

CAR-100

Civil Aviation Regulation

SAFETY MANAGEMENT SYSTEM

Effective: 20th October 2026

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President of CAA

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GLOSSARY OF TERMS OR ABBREVIATIONS

Abbreviations

Abbreviation	Meaning
ADREP	Accident/Incident Data Reporting system (ICAO). Referred to at CAR 100.H.020 as a recognised standardised taxonomy.
AFIS	Aerodrome Flight Information Service
ALoSP	Acceptable Level of Safety Performance. A construct of Annex 19, Second Edition, withdrawn by the Third Edition
AltMoC	Alternative Means of Compliance. See CAR 100.A.020(c).
AMC	Acceptable Means of Compliance. See CAR 100.A.020(a) and (b).
AOC	Air Operator Certificate.
ASRD	Aviation Safety Regulation Department, CAA Oman.
CAA Oman	Civil Aviation Authority of the Sultanate of Oman.
CAP	Civil Aviation Publication.
CAR	Civil Aviation Regulation.
CMA	Continuous Monitoring Approach. <i>The method by which ICAO conducts continuous safety oversight monitoring of a State under USOAP.</i>
DGCAR	Directorate General of Civil Aviation Regulation, CAA Oman.
ERP	Emergency Response Plan. See CAR 100.D.030.
GM	Guidance Material. See CAR 100.A.020(d).
ICAO	International Civil Aviation Organization.
ICVM	ICAO Coordinated Validation Mission.
IFPDS	Instrument Flight Procedure Design Service
MTCIT	Ministry of Transport, Communications and Information Technology, Sultanate of Oman.
OTSB	Oman Transport Safety Bureau. <i>The safety investigation authority responsible for the investigation of aircraft accidents and incidents in the Sultanate of Oman.</i>
QMS	Quality Management System.
RPAS	Remotely Piloted Aircraft System.
SARPs	Standards and Recommended Practices (ICAO).
SMS	Safety Management System.
SPI	Safety Performance Indicator. See CAR 100.F.010.
SPT	Safety Performance Target. See CAR 100.F.010.
SSP	State Safety Programme.
TBD	To be determined.
USOAP	Universal Safety Oversight Audit Programme (ICAO).

INSTRUMENTS AND REGULATIONS REFERRED TO IN THE CAR-100

Reference	Instrument
Annex 19	Annex 19 to the Convention on International Civil Aviation — Safety Management, Third Edition. The source instrument for the CAR-100.
Doc 9859	ICAO Safety Management Manual.
Doc 10151	ICAO Human Performance (HP) Manual for Regulators
Doc 10159	ICAO Safety Intelligence Manual.
CAR-11	The Civil Aviation Regulation governing rulemaking procedures.
CAR-13	The Civil Aviation Regulation governing aircraft accident and incident investigation and reporting, under which the OTSB is designated.
CAR-100	This Civil Aviation Regulation — Safety Management System.
CAR-102	The Civil Aviation Regulation — Remote Piloted Aircraft (Drones). Referred to in CAR 100.B.010(c & e).
CAR-139	The Civil Aviation Regulation governing aerodromes. Referred to in CAR 100.B.010(h).
CAR-145	The Civil Aviation Regulation governing approved maintenance organisations. Referred to in CAR 100.B.010(d).
CAR-171	The Civil Aviation Regulation governing aeronautical telecommunication service Referred to in AMC1 100.B.010.
CAR-172	The Civil Aviation Regulation governing air traffic services. Referred to in CAR 100.B.010(g).
CAR-173	The Civil Aviation Regulation governing instrument flight procedure design services. Referred to in AMC1 100.B.010.
CAR-179	The Civil Aviation Regulation governing aerodrome flight information services. Referred to in AMC1 100.B.010.
CAR-M	The Civil Aviation Regulation governing continuing airworthiness. Referred to in CAR 100.B.010(d).
CAR-OPS	The Civil Aviation Regulation governing air operations. Referred to in CAR 100.B.010(b).
CAR-ORA	The Civil Aviation Regulation governing organisation requirements for aircrew training. Referred to in CAR 100.B.010(a).
CAD 01-02	The Civil Aviation Directive — Safety Occurrence Reporting. Referred to in CAR 100.I.020

Terms carrying a defined meaning for the purposes of this CAR-100 are set out at Appendix 1. Where a term is defined at Appendix 1, that definition prevails over any general description in this Glossary.

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FOREWORD

- (1) CAR-100 Issue 2 was constructed against the Third Edition of Annex 19. Amendment 2 to the Annex, applicable on 26 November 2026, makes four changes that are structural rather than editorial and that cannot be accommodated by amendment:
 - The acceptable level of safety performance construct has been removed and replaced by foundational safety performance management requirements. Any machinery in Issue 1 built on that construct must be withdrawn, not carried across.
 - The population required to hold a safety management system has been extended to operators holding a remotely piloted aircraft system operator certificate authorised for international operations, to approved maintenance organisations serving them, and to operators of certified heliports.
 - A discretionary applicability provision now permits the CAA Oman to require a safety management system of any sector of the aviation system where that is judged appropriate to manage safety risk.
 - Interface management has been strengthened. The system description must now identify relevant organisational interfaces, and hazard identification must reach hazards arising at internal and external interfaces.
- (2) CAR-100 Issue 1 is accordingly repealed in full and Issue 2 is drafted from the Annex upward. No provision of Issue 1 is presumed to survive unless it is independently justified against the Third Edition.
- (3) The umbrella principle:
 - This CAR is the single source of basic safety management system requirements in the Oman regulatory structure. Oversight area regulations govern the discipline-specific activity — operations, airworthiness, personnel licensing, air navigation services, aerodromes — and refer to this CAR for the safety management system. They do not restate it, and they do not vary it.
 - The purpose is threefold: a service provider holding approvals in more than one discipline meets one set of safety management requirements rather than several; an inspector from any discipline applies the same requirements and the same compliance material; and an amendment to Annex 19 is transposed once rather than in every oversight area regulation.
- (4) Proportionality:

A safety management system is required to be commensurate with the size of the service provider and the complexity of its aviation products and services. This is written into the requirement itself at CAR 100.C.030 rather than left to guidance, because the proportionality of the system is the principal determinant of whether a small organisation can implement it at all. An inspector assessing a small service provider against the expectations appropriate to a large one has misapplied this CAR.
- (5) This Regulation enters into force on 20 October 2026 and applies from 26 November 2026, the applicability date of Amendment 2 to Annex 19. Until 26 November 2026, CAR-100 Issue 1 continues to apply, and its repeal takes effect on that date in accordance with CAR 100.A.025(a). A Service Provider may demonstrate compliance with this Regulation before that date.
- (6) The following editorial conventions are used throughout this regulation:
 - **"Shall"** indicates a mandatory requirement;
 - **"Should"** indicates a recommended practice;
 - **"May"** indicates discretionary or optional action;
 - **"Will"** denotes an action or responsibility exercised by the CAA Oman under this Regulation.

Note: The use of the male gender in this regulation shall be interpreted to include the female gender and vice versa.

SUBPART A — GENERAL

CAR 100.A.005 Purpose

The Civil Aviation Regulation – Safety Management System (CAR-100), Issue 2, establishes the requirements for the establishment, implementation and maintenance of a Safety Management System (SMS) by Service Providers subject to the regulatory authority of the Civil Aviation Authority of the Sultanate of Oman (CAA Oman).

It gives effect in The Civil Aviation Law by Royal Decree No. 76/2019 and The Executive Regulation of Oman by Ministerial Decision No. 116/2023, to the SMS provisions of Annex 19 to the Convention on International Civil Aviation.

GM1 100.A.005 Purpose

The Sultanate of Oman is a Contracting State to the Convention on International Civil Aviation. Article 37 obliges Contracting States to collaborate in securing the highest practicable degree of uniformity in regulations and practices, and Annex 19 contains the Standards and Recommended Practices adopted under that Article in respect of safety management.

The obligation to require a SMS of the categories of Service Provider listed in CAR 100.B.010 rests on the State. This CAR-100, is the instrument through which the CAA Oman discharges that obligation.

CAR 100.A.010 Scope and relationships with oversight areas

- (a) This CAR-100, applies across all oversight areas. It is the sole source of basic SMS requirements applicable to Service Providers.
- (b) Where an oversight area regulation requires or refers to a SMS, that requirement or reference shall be read as a requirement to establish, implement and maintain a SMS in accordance with this CAR-100.
- (c) An oversight area technical domain regulation may impose requirements additional to this CAR-100 where necessary to address safety risks particular to that discipline. It shall not reduce, disapply, substitute or restate a requirement of this CAR.
- (d) Where a provision of an oversight area regulation is inconsistent with a provision of this CAR-100, in respect of the SMS, this CAR-100 prevails.
- (e) Nothing in this CAR-100, relieves a Service Provider of any obligation arising under an oversight area regulation, or under the certificate, licence, authorisation or approval it holds.

GM1 100.A.010 The operation of the umbrella in practice

A Service Provider holding both an air operator certificate and an approved maintenance organisation approval is subject to one SMS requirement, this CAR-100. See CAR 100.B.030 on the use of a single system across multiple approvals.

The prohibition at (c) on restating a requirement is deliberate. Where a technical domain-specific regulation reproduces a safety management requirement in its own words, the two texts drift apart at the next amendment and the Service Provider is left to reconcile them. Oversight area regulations should cross-refer to CAR-100.

An example of a legitimate additional requirement under (c) would be a discipline-specific hazard category that an oversight area regulation requires to be addressed within the hazard identification process established under CAR 100.E.005.

CAR 100.A.015 Definitions

For the purposes of this CAR-100, the definitions in Appendix 1 apply.

A term defined in Appendix 1 carries that meaning wherever it appears in this CAR-100, in any AMC or GM to the CAR-100, and in any oversight area regulation in respect of the SMS.

GM1 100.A.015 Source of the definitions

The definitions in Appendix 1 are drawn from Annex 19, Chapter 1, save for those identified in that Appendix as definitions of Oman origin. Where a definition originates in the Annex it has been adopted without alteration, so that terminology used in oversight, in reporting to ICAO and in the Service Provider's own documentation remains aligned.

