

2.3.15 Landing gear system/brakes/tyres

2.3.15.1 brake fire;

2.3.15.2 significant loss of braking action;

2.3.15.3 asymmetrical braking action leading to significant path deviation;

2.3.15.4 failure of the landing gear free fall extension system (including during scheduled tests);

2.3.15.5 unwanted landing gear or gear doors extension/retraction; and

2.3.15.6 multiple tyre burst.

2.3.16 Navigation systems (including precision approach systems) and air data systems

2.3.16.1 total loss or multiple navigation equipment failures

2.3.16.2 total or multiple air data system equipment failures

2.3.16.3 significant misleading indications

2.3.16.4 significant navigation errors attributed to incorrect data or a database coding error

2.3.16.5 unexpected deviations in lateral or vertical path not caused by pilot input

2.3.16.6 problems with ground navigational facilities leading to significant navigation errors not associated with transitions from inertial navigation mode to radio navigation mode.

2.3.17 Oxygen for pressurised aircraft

2.3.17.1 loss of oxygen supply in the cockpit

2.3.17.2 loss of oxygen supply to a considerable number of passengers (more than 10 %), including when found during maintenance, training, or testing.

2.3.18 Bleed air system

2.3.18.1 hot bleed air leak resulting in fire warning or structural damage,

2.3.18.2 loss of all bleed air systems, and

2.3.18.3 failure of bleed air leak detection system.

2.4 Propulsion (including engines, propellers, and rotor systems) and "APUs" (auxiliary power units)

2.4.1 This subpart gives a list of examples of reportable occurrences resulting from the application of these general criteria to specific to aircraft systems:

2.4.1.3 Flameout, shutdown, or malfunction of any engine.

2.4.1.4 Over speed or inability to control the speed of any high-speed rotating component (for example: APU, air starter, air cycle machine, air turbine motor, propeller, or rotor).

2.4.1.5 Failure or malfunction of any part of an engine or powerplant resulting in any one or more of the following:

2.4.1.5.1 non-containment of components/debris;

2.4.1.5.2 uncontrolled internal or external fire, or hot gas breakout;

2.4.1.5.3 thrust in a direction different from that demanded by the pilot;

2.4.1.5.4 thrust-reversing system failing to operate or operating inadvertently;

2.4.1.5.5 inability to control power, thrust or revolutions per minute;

2.4.1.5.6 failure of the engine mount structure;

2.4.1.5.7 partial or complete loss of a major part of the powerplant;

2.4.1.5.8 dense visible fumes or concentrations of toxic products sufficient to incapacitate crew or passengers;

2.4.1.5.9 inability, to shut-down an engine by using through normal procedures; and

2.4.1.5.10 inability to restart a serviceable engine.

2.4.1.6 An uncommanded thrust/power loss, change or oscillation which is classified as a "LOTC" (loss of thrust or power control):

2.4.1.6.1 for a single-engine aircraft; or

2.4.1.6.2 where it is considered excessive for the application; or

2.4.1.6.3 where this could affect more than one engine in a multi-engine aircraft, particularly in the case of a twin-engine aircraft; or

2.4.1.6.4 for a multi-engine aircraft where the same, or similar, engine type is used in an application where the event would be considered hazardous or critical.

2.4.1.7 Any defect in a life-controlled part causing its withdrawal before completion of its full life.

2.4.1.8 Defects of common origin which could cause an in-flight shut-down rate so high that there is the possibility of more than one engine being shut down on the same flight.

2.4.1.9 An engine limiter or control device failing to operate when required or operating inadvertently.

2.4.1.10 Exceedance of engine parameters.
2.4.1.11 "FOD" (foreign objects damage).

2.5 Propellers and transmission

2.5.1 Failure or malfunction of any part of a propeller or powerplant resulting in any one or more of the following:
2.5.1.3 an overspeed of the propeller;
2.5.1.4 the development of excessive drag;
2.5.1.5 a thrust in the opposite direction to that commanded by the pilot;
2.5.1.6 a release of the propeller or any major portion of the propeller;
2.5.1.7 a failure that results in excessive imbalance;
2.5.1.8 the unintended movement of the propeller blades below the established minimum in-flight low-pitch position;
2.5.1.9 an inability to feather the propeller;
2.5.1.10 an inability to change propeller pitch;
2.5.1.11 an uncommanded change in pitch;
2.5.1.12 an uncontrollable torque or speed fluctuation; and
2.5.1.13 the release of low-energy parts.

2.6 Rotors and transmission

2.6.1 Damage or defect of main rotor gearbox/attachment which could lead to in-flight separation of the rotor assembly and/or malfunctions of the rotor control.
2.6.2 Damage to tail rotor, transmission, and equivalent systems.

2.7 Power Units (APUs)

2.7.1 Shut down or failure when the APU is required to be available by operational requirements, e.g. ETOPS, "MEL" (minimum equipment list).
2.7.2 Inability to shut down the APU.
2.7.3 Overspeed.
2.7.4 Inability to start the APU when needed for operational reasons.

2.8 Human factors

2.8.1 Any incident where any feature or inadequacy of the aircraft design could have led to an error of use that could contribute to a hazardous or catastrophic effect.

