

Advisory Circular

SAFETY MANAGEMENT SYSTEM (SMS) – AVIATION TRAINING ORGANISATION (ATO)

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1. **GENERAL.** Pursuant to paragraph 88B of the Air Navigation Order, the Director-General of Civil Aviation (DGCA) may, from time to time, issue advisory circulars (ACs) on any aspect of safety in civil aviation. This AC contains information about standards, practices and procedures acceptable to CAAS. The revision number of the AC is indicated in parenthesis in the suffix of the AC number.
2. **PURPOSE.** This AC is issued to provide additional guidance to Aviation Training Organisations (ATOs) on developing Safety Performance Indicators (SPIs) for their Safety Management System (SMS). This AC complements AC 1-3 *Safety Management System*, which provides guidance on the key concepts and components of an SMS based on ICAO Standards and Recommended Practices and International Practices.
3. **APPLICABILITY.** This AC applies to all ATOs that are exposed to safety risks during the provision of their services.
4. **CANCELLATION.** This is a new AC issued on this subject.
5. **EFFECTIVE DATE.** This AC is effective on 4 May 2017.
6. **REFERENCES.** ICAO Annex 19 - Safety Management, ICAO Safety Management Manual (Doc 9859), Singapore Air Safety Publication Part 10 (SASP 10), and AC 1-3.
7. **SMS DOCUMENTATION.**
 - 7.1 SMS documentation of an ATO may be contained in a separate SMS Manual, or as a section within its existing Manuals such as the ATO's Operations Manual.
8. **EMERGENCY RESPONSE PLAN.**
 - 8.1 Reference to paragraph 9.13 of AC 1-3(5), apart from complying with the national CAA's mandatory incident or accident reporting requirements, an ATO located outside Singapore should include as part of its Emergency Response Plan the requirement to notify CAAS in the

event of any aviation-related incident or accident involving a trainee on a CAAS-approved course.

9 SAFETY PERFORMANCE MONITORING & MEASUREMENT.

9.1 The operation of a UA for a purpose that is neither recreation nor research (e.g. a person using his UA to offer wedding photography services), would require an Operator Permit and an Activity Permit. The objective of regulating such operations is to ensure that the UA is operated safely, and does not pose any safety risks to other aviation users and the public.

9.1 CAAS AC 1-3 provides broad guidance to the aviation industry on the implementation of an SMS, including the setting of SPIs and safety performance targets (SPTs) to provide measurable ways of ensuring and demonstrating the effectiveness of SMS beyond regulatory compliance. These indicators and targets established by an ATO have to be agreed with CAAS.

Safety Performance Monitoring

9.2 The SPIs selected should correspond to the ATO's relevant safety objectives or goals. The SPIs should take into consideration events of high consequence or severity that could lead to injury or death. An ATO is to monitor the following list of SPIs as part of Singapore's State Safety Programme (SSP).

1. Loss of Separation
(Example: Airborne conflict or air-miss)
2. Breach of Runway Safety
(Example: Runway Incursions or Excursions as a result of Human Error, including operations in Uncontrolled Aerodrome)
3. Loss of Control
(Example: Inadvertent aircraft upset)
4. Damage to Aircraft
(Example: Tail strike, Tyre burst upon landing, Bird-strike, collision with other aircraft/ object/ drone)
5. Airspace Infringement
(Example: straying into Airspace)
6. Breach of ATC Clearance
(Example: maintaining an erroneous altitude or acting on misunderstood ATC instructions)

An ATO may include additional SPIs (such as those of high occurrences) other than those aforementioned SPIs in which it considers necessary or relevant to monitor for the purpose of safety assurance. Any additional SPIs are subjected to CAAS review and audit.

Safety Performance Measurement

9.3 In order for CAAS to aggregate the SPIs, ATO should express the SPI in terms of "number of occurrences per 100 flights".

10. SMS ACCEPTANCE BY CAAS.

10.1 An ATO's SMS (including the SPIs and SPTs) and related documents, including their amendments, have to be reviewed and accepted by CAAS as part of the ATO approval/renewal process.

- 10.2 An ATO should carry out periodic reviews of its SMS. Unless otherwise agreed by CAAS, the ATO should carry out the review of its SMS at least annually. The review of the SMS, including the SPIs and SPTs, is to identify opportunities for continuous improvement to safety and to ensure an ATO's SMS remains relevant and robust.