Where a term used in this CAR-100 is not defined at Appendix 1, it carries its ordinary meaning, or the meaning given to it in the applicable oversight area regulation.

CAR 100.A.020 Means of compliance

- (a) Acceptable Means of Compliance (AMC) issued by the CAA Oman illustrate a means, but not the only means, by which a requirement of this CAR-100 may be met.
- (b) A Service Provider that demonstrates compliance with an applicable AMC shall be taken to have complied with the requirement of this CAR -100 to which that AMC relates.
- (c) A Service Provider may also comply with a requirement of this CAR-100 by an Alternative Means of Compliance (AltMoC). Before doing so it shall—
 - (1) submit the proposed alternative means to the CAA Oman, together with a demonstration that it affords a level of safety equivalent to that afforded by the AMC; and
 - (2) obtain the written acceptance of the CAA Oman.
- (d) Guidance Material creates no obligation and compliance with it is not required.
- (e) The CAA Oman may withdraw acceptance of an AltMoC where it is no longer satisfied that an equivalent level of safety is afforded. It shall give the Service Provider written reasons and a reasonable period in which to revert to the AMC or to propose a further alternative.

AMC1 100.A.020(b) Content of an acceptable means of compliance submission

In addition to CAR 100 requirements, respective domain specific technical Civil Aviation Regulations and Civil Aviation Directives should also be complied with.

AMC1 100.A.020(c) Content of an alternative means of compliance submission

A submission under CAR 100.A.020(c) should contain—

- (a) the requirement of this CAR-100 to which the submission relates, and the AMC from which the Service Provider proposes to depart;
- (b) a full description of the proposed alternative means;
- (c) a risk assessment addressing the hazards that the AMC exists to control, and demonstrating how the alternative means controls them to an equivalent standard;
- (d) identification of any consequential change to the SMS manual, procedures, training or records; and
- (e) the date from which the Service Provider proposes to apply the alternative means.

The Service Provider should allow 60 days for assessment. Where the alternative means affects an interface with another organisation, the submission should say so and identify the other organisation.

GM1 100.A.020 Alternative means matter in an umbrella regulation

This CAR-100 applies to organisations of widely differing size, structure and activity — from a large air operator to a small approved training organisation or a certified heliport. A single AMC cannot be equally apt for all of them.

The alternative means route is the mechanism by which proportionality is achieved in cases the AMC did not anticipate. Inspectors should treat a well-founded alternative means submission as the system operating as intended, not as a departure requiring justification beyond that set out in AMC1 100.A.020(c).

CAR 100.A.025 Repeal, savings and transition

- (a) CAR-100 Issue 1 is repealed on 26th November 2026, the applicable date of CAR-100 Issue 2.
- (b) A SMS accepted by the CAA Oman under CAR-100 Issue 1 and in force immediately before 26th November 2026 continues in force as if accepted under this CAR-100, subject to (c).
- (c) A Service Provider to which this CAR-100 applies shall demonstrate compliance with this CAR-100 by the date applicable to it under Appendix 8.
- (d) A Service Provider that becomes subject to this CAR-100 by reason of CAR 100.B.010(c), (e) or (h) shall establish, implement and maintain a SMS in accordance with this CAR-100 by the date applicable to it under Appendix 8.
- (e) A condition, limitation or exemption attached to a certificate, licence, authorisation or approval by reference to a provision of CAR-100 Issue 1 shall be read, from 26th November 2026, as a reference to the provision of this CAR-100 that corresponds to it in subject matter.

GM1 100.A.025 Effect of the savings provision

Paragraph (b) prevents a Service Provider's existing acceptance from lapsing on commencement. It does not excuse continued compliance with Issue 1 requirements that Issue 2 has changed; paragraph (c) sets the date by which the system must meet this CAR-100.

Paragraph (e) exists because conditions attached to individual certificates commonly cite regulatory provisions by number. Without it, every such condition would require individual amendment on commencement.

SUBPART B — REQUIREMENT TO IMPLEMENT A SAFETY MANAGEMENT SYSTEM

CAR 100.B.005 Requirement to establish, implement and maintain a safety management system

- (a) A Service Provider identified in CAR 100.B.010 shall establish, implement and maintain a safety management system in accordance with this CAR-100.
- (b) The safety management system shall—
 - (1) be established and managed in accordance with the framework at Appendix 2;
 - (2) cover a defined scope of aviation products and services determined in accordance with CAR 100.B.025; and
 - (3) be supported by a system description prepared in accordance with CAR 100.C.010.
- (c) The safety management system shall be maintained in operation for so long as the Service Provider holds the certificate, licence, authorisation or approval by reason of which the CAR-100 applies to it.

GM1 100.B.005 Establish, implement and maintain

The three verbs are distinct and each is separately auditable. "Establish" refers to the design of the system and its documentation. "Implement" refers to the system operating in the organisation as designed. "Maintain" refers to its continuing effectiveness over time, which is the subject of Subpart F.

A Service Provider whose SMS manual is complete but whose hazard identification process has not produced a hazard record in twelve months has established but not implemented a system.

CAR 100.B.010 Service Providers required to implement a safety management system

This CAR applies to the following Service Providers —

- (a) an approved training organisation approved under CAR-ORA that is exposed to safety risks related to aircraft operations during the provision of its services;
- (b) an operator of aeroplanes or helicopters holding an air operator certificate issued under CAR-OPS and authorised to conduct international commercial air transport;
- (c) an operator holding a remotely piloted aircraft system operator certificate (ROC) issued under CAR-102 and authorised to conduct international commercial operations;
- (d) an approved maintenance organisation approved under CAR-145 and CAR-M providing services to an operator falling within (b);
- (e) an approved maintenance organisation approved under CAR-102 providing services to an operator falling within (c);
- (f) an organisation responsible for the type design or manufacture of aircraft, engines or propellers (currently not available in Oman, hence not applicable);
- (g) an air traffic services (ATS) provider designated under CAR-172; and
- (h) an operator of a certified aerodrome or a certified heliport certificated under CAR-139.

AMC1 100.B.010 Technical Domain-Specific Requirements

Each Service Provider listed in CAR 100.B.010 should comply with this CAR-100 as the basic SMS requirement, together with any additional management system requirements of the technical domain regulation under which it holds its approval, for example CAR-ORA, CAR-145, CAR-M, CAR-139 or CAR-172.

Where an ATS provider under CAR 100.B.010(g) also provides an AFIS (CAR-179), an IFPDS (CAR-173) or an aeronautical telecommunication service (CAR-171), those services should be included within the defined scope of its SMS under CAR 100.B.025 and addressed in its system description. The technical domain regulation may set additional requirements for those services, in particular for safety risk management, but does not replace this CAR-100.

Where such a service is provided by an organisation that is not an ATS provider under CAR 100.B.010(g), the CAA Oman may apply this CAR-100 to that organisation by direction under CAR 100.B.020.

GM1 100.B.010 Scope of the maintenance categories

Where maintenance activity is not carried out by an approved maintenance organisation but is carried out by the operator under the provisions of the applicable operations and airworthiness CARs, that activity falls within the scope of the operator's own safety management system. It does not fall outside the CAR-100 by reason of not being performed by an approved maintenance organisation.

Paragraphs (c) and (e) are new at Issue 2 and depend on the existence of a remotely piloted aircraft system operator certificate in the Oman regulatory structure. Paragraph (h) extends to certified heliports, which were not within the scope of Issue 1.

CAR 100.B.015 International general aviation — large or turbojet aeroplanes

- (a) This CAR-100 applies to an operator of a large aeroplane or a turbojet aeroplane engaged in international general aviation where the Sultanate of Oman is the State of Registry, to the extent provided by the criteria at Appendix 7.
- (b) An operator to which (a) applies shall establish and manage a SMS meeting the criteria at Appendix 7.

GM1 100.B.015 Reason for a separate provision

International general aviation operators of large or turbojet aeroplanes are not within the population at CAR 100.B.010. Annex 19 requires instead that the State of Registry establish criteria for such operators to implement a SMS, addressing the framework and elements of the SMS framework.

Appendix 7 sets those criteria. The obligation is therefore to meet the Appendix 7 criteria rather than to comply with Subparts D to G in full, although the Appendix draws on them.

CAR 100.B.020 Discretionary application

- (a) The CAA Oman may, by written direction, require any person carrying on an aviation activity that is not within CAR 100.B.010 to establish, implement and maintain a SMS in accordance with the CAR-100, or in accordance with such of its provisions as the direction specifies, where the CAA Oman considers this appropriate to support the management of safety risks.
- (b) A direction under (a) shall —
 - (1) identify the person or class of persons to which it applies;
 - (2) specify which provisions of this CAR-100 apply and any modification to them;
 - (3) state the safety justification for the direction; and
 - (4) specify the date from which compliance is required, allowing a reasonable period for implementation.
- (c) The CAA Oman shall periodically review the need to extend the application of this CAR-100 to aviation sectors beyond those at CAR 100.B.010.
- (d) A person to whom a direction under (a) applies shall be treated as a Service Provider for the purposes of this CAR-100 and any oversight area regulation, to the extent the direction provides.

GM1 100.B.020 Intended use of the power

The power exists because the aviation system contains activity that presents safety risk but falls outside the categories established internationally — for example domestic commercial operations, ground handling, or unmanned activity below the threshold at CAR 100.B.010(c).

It is drafted as an enabling power rather than a closed list so that extension does not require amendment of this CAR-100 each time. The requirement at (b)(3) to state a safety justification, and at (b)(4) to allow a reasonable implementation period, are the safeguards against its disproportionate use.

CAR 100.B.025 Scope of the safety management system

- (a) A Service Provider shall define the scope of its SMS by reference to the aviation products and services it provides.
- (b) The defined scope shall be stated in the SMS manual and shall be accepted by the CAA Oman in accordance with CAR 100.J.005.
- (c) The defined scope shall encompass every activity for which the Service Provider holds a certificate, licence, authorisation or approval by reason of which this CAR-100 applies to it.
- (d) Where the Service Provider carries on activity outside the defined scope, the SMS manual shall identify that activity and describe the interface between it and the activity within scope.