2.9 Other occurrences

2.9.1 An occurrence not normally considered as reportable (e.g., furnishing and cabin equipment, water systems), where the circumstances resulted in endangering the aircraft or its occupants.
2.9.2 A fire, explosion, smoke or toxic or noxious fumes.

2.9.3 Any other event which could endanger the aircraft or affect the safety of the occupants of the aircraft, or people or property in the vicinity of the aircraft or on the ground.

2.9.4 Failure or defects of passenger address system resulting in loss of, or inaudible, passenger address system.

2.9.5 Loss of pilot seat control during flight.

3. **List of Reportable Occurrences Related to Aircraft Maintenance and Repair**

3.1 The following occurrences relating to aircraft maintenance and repair are considered reportable:

3.1.1 Incorrect assembly of parts or components of the aircraft found during an inspection or test procedure not intended for that specific purpose.

3.1.2 Hot bleed air leak resulting in structural damage.

3.1.3 Any defect in a life-controlled part causing retirement before completion of its full life.

3.1.4 Any damage or deterioration (e.g. fractures, cracks, corrosion, delamination, disbonding etc.) resulting from any cause (e.g. as flutter, loss of stiffness or structural failure) to:

3.1.4.3 a primary structure or a "PSE" (principal structure element) (as defined in the manufacturers' Repair Manual) where such damage or deterioration exceeds allowable limits specified in the Repair Manual and requires a repair or complete or partial replacement;

3.1.4.4 a secondary structure which consequently has or may have endangered the aircraft;

3.1.4.5 the engine, propeller, or rotorcraft rotor system.

3.1.5 Any failure, malfunction or defect of any system or equipment, or damage or deterioration thereof found as a result of compliance with an airworthiness directive or other mandatory instruction issued by a regulatory authority, when:

3.1.6 it is detected for the first time by the reporting organisation implementing compliance;

3.1.7 on any subsequent compliance, it exceeds the permissible limits quoted in the instruction and/or published repair/rectification procedures are not available.

3.1.8 Failure of any emergency system or equipment, including all exit doors and lighting, to perform satisfactorily, including when being used for maintenance or test purposes.

3.1.9 Non-compliance or significant errors in compliance with required maintenance procedures.

3.1.10 Products, parts, appliances, and materials of unknown or suspect origin (suspected unapproved parts).

3.1.11 Misleading, incorrect, or insufficient maintenance data or procedures that could lead to maintenance errors.

3.1.12 Any failure, malfunction or defect of ground equipment used for testing or checking of aircraft systems and equipment when the required routine inspection and test procedures did not clearly identify the problem, where this results in a hazardous situation.

4. **List of Reportable Occurrences Related to Aerodrome Operations**

4.1 Aerodrome and aerodrome facilities

4.1.1 Significant spillage during fuelling operations

4.1.2 Loading of incorrect fuel quantities likely to have a significant effect on aircraft endurance, performance, balance, or structural strength.

4.1.3 Failure or significant deterioration of aerodrome aircraft operating surfaces.

4.2 Handling of passengers, baggage, and cargo

4.2.1 Significant contamination of aircraft structure, systems and equipment arising from the carriage of baggage or cargo.

4.2.2 Incorrect loading of passengers, baggage, or cargo, likely to have a significant effect on aircraft mass and/or balance.

4.2.3 Incorrect stowage of baggage or cargo (including hand baggage) likely in any way to endanger the aircraft, its equipment, or occupants or to impede emergency evacuation.

4.2.4 Inadequate stowage of cargo containers or other substantial items of cargo.

4.2.5 Carriage or attempted carriage of dangerous goods in contravention of applicable regulations, including incorrect labelling and packaging of dangerous goods.

4.3 Aircraft ground handling and servicing

4.3.1 Failure, malfunction, or defect of ground equipment used for the testing or checking of aircraft systems and equipment when the required routine inspection and test procedures did not clearly identify the problem, where this results in a hazardous situation.

4.3.2 Non-compliance or significant errors in compliance with required servicing procedures.

4.3.3 Loading of contaminated or incorrect type of fuel or other essential fluids (including oxygen and potable water).

4.3.4 Unsatisfactory ground de-icing/anti-icing.

5. **List of Reportable Occurrences Related to Air Navigation Services**

5.1 General

5.1.1 Near collision incidents (encompassing specific situations where one aircraft and another aircraft/the ground/a vehicle/person or object are perceived to be too close to each other):

5.1.1.3 separation minima infringement;

5.1.1.4 inadequate separation;

5.1.1.5 "near-CFIT" (near-controlled flight into terrain);
5.1.1.6 runway incursion where avoiding action was necessary.

5.1.2 Potential for collision or near collision (encompassing specific situations having the potential to be an accident or a near collision, if another aircraft is in the vicinity):
5.1.2.3 runway incursion where no avoiding action is necessary;
5.1.2.4 runway excursion;
5.1.2.5 aircraft deviation from ATC clearance;
5.1.2.6 aircraft deviation from applicable "ATM" (air traffic management) regulation:
5.1.2.7 aircraft deviation from applicable published ATM procedures;
5.1.2.8 unauthorised penetration of airspace; and
5.1.2.9 deviation from aircraft ATM-related equipment carriage and operations, as mandated by applicable regulation(s).