GM1 100.B.025 Scope and interface

Paragraph (d) addresses the common case of an organisation whose regulated activity sits alongside unregulated or differently regulated activity — for example an aerodrome operator that also provides ground handling, or a maintenance organisation that also manufactures parts.

The requirement is not to bring the out-of-scope activity into the SMS. It is to make the boundary explicit and to manage what crosses it, which is the subject of CAR 100.C.015.

CAR 100.B.030 Single safety management system for multiple approvals

- (a) A Service Provider holding more than one certificate, licence, authorisation or approval requiring a SMS may establish a single SMS covering all of them.
- (b) Where a Service Provider does so—
 - (1) the defined scope shall identify each certificate, licence, authorisation or approval covered;
 - (2) the system description shall address the activity carried on under each; and
 - (3) the SMS shall satisfy the requirements applicable to each.
- (c) A single SMS established under (a) shall be accepted once, by the CAA Oman, for all the approvals it covers.

GM1 100.B.030 Practical effect

This provision is one of the principal reasons for constructing the CAR-100 as an umbrella regulation. A Service Provider holding an air operator certificate and a maintenance approval operates one hazard identification process, one safety risk register, one set of safety performance indicators and one safety review board, not two of each.

Paragraph (c) is directed as much at CAA Oman as at the Service Provider. Where a single system is accepted, oversight of it should be coordinated across the technical disciplines concerned rather than conducted separately by each.

CAR 100.B.035 Integration with other management systems

- (a) A Service Provider may integrate its SMS with other management systems it operates.
- (b) Where it does so, the Service Provider shall ensure that—
 - (1) each requirement of this CAR-100 remains separately identifiable within the integrated system;
 - (2) the safety management outputs of the integrated system are separately auditable; and
 - (3) the integration does not diminish the visibility of safety information to the accountable executive or to the CAA Oman.

GM1 100.B.035 Integration with quality, security and other systems

Integration with a quality management system, an aviation security management system or an occupational health and safety system is common and is not discouraged. What matters is that a person auditing the system — internally or on behalf of the CAA Oman — can find each requirement of this CAR without reconstructing it from a general management framework.

A cross-reference matrix within the SMS manual, mapping each provision of this CAR-100 to the corresponding part of the integrated system, is normally sufficient to satisfy (b)(1).

The caution at (b)(3) reflects a known failure mode: where safety information is aggregated with commercial or operational reporting before reaching senior management, safety signals are diluted.

SUBPART C — GENERAL REQUIREMENTS FOR THE SAFETY MANAGEMENT SYSTEM

CAR 100.C.005 Safety management system framework

- (a) A Service Provider shall establish and manage its SMS in accordance with the framework at Appendix 2, comprising four components and twelve elements.
- (b) Each of the twelve elements shall be implemented. None may be omitted on the ground that the Service Provider is small or its activity simple; the manner of implementation is instead determined in accordance with CAR 100.C.030.

GM1 100.C.005 The framework as a minimum

The four components and twelve elements are the minimum content of a SMS. Subparts D to G of this CAR-100 set out the requirements of each element in full; Appendix 2 presents them as a single table for reference and for use in oversight.

Paragraph (b) draws the distinction that most often causes difficulty. Proportionality governs how an element is implemented — the depth of process, the formality of documentation, the frequency of review. It does not permit an element to be left out.

CAR 100.C.010 System description

- (a) A Service Provider shall prepare, and keep current, a description of the system within which its SMS operates.
- (b) The system description shall address—
 - (1) the aviation products and services within the defined scope;
 - (2) the organisational structure, and the functions and activities carried on;
 - (3) the facilities, equipment and systems used in the provision of the products and services;
 - (4) the personnel carrying on those functions and activities, and the competences required of them;
 - (5) the regulatory requirements applicable to the activity; and
 - (6) the organisational interfaces identified under CAR 100.C.015.
- (c) The system description shall form part of the SMS documentation and shall be reviewed whenever a change under CAR 100.F.015 affects it.

AMC1 100.C.010 Form of the system description

The system description need not be a separate document. It may be a chapter of the SMS manual, or a set of cross-references to documentation the Service Provider already holds — an organisation exposition, a management system manual, an aerodrome manual — provided the material required by CAR 100.C.010(b) can be located as a whole.

For a small Service Provider, a system description of a few pages supported by an organisation chart and an interface list will normally be sufficient.

The system description should be dated and its currency confirmed at each management review of the safety management system.

GM1 100.C.010 Purpose of the system description

A SMS manages the safety risks of a particular system. The system description defines what that system is. Without it, the scope of hazard identification is indeterminate and the adequacy of the risk register cannot be assessed.

It is also the document from which an inspector new to the organisation, or from another technical discipline, orients themselves. That is a legitimate secondary purpose and argues for clarity over completeness.

CAR 100.C.015 Organisational interfaces

- (a) A Service Provider shall identify the organisational interfaces that are relevant to the safety of its aviation products and services, including interfaces—
 - (1) internal to the Service Provider, between its own functions, departments or sites; and
 - (2) external to the Service Provider, with other organisations on which the safe provision of its products and services depends or which depend on it.
- (b) The Service Provider shall manage the safety risks arising at each identified interface, including by agreeing with the other organisation, so far as is reasonably practicable—
 - (1) the allocation of responsibility for the activity at the interface;
 - (2) the exchange of safety information relevant to the interface; and
 - (3) the means by which hazards identified at the interface are notified and addressed.
- (c) Identified interfaces shall be recorded in the system description and shall be reviewed when the interface changes.

AMC1 100.C.015 Managing external interfaces

Where the other organisation is itself a Service Provider required to hold a SMS, the arrangements at CAR 100.C.015(b) should be recorded in writing, whether in a contract, a service level agreement, a memorandum of understanding or a dedicated interface agreement. Where the other organisation is not required to hold a SMS — a fuel supplier, a construction contractor, a ground transport provider — the Service Provider remains responsible for the safety risks arising at the interface and should address them through the contractual arrangements and through its own hazard identification process.

Interfaces that commonly warrant explicit treatment include: operator and maintenance organisation; aerodrome operator and ground handling agent; air traffic services provider and adjacent units or military authorities; training organisation and the operators whose personnel it trains; and, for remotely piloted aircraft system operations, the operator and the provider of the command and control link.

GM1 100.C.015 Interfaces strengthened

Accident and serious incident experience have repeatedly shown that the hazard lies not within either organisation but in the space between them, where each assumes the other is managing it. Interface management is the element of the framework directed at that space.

An inspector assessing this requirement should look for evidence that the interfaces have been actively identified rather than asserted, and that at least the principal ones have produced something — an agreement, an exchange of hazard information, a jointly owned risk entry.

CAR 100.C.020 Safety management system implementation plan

- (a) A Service Provider establishing a SMS, or extending an existing system to activity newly within scope, shall develop an implementation plan containing the matters at Appendix 3.
- (b) The implementation plan shall be submitted to the CAA Oman for acceptance before implementation commences.
- (c) The Service Provider shall report progress against the accepted implementation plan to the CAA Oman at the intervals the plan provides.
- (d) A material change to the accepted implementation plan shall be submitted to the CAA Oman for acceptance.

AMC1 100.C.020 Phasing of implementation

Implementation is normally phased. A common and acceptable phasing is—

- (a) Phase 1 — safety policy and objectives, accountable executive, safety manager, implementation plan, system description and gap analysis;

- (b) Phase 2 — safety reporting system, hazard identification and safety risk management processes, SMS documentation and initial training;
- (c) Phase 3 — safety performance indicators, safety assurance processes, management of change and internal audit of the system; and
- (d) Phase 4 — continual improvement, maturity of the safety performance measurement set, and full integration of safety promotion.

The phasing above is illustrative. A Service Provider may propose a different phasing where its circumstances warrant, provided the plan shows a coherent sequence and a defensible end date.

GM1 100.C.020 When an implementation plan is required

An implementation plan is required on first establishment of a system, and where an existing system is extended to activity that was previously outside its scope — for example on the addition of a new approval, a new aerodrome, or a new class of operation.

It is not required for routine change within an established scope, which is dealt with under CAR 100.F.015.

CAR 100.C.025 Human performance

In establishing and managing its safety management system, a Service Provider shall give specific consideration to human performance implications.

GM1 100.C.025 Where human performance considerations arise

This requirement is not confined to a single element. Human performance is relevant to hazard identification, to the design of safety risk controls, to the workload and competence of personnel carrying out safety-critical tasks, to the usability of procedures and reporting systems, and to the effectiveness of safety communication.

Guidance is available in the ICAO Manual on Human Performance for Regulators (Doc 10151) and in the Safety Management Manual (Doc 9859).

CAR 100.C.030 Proportionality of the safety management system

- (a) A SMS shall be commensurate with—
 - (1) the size of the Service Provider; and
 - (2) the complexity of its aviation products and services and of the safety risks associated with them.
- (b) A Service Provider shall determine, and record in its SMS manual, how each element of the framework is implemented having regard to (a).
- (c) In assessing compliance with the CAR-100, the CAA Oman shall have regard to (a).

AMC1 100.C.030 Factors bearing on proportionality

The following factors are relevant to determining the appropriate scale of a SMS —

- (a) the number of personnel carrying out safety-related functions;
- (b) the number of sites and whether activity is conducted at more than one location;
- (c) the volume and diversity of the activity;
- (d) the complexity of the technology, aircraft or systems involved;
- (e) the number and criticality of external organisational interfaces;
- (f) the extent to which the activity is contracted out; and
- (g) the safety risk profile arising from the Service Provider's own hazard identification.

A Service Provider that is small on each of these factors may reasonably implement the framework through a smaller number of combined processes, fewer and simpler records, less frequent formal review, and the combination of safety roles with other duties in accordance with CAR 100.D.025(c).

GM1 100.C.030 Proportionality is a requirement, not a concession

Paragraph (c) binds the CAA Oman. An inspector who applies to a small Service Provider the expectations formed in oversight of a large one has misapplied this CAR, and a finding raised on that basis is not sustainable.

The converse is equally true. Proportionality does not entitle a large or complex Service Provider to a simplified system, and the factors at AMC1 100.C.030 operate in both directions.

The record required at (b) is what makes proportionality auditable. It allows the Service Provider to explain its choices once, rather than defending them at each inspection.

SUBPART D — SAFETY POLICY, OBJECTIVES AND RESOURCES

This Subpart gives effect to Component 1 of the safety management system framework.

CAR 100.D.005 Safety policy

- (a) A Service Provider shall define a safety policy in accordance with applicable international and national requirements.
- (b) The safety policy shall—
 - (1) reflect the organisation's commitment regarding safety, including the promotion of a positive safety culture;
 - (2) include a clear statement about the provision of the resources necessary to implement the policy;
 - (3) include the safety reporting procedures;
 - (4) indicate clearly which types of behaviour are unacceptable in relation to the Service Provider's aviation activities, and the circumstances in which disciplinary action would not apply;
 - (5) be signed by the accountable executive;
 - (6) be communicated throughout the organisation with visible endorsement; and
 - (7) be reviewed periodically to confirm that it remains relevant and appropriate to the Service Provider.

AMC1 100.D.005(b)(4) Unacceptable behaviour and the disciplinary boundary

The statement required by CAR 100.D.005(b)(4) has two halves and both are mandatory. Policies that state only what is unacceptable, without stating when disciplinary action will not follow, do not comply.

The second half should make clear, as a minimum, that disciplinary action will not follow from the reporting of an error, omission or occurrence where the act or omission was commensurate with the person's training and experience, and where the report was made in accordance with the Service Provider's reporting procedures.

The boundary should be expressed in terms the workforce can apply. Conduct commonly placed outside protection includes wilful misconduct, gross negligence, criminal activity, falsification of records, and the deliberate failure to report a known occurrence.

The policy should identify who decides whether conduct falls outside protection, and should provide that the decision is not taken by the person's immediate line manager alone.

GM1 100.D.005 The safety policy as the foundation of reporting

The willingness of personnel to report is the single greatest determinant of whether a safety management system produces useful safety data. That willingness rests on the credibility of the statement required by (b)(4).

A policy signed by the accountable executive but not visibly acted upon when a report is made against senior management is the most common cause of reporting collapse. Inspectors assessing this element should look beyond the text of the policy to the reporting rate and to the treatment of reports that were unwelcome.

CAR 100.D.010 Safety objectives

- (a) A Service Provider shall define safety objectives, having due regard to its safety policy.
- (b) The safety objectives shall—
 - (1) form the basis for safety performance measurement and monitoring under CAR 100.F.005;
 - (2) reflect the Service Provider's commitment to maintain or continually improve the overall effectiveness of the safety management system;
 - (3) be communicated throughout the organisation; and
 - (4) be reviewed periodically to confirm that they remain relevant and appropriate.
- (c) In defining its safety objectives, a Service Provider shall consider the safety objectives established by the CAA Oman at State level, where relevant to its activity.

GM1 100.D.010 Relationship with State safety objectives

Paragraph (c) requires consideration, not adoption. A Service Provider is not required to replicate the State's safety objectives, but should be able to explain how its own objectives relate to them where its activity bears on a State-level objective.

The CAA Oman publishes its safety policy and safety objectives, and the national aviation safety plan where one is in force. Where these have not been published, or do not bear on the Service Provider's activity, paragraph (c) is satisfied by recording that consideration was given.

CAR 100.D.015 Safety accountability and responsibilities

A Service Provider shall—

- (a) identify the accountable executive, who, irrespective of other functions, is accountable on behalf of the organisation for the implementation and maintenance of an effective safety management system;
- (b) define clearly the lines of safety accountability throughout the organisation, including a direct accountability for safety on the part of senior management;
- (c) identify the responsibilities of all members of management, irrespective of other functions, and of employees, with respect to the safety performance of the organisation;
- (d) document and communicate safety accountabilities, responsibilities and authorities throughout the organisation; and
- (e) define the levels of management with authority to make decisions regarding safety risk tolerability.

GM1 100.D.015 Accountability and responsibility

An accountability is an obligation that cannot be delegated. A responsibility is a function or activity that may be delegated. The accountable executive may delegate the performance of safety management activity but cannot delegate the accountability for the system being effective.

Paragraph (e) is frequently overlooked. Its purpose is to ensure that when a risk assessment concludes that a residual risk is tolerable, it is clear who was entitled to reach that conclusion. A risk tolerability decision taken at a level not authorised to take it is a finding against this paragraph, irrespective of whether the decision was correct.

CAR 100.D.020 Accountable Executive

- (a) The accountable executive shall be a single identified person who has—
 - (1) final authority over the operations authorised under the certificate, licence, authorisation or approval held;
 - (2) control of the financial and human resources necessary for the activity carried on; and
 - (3) final responsibility for all safety matters.
- (b) The Service Provider shall notify the CAA Oman of the identity of the accountable executive, and of any change to it, within 30 days.
- (c) The accountable executive shall ensure that the safety management system is properly implemented and maintained, and that it performs to the requirements of the CAR-100.

AMC1 100.D.020 Identification of the accountable executive

The accountable executive is normally the chief executive officer, managing director, director general, president or equivalent of the organisation as a whole, rather than a safety, quality or operations post-holder.

Where an organisation is part of a group, the accountable executive should be the person with control of the resources of the entity holding the approval, not a group officer without that control.

Where a Service Provider holds several approvals covered by a single safety management system under CAR 100.B.030, there should be one accountable executive for that system.

GM1 100.D.020 Control of resources is decisive

The test at (a)(2) is the operative one. A person who is accountable for safety but cannot commit the funds or the people to act on a risk decision cannot discharge that accountability, and appointing them satisfies the form of this requirement while defeating its purpose.

This is a point on which inspectors from all disciplines should be prepared to probe, since the organisational reality is often not apparent from the SMS manual.

CAR 100.D.025 Appointment of key safety personnel

- (a) A Service Provider shall appoint a safety manager who is responsible for the implementation and maintenance of the safety management system.
- (b) The safety manager shall have direct access to the accountable executive.
- (c) The responsibilities for the implementation and maintenance of the safety management system may be assigned to more than one person, and may be combined with other duties, provided that the combination does not give rise to a conflict of interest.
- (d) The Service Provider shall notify the CAA Oman of the identity of the safety manager, and of any change to it, within 30 days.

AMC1 100.D.025 Competence of the safety manager

The safety manager should have—

- (a) operational or technical knowledge of the activity carried on by the Service Provider sufficient to engage credibly with the hazards it presents;
- (b) knowledge of safety management principles and of the requirements of the CAR-100;
- (c) competence in safety data analysis appropriate to the scale of the system; and
- (d) the standing within the organisation to raise safety matters with senior management.

Where the role is combined with other duties under CAR 100.D.025(c), a conflict of interest arises in particular where the same person is responsible both for the activity generating a safety risk and for the assessment of the acceptability of that risk. Combination with a quality or compliance monitoring role is common and is not of itself a conflict; combination with responsibility for line production or operational delivery requires careful assessment.

GM1 100.D.025 Direct access to the accountable executive

Paragraph (b) is a structural safeguard, not a courtesy. Its purpose is to ensure that a safety concern reaches the person with control of the resources without being filtered by an intervening management layer that may have an interest in the outcome. Direct access does not require the safety manager to report to the accountable executive for all purposes; it requires an unobstructed route for safety matters.

CAR 100.D.030 Coordination of emergency response planning

- (a) A Service Provider that is required to establish and maintain an emergency response plan shall ensure that the plan is properly coordinated with the emergency response plans of those organisations with which it must interface during the provision of its products and services.
- (b) The Service Provider shall ensure that its emergency response plan is coordinated with the arrangements of the CAA Oman and of other State bodies to the extent those arrangements apply to it.
- (c) The emergency response plan shall be tested at intervals appropriate to the activity, and the outcome of each test shall be recorded and acted upon.

AMC1 100.D.030(c) Testing the emergency response plan

A full-scale exercise is not required on every occasion. A programme combining full-scale exercises at longer intervals with table-top exercises, communications tests and departmental drills in between is normally appropriate.

Where organisations share an interface identified under CAR 100.C.015, joint testing of the interface should be included in the programme.

The record should identify the deficiencies revealed, the corrective action taken and the date by which it was completed.

GM1 100.D.030 Service Providers that are affected

The obligation to hold an emergency response plan arises under the applicable oversight area regulation, not under this CAR-100. This provision governs the coordination of a plan that exists, and does not itself create the obligation to hold one.

Paragraph (b) reflects the requirement on the State to ensure that the role of the CAA Oman is reflected in emergency response planning and crisis management at State level. Service Providers should expect the CAA Oman to publish the arrangements with which their plans must be coordinated.

CAR 100.D.035 Safety management system documentation

- (a) A Service Provider shall develop and maintain an SMS manual containing the matters at Appendix 4, describing its—
 - (1) safety policy, safety objectives and resources;
 - (2) safety management system requirements;
 - (3) safety management system processes and procedures; and
 - (4) accountabilities, responsibilities and authorities for those processes and procedures.
- (b) The SMS manual may be a stand-alone document or may be integrated with other documentation maintained by the Service Provider, provided that CAR 100.B.035(b) is satisfied.
- (c) The SMS manual shall be kept current, shall be under document control, and shall be accessible to all personnel to whom it is relevant.

GM1 100.D.035 One manual, not a library

The purpose of the SMS manual is to allow any person — an employee, the accountable executive, an inspector — to establish how the safety management system works without assembling it from separate sources.

Where content already exists elsewhere in the Service Provider's documentation, cross-reference is preferable to duplication, since duplicated text diverges at the next amendment.

CAR 100.D.040 Safety management system records

- (a) A Service Provider shall develop and maintain safety management system operational records as part of its SMS documentation.
- (b) Records shall be retained for the periods at Appendix 5.
- (c) Records shall be stored so as to ensure their integrity, their retrievability, and their protection in accordance with Subpart I.
- (d) Where records are held in electronic form, the Service Provider shall ensure that they remain accessible for the full retention period notwithstanding a change of system.

GM1 100.D.040 Records as the evidence of implementation

The records generated by a safety management system are the principal evidence that it is implemented rather than merely established. They are also, in aggregate, the Service Provider's safety data, and are therefore subject to the protections at Subpart I.