5.1.3 ATM-specific occurrences (encompassing those situations where the ability to provide safe ATM services is affected, including situations where, by chance, the safe operation of aircraft has not been jeopardised).

5.1.4 This shall include the following occurrences:
5.1.4.3 inability to provide ATM services:
5.1.4.4 inability to provide air traffic services;
5.1.4.5 inability to provide airspace management services;
5.1.4.6 inability to provide air traffic flow management services;
5.1.4.7 failure of Communication function;
5.1.4.8 failure of Surveillance function;
5.1.4.9 failure of Data Processing and Distribution function;
5.1.4.10 failure of Navigation function; and
5.1.4.11 ATM system security.

5.1.5 "ATC" (air traffic control) Navigation and Communications - significant malfunction or deterioration of service.

5.2 An aircraft was or could have been endangered by impairment of any member of ground staff (e.g. ATC, "AD" (aircraft dispatchers), Maintenance, etc.).

5.3 ATC overload.

5.4 Failure or unplanned shutdown of a major operational ATC computer system, requiring reversion to manual back-up and resulting in disruption to the normal flow of air traffic.

5.5 Specific

5.5.1 The following section give examples of reportable occurrences resulting from the application of the general criteria to air navigation service listed above.

5.5.1.3 Provision of significantly incorrect, inadequate, or misleading information from any ground sources, e.g. ATC, "ATIS"

(automatic terminal information service), meteorological services, navigation databases, maps, charts, manuals, etc.

5.5.1.3.1 Provision of less than prescribed terrain clearance.
5.5.1.3.2 Provision of incorrect pressure reference data (i.e. altimeter setting).
5.5.1.3.3 Incorrect transmission, receipt, or interpretation of significant messages when this results in a hazardous situation.
5.5.1.3.4 Separation minima infringement.
5.5.1.3.5 Unauthorised penetration of airspace.
5.5.1.3.6 Unlawful radio communication transmission.
5.5.1.3.7 Failure of ANS ground or satellite facilities.
5.5.1.3.8 Major ATC/ATM failure or significant deterioration of aerodrome infrastructure.
5.5.1.3.9 Aerodrome movement areas obstructed by aircraft, vehicles, animals, or foreign objects, resulting in a hazardous or potentially hazardous situation.
5.5.1.3.10 Errors or inadequacies in marking of obstructions or hazards on aerodrome movement areas resulting in a hazardous situation.
5.5.1.3.11 Failure, significant malfunction, or unavailability of airfield lighting.

6. **Categories of Persons Required to Report**

6.1 The following categories of persons (or organisations) are required to report occurrences. These include:

6.7.1 the operator and the commander of a turbine-powered aircraft which has a certificate of airworthiness issued by the Executive Director;
6.7.2 the operator and the commander of an aircraft operated under an air operator's certificate granted by the Executive Director;
6.7.3 a person who carries on the business of manufacturing a turbine-powered or a public transport aircraft, or any equipment or part thereof, in Namibia;
6.7.4 a person who carries on the business of maintaining or modifying a turbine-powered aircraft , which has a certificate of airworthiness issued by the Executive Director, and a person who carries on the business of maintaining or modifying any equipment or part of such an aircraft;
6.7.5 a person who carries on the business of maintaining or modifying an aircraft, operated under an air operator's certificate granted by the Executive Director, and a person who carries on the business of maintaining or modifying any equipment or part of such an aircraft;
6.7.6 a person who signs an airworthiness review certificate, or a certificate of release to service in respect of a turbine-powered aircraft, which has a certificate of airworthiness issued by the Executive Director, and a

person who signs an airworthiness review certificate or a certificate of release to service in respect of any equipment or part of such an aircraft;

6.7.7 a person who signs an airworthiness review certificate, or a certificate of release to service in respect of an aircraft, operated under an air operator's certificate granted by the Executive Director, and a person who signs an airworthiness review certificate or a certificate of release to service in respect of any equipment or part of such an aircraft;

6.7.8 a person who performs a function which requires him to be authorised by the Executive Director as an air traffic controller or as a flight information service officer;

6.7.9 a licensee and a manager of a licensed aerodrome or a manager of an airport that is used for the conduct of Public Transport (Commercial Air Transport) operations.

6.7.10 a person who performs a function in respect of the installation, modification, maintenance, repair, overhaul, flight-checking or inspection of air navigation facilities which are utilized by a person who provides an air traffic control service under an approval issued by the Executive Director; and

6.7.11 a person who performs a function in respect of the ground-handling of aircraft, including fuelling, servicing, load sheet preparation, loading, de-icing, and towing at an airport to that is used for the conduct of Public Transport (Commercial Air Transport) operations.

7. Voluntary Reporting

7.7 The state encourages voluntary reporting to the same criteria across the whole spectrum of the civil aviation operations, and therefore, do not substantially differentiate between voluntary and mandatory reports.