Paragraph (d) addresses a recurring practical failure. Safety data held in a superseded database or a proprietary format that the organisation can no longer read has not been retained for the purposes of paragraph (b).

SUBPART E — SAFETY RISK MANAGEMENT

This Subpart gives effect to Component 2 of the safety management system framework.

CAR 100.E.005 Hazard identification

- (a) A Service Provider shall develop and maintain a process to identify hazards associated with its aviation products or services, including hazards related to internal and external organisational interfaces.
- (b) Hazard identification shall be based on a combination of reactive and proactive methods.
- (c) The process shall draw on, as a minimum—
 - (1) reports received through the internal safety reporting system established under CAR 100.H.005;
 - (2) the outcome of investigations of occurrences within the Service Provider's organisation;
 - (3) safety information provided by the CAA Oman or by other organisations, including at interfaces identified under CAR 100.C.015;
 - (4) the outcome of audits, inspections and monitoring activity; and
 - (5) changes identified under CAR 100.F.015.
- (d) Identified hazards shall be recorded, and the record shall be maintained.

AMC1 100.E.005(b) Reactive and proactive methods

Reactive methods identify hazards from events that have already occurred. They include occurrence reporting, investigation of accidents and incidents, and analysis of findings raised in audit.

Proactive methods identify hazards before an event occurs. They include safety surveys and staff questionnaires, flight data or operational data monitoring where available, safety assessment of proposed changes, hazard analysis of new equipment or procedures, structured workshops with operational personnel, and analysis of trends in reported data.

A process resting on occurrence reports alone does not satisfy CAR 100.E.005(b). At least one proactive method should be in routine use and should be capable of generating hazard entries independently of reported events.

GM1 100.E.005 What counts as a hazard

A hazard is a condition or object with the potential to cause or contribute to an aircraft incident or accident. It is not the event itself, and it is not the consequence.

A frequent error in hazard registers is the recording of consequences — runway excursion, loss of separation, controlled flight into terrain — in place of the conditions that give rise to them. The test is whether the entry describes something that exists in the system and can be acted upon.

Hazards arising at interfaces are the category most often missed. Where the Service Provider depends on another organisation, or another organisation depends on it, the hazard register should show entries arising from that dependency.

CAR 100.E.010 Safety risk assessment and mitigation

- (a) A Service Provider shall develop and maintain a process that ensures the analysis, assessment and control of the safety risks associated with identified hazards.
- (b) The process shall provide for—
 - (1) assessment of the probability and severity of the consequences of each identified hazard;
 - (2) determination of the tolerability of the resulting safety risk by a person authorised under CAR 100.D.015(e);
 - (3) where the safety risk is not tolerable, the identification and implementation of safety risk controls;

- (4) reassessment of the safety risk following implementation of the controls; and
- (5) recording of the assessment, the decision, the controls and the person taking the decision.
- (c) The Service Provider shall verify that implemented safety risk controls are effective, in accordance with CAR 100.F.005(c).
- (d) In managing safety risks, the Service Provider shall consider the effect on aviation safety of risk management measures implemented in other domains, including aviation security, facilitation and environmental protection.

AMC1 100.E.010 Safety risk assessment methodology

The Service Provider should adopt a documented methodology and apply it consistently. The methodology should define—

- (a) the severity categories and the probability categories used, in terms meaningful to the Service Provider's activity;
- (b) the matrix or equivalent means by which severity and probability combine to produce a risk index;
- (c) the tolerability bands, and for each band the action required and the level of management authorised to accept the risk; and
- (d) the circumstances requiring reassessment.

A three-band scheme — intolerable, tolerable subject to control, acceptable — is widely used and is sufficient. More elaborate schemes are permissible but should not be adopted where the organisation lacks the data to populate them.

Where safety risk controls rely on the action of another organisation at an interface, the assessment should record that dependency and the arrangements under CAR 100.C.015(b) that support it.

Appendix 9 sets out an example of an acceptable methodology, matrices and forms that a Service Provider may adopt for the purposes of this AMC.

GM1 100.E.010 Consistency matters more than sophistication

The value of a risk assessment methodology lies in consistent application across the organisation and over time, so that risks can be compared and prioritised. A simple scheme applied consistently produces a usable risk picture; a sophisticated scheme applied inconsistently does not.

Paragraph (d) recognises that measures introduced for security, facilitation or environmental reasons can create aviation safety risk — for example a security procedure that increases crew workload at a critical phase, or a noise abatement routing that increases terrain proximity. The requirement is to consider the effect, not to resolve the conflict unilaterally.

SUBPART F — SAFETY ASSURANCE

This Subpart gives effect to Component 3 of the safety management system framework.

CAR 100.F.005 Safety performance measurement and monitoring

A Service Provider shall establish means to—

- (a) measure and monitor the safety performance of the organisation;
- (b) measure and monitor progress towards the achievement of its safety objectives; and
- (c) validate the effectiveness of its safety risk controls.

AMC1 100.F.005 Means of measurement and monitoring

The means established should include—

- (a) a set of safety performance indicators established under CAR 100.F.010;
- (b) an internal audit programme covering the SMS and compliance with applicable safety regulations;
- (c) a periodic management review of safety performance, chaired by or reported to the accountable executive; and
- (d) a means of verifying, for each significant safety risk control, that the control is in place and is producing the intended effect.

The internal audit programme referred to at (b) should be independent of the activity audited, should be planned on a cycle covering the whole system, and should feed its findings into hazard identification under CAR 100.E.005(c)(4).

For a small Service Provider, independence of internal audit may be achieved by using a person from a different function, by reciprocal arrangement with another organisation, or by an external auditor.

GM1 100.F.005(c) Validating risk controls

Paragraph (c) is the element most often absent in practice. A safety risk control that has been decided upon and recorded is not thereby validated; validation requires evidence that it was implemented and that it is working.

A control consisting of a procedural change is validated by evidence that the procedure is followed, not by evidence that it was issued. A control consisting of training is validated by evidence of changed behaviour or outcome, not by attendance records alone.

CAR 100.F.010 Safety performance indicators and targets

- (a) A Service Provider shall establish safety performance indicators, supported by qualitative means where appropriate, to measure and monitor its safety performance.
- (b) A Service Provider may establish safety performance targets for its safety performance indicators.
- (c) Safety performance indicators and any targets shall be reviewed periodically and revised where they no longer serve the purpose at CAR 100.F.005.
- (d) In establishing safety performance indicators, a Service Provider shall consider the safety performance measurement and monitoring undertaken by the CAA Oman at State level, where relevant to its activity.

AMC1 100.F.010 Selecting indicators

The indicator set should include both lagging indicators, which measure outcomes that have occurred, and leading indicators, which measure the condition of the safety risk controls before an outcome occurs.

The set should be small enough to be reviewed meaningfully at each management review. A set of five to ten indicators

is sufficient for most Service Providers, and a larger set is rarely reviewed in substance.

Each indicator should be traceable to a safety objective, to a significant safety risk, or to the effectiveness of a specific risk control. An indicator that measures something the organisation cannot influence should be reconsidered. Where an indicator is expressed as a rate, the denominator should be stated and should be one the Service Provider records reliably.

GM1 100.F.010 Targets are discretionary

Paragraph (b) is permissive. Annex 19 requires safety performance targets to be set only where appropriate, and the Service Provider element of the framework does not require them at all.

This is a change from the previous edition of the Annex and from CAR-100 Issue 1. The acceptable level of safety performance construct has been withdrawn, and no provision of this CAR-100 requires a Service Provider to declare an acceptable level of safety performance.

A target set on an indicator with a small numerical base is liable to drive reporting behaviour rather than safety performance, and should be avoided.

CAR 100.F.015 Management of change

- (a) A Service Provider shall develop and maintain a process to—
 - (1) identify changes which may affect the level of safety risk associated with its aviation products or services; and
 - (2) identify and manage the safety risks that may arise from those changes.
- (b) The process shall be applied before the change is implemented, save where the change arises from circumstances outside the Service Provider's control, in which case it shall be applied as soon as reasonably practicable.
- (c) The process shall address, as a minimum—
 - (1) the criticality of the systems and activities affected;
 - (2) the stability of the operating environment and of the organisation at the time of the change;
 - (3) the effect of the change on interfaces identified under CAR 100.C.015; and
 - (4) the effect of the change on existing safety risk controls.
- (d) The outcome of the assessment shall be recorded, and the system description shall be updated where the change affects it.

AMC1 100.F.015 Changes to which the process should be applied

The process should be applied to changes including—

- (a) organisational restructuring, significant changes in personnel numbers, or change of accountable executive or safety manager;
- (b) the introduction of new aircraft types, equipment, systems or technology;
- (c) the introduction of new routes, destinations, operations, or types of activity;
- (d) changes to facilities, infrastructure or the physical operating environment;
- (e) the contracting out of an activity previously performed in-house, or its return in-house;
- (f) significant change in the volume of activity, in either direction; and
- (g) changes in the regulatory framework applicable to the Service Provider.

The Service Provider should define a threshold below which a full assessment is not required, and should record that threshold in the SMS manual.

GM1 100.F.015 Contraction is a change

Paragraph (f) of AMC1 100.F.015 refers to change in volume in either direction. A reduction in activity is as significant a change as an expansion, and is more often overlooked: it typically involves loss of experienced personnel, dilution of oversight, deferral of maintenance and training, and erosion of the resources on which existing risk controls depend.

Changes to the regulatory framework — including the commencement of this CAR-100 — are themselves changes within the meaning of this provision.

CAR 100.F.020 Continual improvement of the safety management system

- (a) A Service Provider shall monitor and assess its safety management system processes in order to maintain or continually improve the overall effectiveness of the system.
- (b) The assessment shall be carried out at planned intervals and shall address each element of the framework at Appendix 2.
- (c) Deficiencies identified shall be recorded, and corrective action shall be taken and its effectiveness verified.

AMC1 100.F.020 Assessing the system rather than the outcome

The assessment required by CAR 100.F.020 is of the safety management system itself — whether its processes are functioning as designed and producing the intended outputs. It is distinct from the measurement of safety performance under CAR 100.F.005, which is concerned with outcomes.

Sources of evidence include internal audit findings, the rate and quality of safety reports, the currency of the hazard register and risk assessments, the completion rate of agreed safety actions, the currency of the SMS documentation, and feedback from personnel.

An annual interval is normally appropriate for the assessment required by (b), with more frequent review of individual elements where circumstances warrant.

SUBPART G — SAFETY PROMOTION

This Subpart gives effect to Component 4 of the safety management system framework.

CAR 100.G.005 Safety training and education

- (a) A Service Provider shall develop and maintain a safety training programme that ensures that personnel are trained and competent to perform their safety management system duties.
- (b) The scope of the safety training programme shall be appropriate to each individual's involvement in the safety management system.
- (c) The programme shall include initial and recurrent training.
- (d) Records of safety training shall be maintained in accordance with CAR 100.D.040.

AMC1 100.G.005 Content by category of personnel

The programme should provide, as a minimum—

- (a) for all personnel — the safety policy, the reporting system and how to use it, the behaviours identified as unacceptable and the circumstances in which disciplinary action does not apply, and their own safety responsibilities;
- (b) for operational personnel — in addition, hazard identification, the reporting of hazards, and the safety risk controls applicable to their tasks;
- (c) for managers and supervisors — in addition, safety risk assessment and tolerability, the management of change, safety performance monitoring, and their accountabilities under CAR 100.D.015;
- (d) for the safety manager and safety personnel — in addition, the operation of each element of the framework, safety data analysis, and investigation technique appropriate to the activity; and
- (e) for the accountable executive — awareness training covering safety management principles, their own accountability, safety risk tolerability decisions, and the resourcing of the system.

Recurrent training at intervals not exceeding 36 months is normally appropriate for personnel other than safety personnel, and at intervals not exceeding 24 months for safety personnel.

GM1 100.G.005(e) Training the accountable executive

Accountable executive training is frequently omitted on the basis that the post-holder is a senior figure. The accountability at CAR 100.D.020(c) cannot be discharged by a person who does not understand what the system requires of them, and awareness training is the means by which that is addressed.

It is normally brief — a matter of hours rather than days — and is most effective when delivered against the organisation's own safety data.

CAR 100.G.010 Safety communication

A Service Provider shall develop and maintain a formal means for safety communication that—

- (a) ensures that personnel are aware of the safety management system to a degree commensurate with their positions;
- (b) conveys safety-critical information;
- (c) explains why particular actions are taken to improve safety; and
- (d) explains why safety procedures are introduced or changed.

AMC1 100.G.010 Means of safety communication

Means may include safety bulletins and notices, safety meetings and briefings, a safety section within routine operational communications, intranet or application-based channels, and feedback to the individual reporter on the outcome of their report.

Feedback to reporters deserves particular attention. A reporting system that does not tell reporters what happened to their reports will decline in use, whatever the policy states.

The means should permit communication in both directions, so that personnel can raise safety matters outside the formal reporting system.

GM1 100.G.010 Communication and safety culture

Paragraphs (c) and (d) are directed at a specific failure: safety measures imposed without explanation are complied with formally and circumvented in practice, and they generate no reporting.

Explaining the reasoning behind a change also exposes it to challenge from the personnel closest to the task, which is itself a source of hazard identification.

CAR 100.G.015 Positive safety culture

- (a) A Service Provider shall take measures to promote a positive safety culture within its organisation.
- (b) The measures shall include those necessary to encourage the use of the safety reporting system established under CAR 100.H.005.

GM1 100.G.015 What a positive safety culture requires of the organisation

A positive safety culture is characterised by a workforce that is informed about the hazards of its activity, willing to report, confident that reports will be treated fairly, adaptable to changing risk, and continuously learning from what it reports.

It cannot be created by policy statement alone. The indicators most closely associated with it are the reporting rate, the proportion of reports concerning the reporter's own error, the time taken to give feedback, and the treatment of reports that are unwelcome to management.

Promotion of a positive safety culture is also a State obligation, and the CAA Oman will promote it across the aviation community. That does not displace the Service Provider's own obligation under this provision.

SUBPART H — SAFETY REPORTING, SAFETY DATA AND SAFETY INFORMATION

CAR 100.H.005 Internal safety reporting system

- (a) A Service Provider shall establish and maintain a safety reporting system through which its personnel, and the personnel of organisations working on its behalf, may report hazards, occurrences, errors and safety concerns.
- (b) The reporting system shall—
 - (1) be accessible to all personnel to whom it applies;
 - (2) be simple to use and impose no unnecessary requirement on the reporter;
 - (3) provide for confidential reporting;
 - (4) provide feedback to the reporter on the outcome of the report; and
 - (5) feed the hazard identification process established under CAR 100.E.005.
- (c) The Service Provider shall take the measures necessary, including those under CAR 100.G.015, to encourage the use of the reporting system.
- (d) Safety data captured by the reporting system, and safety information derived from it, shall be protected in accordance with Subpart I.

AMC1 100.H.005 Design of the reporting system

The reporting system should—

- (a) permit reports to be made by more than one means, at least one of which is available at the place of work;
- (b) permit a report to be made without identifying the reporter to line management, while retaining the ability of the safety manager to seek clarification;
- (c) acknowledge receipt promptly and provide substantive feedback within a stated period;
- (d) record the disposition of every report, including reports on which no action is taken and the reason; and
- (e) be capable of producing the aggregate data needed for CAR 100.H.025.

Where the Service Provider operates a confidential reporting scheme, the arrangements for de-identification and for the retention of the identifying data should be recorded in the SMS manual, and the number of persons with access to identifying data should be as small as practicable.

GM1 100.H.005 Confidential is not the same as anonymous

A confidential report identifies the reporter to a restricted custodian, permitting clarification and feedback, and is de-identified before wider use. An anonymous report identifies no one.

Confidential reporting is preferable because it allows follow-up and feedback, both of which sustain reporting rates. An anonymous channel may nonetheless be worth retaining for matters the reporter is unwilling to raise on any other basis.

CAR 100.H.010 Reporting to the Authority

- (a) A Service Provider shall report to the Authority the occurrences it is required to report under the applicable oversight area regulation or CAR-13 and CAD 01-02, within the period that regulation provides.
- (b) A Service Provider shall provide to the CAA Oman, on request, safety data and safety information held by it that the CAA Oman requires for the purposes of the State Safety Programme.
- (c) A request under (b) shall identify the purpose for which the safety data or safety information is required.
- (d) Safety data and safety information provided under this provision are subject to the protection regime referred to in CAR 100.I.020.

GM1 100.H.010 Relationship with mandatory occurrence reporting

The CAR-100 does not establish the mandatory occurrence reporting scheme, which arises under the applicable oversight area regulation and under the national occurrence reporting instrument. Paragraph (a) confirms that the obligation is unaffected by this CAR-100 and that reporting under it feeds the same safety data holdings.

Paragraph (c) exists so that the Service Provider, and any person whose data is involved, can see the purpose for which the data is sought. It supports the use limitation at CAR 100.I.010 and the State-level protection regime.

CAR 100.H.015 Participation in voluntary reporting

- (a) A Service Provider shall not impede its personnel from reporting to a voluntary safety reporting system established by the CAA Oman.
- (b) A Service Provider shall inform its personnel of the existence of any such system and of the protection accorded to reports made through it.

GM1 100.H.015 Why this obligation sits on the Service Provider

The establishment of a voluntary safety reporting system is a State obligation and is not a requirement of this CAR-100. What this CAR-100 requires is that the Service Provider does not obstruct access to it, and that its personnel know it exists.

A Service Provider whose internal policy requires reports to be routed through management before reaching an external voluntary scheme would not comply with (a).

CAR 100.H.020 Taxonomy

- (a) A Service Provider shall classify safety data and safety information using the taxonomy specified by the CAA Oman.
- (b) Where the CAA Oman has not specified a taxonomy for a category of data, the Service Provider shall use a taxonomy aligned with the ADREP taxonomy or another recognised standardised taxonomy, and shall record its choice in the SMS manual.

GM1 100.H.020 Purpose of a common taxonomy

A common taxonomy allows safety data to be compared across Service Providers and aggregated at State level, allows hazards to be identified from data that no single organisation holds in sufficient volume, and allows safety information to be shared and exchanged internationally.

Service Providers should expect the CAA Oman to specify the taxonomy in a supporting instrument. Until it does, (b) applies.

CAR 100.H.025 Analysis of safety data and safety information

- (a) A Service Provider shall establish and maintain a process to analyse the safety data and safety information it holds.
- (b) The process shall support—
 - (1) the identification of hazards under CAR 100.E.005;
 - (2) the development and monitoring of safety performance indicators under CAR 100.F.010;
 - (3) the validation of safety risk controls under CAR 100.F.005(c); and
 - (4) the identification of existing practices that have resulted in positive safety outcomes.
- (c) The analysis shall be carried out by persons competent to do so, and its outputs shall be reported to the accountable executive at the intervals the SMS manual provides.

GM1 100.H.025(b)(4) Learning from what goes right

Sub-paragraph (b)(4) is new at the Third Edition of the Annex 19. Safety analysis has traditionally examined events that went wrong. Examining the practices and operational strategies by which normal work succeeds — including where it succeeds in adverse conditions — identifies the controls that are actually load-bearing.

For most Service Providers this is achieved through normal operations monitoring, through structured discussion with operational personnel, or through examining events in which an undesired outcome was avoided.

CAR 100.H.030 Sharing and exchange of safety information

- (a) A Service Provider may share or exchange safety information with other Service Providers, with the CAA Oman, and with other organisations, for the purpose of maintaining or improving safety.
- (b) Before sharing or exchanging safety information, the Service Provider shall satisfy itself that—
 - (1) the recipient will use it only for the purpose of maintaining or improving safety;
 - (2) the level of protection to be accorded to it has been agreed; and
 - (3) personal data within it has been de-identified, unless its retention is necessary for the safety purpose and is lawful.
- (c) Where a Service Provider identifies, from its own safety data, a matter likely to be of interest to another Service Provider or to the CAA Oman, it shall bring that matter to their attention without undue delay.

AMC1 100.H.030 Arrangements for sharing

Sharing arrangements may take the form of a written agreement, participation in a collaborative safety team or industry forum, or an established route for the exchange of information at an interface identified under CAR 100.C.015.

The agreement on protection required by CAR 100.H.030(b)(2) should be reached before information is exchanged, not afterwards, and should address onward disclosure.

GM1 100.H.030(c) The duty to pass on what is found

Paragraph (c) mirrors, at Service Provider level, the obligation on States to forward safety information of interest to other States. Its most common application is at interfaces: an operator identifying a hazard arising from an aerodrome's infrastructure, or a maintenance organisation identifying a defect trend relevant to other operators of the type.

It is not a general obligation to publish safety data, and it does not displace the protections at Subpart I.

SUBPART I — PROTECTION OF SAFETY DATA, SAFETY INFORMATION AND RELATED SOURCES

This Subpart imposes obligations on the Service Provider in respect of safety data and safety information within its own control.

The principles governing the use of safety data in disciplinary, civil, administrative and criminal proceedings, the principles of exception, the role of the competent authority, and the relationship with the administration of justice bind the State and the courts. They cannot be created by a regulation addressed to Service Providers and are reserved to Article 7(b) and (c) of the Civil Aviation Law and Article 8(c) to (f) of the Executive Regulations and CAD 01-02.

CAR 100.I.005 Protection within the Service Provider's organisation

- (a) A Service Provider shall protect the safety data and safety information it collects, and the sources of that data and information, in accordance with this Subpart.
- (b) The Service Provider shall establish a documented procedure setting out—
 - (1) the safety data and safety information to which protection applies;
 - (2) the persons within the organisation permitted access to it, and on what terms;
 - (3) the arrangements for de-identification and for the storage of identifying data; and
 - (4) the circumstances in which protected data may be disclosed within or outside the organisation, and who may authorise disclosure.
- (c) The Service Provider shall designate a custodian responsible for applying the protection required by this Subpart.

GM1 100.I.005 The custodian role

The custodian is normally the safety manager, but need not be. What matters is that a single identified person is answerable for the integrity of the protection, and that the number of persons with access to identifying data is deliberately restricted rather than incidental to the design of the system.

CAR 100.I.010 Use limitation

- (a) A Service Provider shall not use safety data or safety information collected through its safety reporting system, or derived from it, for any purpose other than maintaining or improving safety.
- (b) In particular, and subject to (c), a Service Provider shall not use such safety data or safety information—
 - (1) for disciplinary proceedings against its personnel;
 - (2) in support of any civil or administrative proceedings; or
 - (3) for any purpose connected with the terms of employment of the reporter or of any person identified in the report.
- (c) Paragraph (b) does not apply where the Service Provider determines, in accordance with its procedure under CAR 100.I.005(b), that the occurrence may have been caused by an act or omission constituting gross negligence, wilful misconduct or criminal activity.
- (d) A determination under (c) shall be recorded, with reasons, and shall be taken by a person identified in the procedure who is not the immediate line manager of the person concerned.
- (e) Nothing in this provision prevents a Service Provider from taking any preventive, corrective or remedial action necessary to maintain or improve aviation safety.

GM1 100.I.010 The boundary in practice

Paragraphs (b) and (c) together give effect, within the organisation, to the boundary the Service Provider is required to state in its safety policy under CAR 100.D.005(b)(4). The two texts should be consistent, and a Service Provider whose

policy statement and whose procedure under CAR 100.I.005(b) describe different boundaries has a defect in its system.

Paragraph (e) is important and is frequently misunderstood. Protection of safety data does not prevent the organisation from acting on what the data reveals. A Service Provider that learns of a hazardous practice through a protected report may and should stop the practice; what it may not do is use the report as the evidential basis for disciplining the reporter.

The requirement at (d) that the determination not be taken by the immediate line manager reflects the fact that the manager may be implicated in the circumstances reported.

CAR 100.I.015 De-identification and disclosure

- (a) A Service Provider shall de-identify safety data and safety information before using it for analysis, communication, training or sharing, unless the identity of a person or source is necessary for the safety purpose.
- (b) Where identifying data is retained, it shall be stored separately from the de-identified data and access to it shall be restricted to the custodian and to persons identified in the procedure under CAR 100.I.005(b).
- (c) A Service Provider shall not disclose safety data or safety information to the public except in de-identified, summarised or aggregate form.

CAR 100.I.020 Relationship with the national protection regime

- (a) The protection accorded by this Subpart is in addition to, and does not limit, the protection accorded to safety data, safety information and related sources by Article 7(b) and (c) of the Civil Aviation Law and Article 8(c) to (f) of the Executive Regulations and CAD 01-02.
- (b) Where safety data or safety information is provided to the CAA Oman under CAR 100.H.010, the protection accorded to it is that provided by Article 7(b) and (c) of the Civil Aviation Law and Article 8(c) to (f) of the Executive Regulations and CAD 01-02.
- (c) Where an investigation has been instituted under the national accident and incident investigation instrument – CAR-13, typically CAR 13.150 and Appendix B, records listed in that instrument are subject to the protections it provides rather than to this Subpart.

GM1 100.I.020 What Service Providers should tell their personnel

Personnel are entitled to know what protection a report attracts. That protection comes from two sources: the Service Provider's own obligations under this Subpart, which govern what the organisation may do with the report; and the national protection instrument, which governs what may be done with it in proceedings.

Safety training under CAR 100.G.005 should explain both, and should not overstate either. In particular, personnel should be told that protection is not absolute and that exceptions exist for gross negligence, wilful misconduct and criminal activity.

CAR 100.I.025 Ambient workplace recordings

- (a) Where a Service Provider holds ambient workplace recordings required by national law, it shall treat them as privileged protected data.
- (b) The Service Provider shall establish specific measures governing the confidentiality of, and access to, such recordings, and shall record those measures in the procedure under CAR 100.I.005(b).
- (c) Such recordings shall not be used for any purpose other than maintaining or improving safety, except as Article 7(b) and (c) of the Civil Aviation Law and Article 8(c) to (f) of the Executive Regulations and CAD 01-02 provides.

GM1 100.I.025 Scope

Ambient workplace recordings include cockpit voice recordings and recordings of background communication and the aural environment at air traffic controller working positions.

Provisions on the protection of flight recorder recordings and recordings from air traffic control units during an investigation arise under the accident and incident investigation instrument, and provisions on the protection of flight recorder recordings during normal operations arise under the applicable operations regulation. This provision does not displace either.

SUBPART J — ACCEPTANCE, OVERSIGHT AND INTERNAL RESOLUTION

CAR 100.J.005 Acceptance of the safety management system

- (a) The safety management system of a Service Provider identified in CAR 100.B.010 shall be made acceptable to the CAA Oman.
- (b) Where the CAA Oman is not the authority responsible for the certificate, licence, authorisation or approval concerned, the safety management system shall be made acceptable to the authority identified in Appendix 6.
- (c) For the purpose of acceptance the Service Provider shall submit its SMS manual, its system description, and such further material as the CAA Oman requires.
- (d) Acceptance may be granted subject to conditions.

GM1 100.J.005 Which authority accepts

Appendix 6 allocates the accepting authority for each category of Service Provider, reflecting the allocation in Annex 19. In most cases this is the CAA Oman. It is not, for example, where an organisation responsible for type design holds its approval from another State of Design.

Where a Service Provider holds approvals from more than one State, the CAA Oman will seek to avoid duplication in the oversight of the safety management system, and Service Providers should draw any duplication to the CAA Oman's attention.

CAR 100.J.010 Changes requiring notification or acceptance

- (a) A Service Provider shall notify the CAA Oman of any change to—
 - (1) the accountable executive or the safety manager;
 - (2) the defined scope of the safety management system; or
 - (3) the organisational structure to the extent it affects safety accountabilities.
- (b) A change to the defined scope of the safety management system requires the acceptance of the CAA Oman before it takes effect.
- (c) The Service Provider shall keep its SMS manual current and shall make the current version available to the CAA Oman on request.

CAR 100.J.015 Access and cooperation

- (a) A Service Provider shall grant persons authorised by the CAA Oman access to its facilities, personnel, records, data and documentation relevant to the safety management system.
- (b) A Service Provider shall cooperate with the CAA Oman in the conduct of any assessment of its safety management system or of its safety performance.
- (c) Access granted under (a) does not displace the protection accorded to safety data and safety information under Subpart I or under Article 7(b) and (c) of the Civil Aviation Law and Article 8(c) to (f) of the Executive Regulations and CAD 01-02.

GM1 100.J.015 Access and protection are not in conflict

Paragraph (c) is included because the two obligations are sometimes thought to conflict. They do not. The CAA Oman requires access to safety data in order to discharge its safety oversight and State Safety Programme responsibilities, which are themselves purposes of maintaining or improving safety.

What the protection regime governs is the use to which the data may subsequently be put, not whether the CAA Oman may see it.

CAR 100.J.020 Periodic assessment by the CAA Oman

- (a) The CAA Oman will periodically assess the SMS of each Service Provider to which this CAR-100 applies.
- (b) The CAA Oman will monitor the safety performance of each such Service Provider.
- (c) The CAA Oman will prioritise its surveillance activity towards areas of greater safety concern or need, having regard to the SMS assessment, the safety performance monitoring and the organisational risk profile.

GM1 100.J.020 Effect on the Service Provider

This provision states, for the Service Provider's information, the oversight to which it is subject. The obligations it describes rest on the CAA Oman.

The practical consequence for a Service Provider is that the maturity and performance of its SMS will influence the intensity and focus of the surveillance it receives. A Service Provider whose system reliably identifies and resolves its own safety issues should expect that to be reflected in the oversight programme.

CAR 100.J.025 Internal resolution of events

- (a) A Service Provider may deal with and resolve internally, within its safety management system, events involving safety issues falling within the conditions and circumstances specified by the CAA Oman under the surveillance policy instrument.
- (b) Where a Service Provider resolves an event internally under (a), it shall—
 - (1) record the event, the analysis, the action taken and the verification of that action; and
 - (2) make the record available to the CAA Oman on request.
- (c) Internal resolution under (a) does not affect any obligation to report the event under CAR 100.H.010.

GM1 100.J.025 A provision that depends on a further instrument

The CAA Oman is required to establish a surveillance policy specifying the conditions and circumstances under which a Service Provider with a safety management system may deal with and resolve events internally, to the CAA Oman's satisfaction.

Until that policy is published, paragraph (a) has no content and a Service Provider cannot rely on it. This is a known gap that has been identified and will be resolved in due course.

CAR 100.J.030 Findings and corrective action

- (a) Where the CAA Oman identifies a failure to comply with this CAR-100, it will raise a finding and classify it in accordance with the enforcement and findings instrument.
- (b) A Service Provider shall, in response to a finding—
 - (1) take immediate action to address the safety risk where the finding discloses one;
 - (2) determine the root cause;
 - (3) submit a corrective action plan within the period the CAA Oman specifies; and
 - (4) implement the plan and verify the effectiveness of the action taken.
- (c) Findings, corrective action plans and their verification shall be recorded and shall feed the hazard identification process under CAR 100.E.005(c)(4) and the assessment under CAR 100.F.020.

GM1 100.J.030 Findings as safety data

Paragraph (c) closes a loop that is often left open. Findings raised by the CAA Oman are a source of hazard information about the Service Provider's own system, and a Service Provider that treats them purely as a compliance matter to be closed out is discarding safety data it has already paid for.

APPENDIX 1 — DEFINITIONS

The following definitions apply for the purposes of this CAR-100.

Term	Definition
Accountable executive	The person identified under CAR 100.D.020 who, irrespective of other functions, is accountable on behalf of the organisation for the implementation and maintenance of an effective safety management system.
Authority	For the purposes of CAR 100.H.010, the CAA Oman or, in respect of occurrences required to be reported under CAR-13, the Oman Transport Safety Bureau (OTSB), as applicable.
Hazard	A condition or an object with the potential to cause or contribute to an aircraft incident or accident.
Human performance	Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.
Interface	A point at which the activity of the Service Provider meets the activity of another function within its own organisation, or of another organisation, and at which safety risk may arise from the interaction.
Operational personnel	Personnel involved in aviation activities who are in a position to report safety information.
Oversight area/ technical domain-specific regulation	A Civil Aviation Regulation governing a particular technical discipline or oversight area, other than the CAR-100.
Positive safety culture	A culture in which personnel are informed about the hazards of the activity, are willing to report, are treated fairly when they do so, adapt to changing risk, and learn from what is reported.
Safety	The state in which risks associated with aviation activities, related to or in direct support of the operation of aircraft, are reduced and controlled to an acceptable level.
Safety data	A defined set of facts or values collected for reference, processing or analysis which could be used to maintain or improve safety.
Safety information	Safety data processed, organised or analysed in a given context to support safety management and the development of safety intelligence.
Safety management system	A systematic approach to managing safety, including the necessary organisational structures, accountability, responsibilities, policies and procedures.
Safety manager	The person appointed under CAR 100.D.025 as responsible for the implementation and maintenance of the safety management system.
Safety performance	A Service Provider's measurable effect on safety achievement.
Safety performance indicator	A metric used to measure and monitor safety performance, including progress towards achieving a safety objective.
Safety performance target	The planned or intended target for a safety performance indicator over a given period.
Safety risk	The predicted probability and severity of the consequences or outcomes of a hazard.
Service Provider	A person to whom the CAR-100 applies by reason of CAR 100.B.010, CAR 100.B.015 or a direction under CAR 100.B.020.
System description	The description required by CAR 100.C.010.

APPENDIX 2 — SAFETY MANAGEMENT SYSTEM FRAMEWORK

The framework comprises four components and twelve elements. This Appendix is referred to in CAR 100.C.005 and states, for each element, the provision of the CAR-100 that gives effect to it.

Component	Element	Provision of the CAR-100
1. Safety policy, objectives and resources	1.1 Management commitment	CAR 100.D.005; CAR 100.D.010
	1.2 Safety accountability and responsibilities	CAR 100.D.015; CAR 100.D.020
	1.3 Appointment of key safety personnel	CAR 100.D.025
	1.4 Coordination of emergency response planning	CAR 100.D.030
	1.5 SMS documentation	CAR 100.D.035; CAR 100.D.040
2. Safety risk management	2.1 Hazard identification	CAR 100.E.005
	2.2 Safety risk assessment and mitigation	CAR 100.E.010
3. Safety assurance	3.1 Safety performance measurement and monitoring	CAR 100.F.005; CAR 100.F.010
	3.2 The management of change	CAR 100.F.015
	3.3 Continual improvement of the SMS	CAR 100.F.020
4. Safety promotion	4.1 Training and education	CAR 100.G.005
	4.2 Safety communication	CAR 100.G.010; CAR 100.G.015

Each of the twelve elements shall be implemented. The manner of implementation is determined in accordance with CAR 100.C.030.

APPENDIX 3 — CONTENT OF THE IMPLEMENTATION PLAN

An implementation plan required by CAR 100.C.020 shall contain—

- the scope of the safety management system to be implemented, and the certificates, licences, authorisations or approvals it will cover;
- the outcome of a gap analysis against each element of the framework at Appendix 2, identifying what exists, what is partly in place and what is absent;
- the actions required to close each gap, with the person responsible for each and the date for completion;
- the phasing of implementation and the deliverable marking the completion of each phase;
- the resources allocated to implementation, including personnel, training and any system or tool to be acquired;
- the training required to support implementation, by category of personnel;
- the arrangements for coordinating implementation with organisations at identified interfaces;
- the intervals at which progress will be reported to the CAA Oman; and
- the date by which implementation will be complete.

APPENDIX 4 — CONTENT OF THE SMS MANUAL

An SMS manual required by CAR 100.D.035 shall contain, or cross-refer to, the following—

Section	Content
Scope and system description	The defined scope under CAR 100.B.025; the system description under CAR 100.C.010; the interfaces identified under CAR 100.C.015.
Safety policy and objectives	The safety policy signed by the accountable executive; the safety objectives; the statement of unacceptable behaviours and the disciplinary boundary.
Accountabilities and responsibilities	The accountable executive; the safety manager; safety accountabilities and responsibilities throughout the organisation; the levels authorised to take safety risk tolerability decisions.
Safety risk management	The hazard identification process; the safety risk assessment methodology, including severity and probability categories, the risk matrix and the tolerability bands; the arrangements for recording and reviewing risks.
Safety assurance	Safety performance indicators and any targets; the internal audit programme; the management review arrangements; the management of change process and its threshold; the arrangements for the periodic assessment of the system.
Safety promotion	The safety training programme by category of personnel; the means of safety communication; the measures promoting a positive safety culture.
Safety reporting and data	The internal reporting system and how to use it; the taxonomy applied; the analysis process; reporting obligations to the CAA Oman.
Protection of safety data	The procedure under CAR 100.I.005(b); the custodian; de-identification and access arrangements; the disciplinary boundary and who determines it.
Emergency response	The emergency response plan or a cross-reference to it; the coordination arrangements; the testing programme.
Documentation and records	Document control arrangements; the records held and their retention periods; the arrangements for proportionality required by CAR 100.C.030(b).

APPENDIX 5 — RECORDS AND RETENTION PERIODS

Record	Retention	Provision
Safety reports and their disposition	5 years	CAR 100.H.005
Hazard register & reports	Life of the system	CAR 100.E.005(d)
Safety risk assessments and tolerability decisions	5 years after the risk is closed	CAR 100.E.010(b)(5)
Safety performance & indicator data	5 years	CAR 100.F.010
Management of change assessments	5 years after the change	CAR 100.F.015(d)
Internal audit reports, corrective action & records	5 years	AMC1 100.F.005
Periodic assessment of the SMS	5 years	CAR 100.F.020
Safety training & competency records	Duration of employment plus 3 years	CAR 100.G.005(d)
Emergency response plan test records	5 years	CAR 100.D.030(c)
Findings and corrective action plans	5 years after closure	CAR 100.J.030(c)
SMS manual, superseded versions	5 years after supersession	CAR 100.D.035(c)

Retention periods - The retention of identifying data associated with confidential reports raises a separate question and should be settled with reference to Oman data protection law.

Note: Where another CAR or applicable law requires a longer period, the longer period applies. A safety risk is not closed for the purposes of this Appendix while the activity, product or service to which it relates, or a safety risk control relied upon, remains in use. Records relevant to an accident or incident investigation, or requested by the CAA Oman, are retained until their release is authorised, notwithstanding the expiry of the period above.

APPENDIX 6 — ALLOCATION OF THE ACCEPTING AUTHORITY

For the purposes of CAR 100.J.005, the safety management system of each category of Service Provider shall be made acceptable to the authorities identified below.

Category of Service Provider	Safety management system to be made acceptable to
Approved training organisation exposed to safety risks related to aircraft operations	The State or States responsible for the organisation's approval
Operator of aeroplanes or helicopters authorised to conduct international commercial air transport	The State of the Operator
Operator holding an RPAS operator certificate authorised for international operations	The State of the Operator
Approved maintenance organisation serving operators of aeroplanes or helicopters in international commercial air transport	The State or States responsible for the organisation's approval
Approved maintenance organisation serving operators authorised for international RPAS operations	The State or States responsible for the organisation's approval
Organisation responsible for the type design of aircraft, engines or propellers	The State of Design
Organisation responsible for the manufacture of aircraft, engines or propellers	The State of Manufacture
Air Navigation Services including ATS and related AFIS, IFPDS, and aeronautical telecommunication service provider within the scope of its SMS (CAR 100.B.010(g); AMC1 100.B.010)	The State responsible for the provider's designation
Operator of a certified aerodrome or certified heliport	The State responsible for the certification
Person subject to a direction under CAR 100.B.020	The CAA Oman

Where the Authority is the authority identified above, the safety management system shall be made acceptable to the Authority.

APPENDIX 7 — CRITERIA FOR INTERNATIONAL GENERAL AVIATION OPERATORS OF LARGE OR TURBOJET AEROPLANES

This Appendix sets the criteria referred to in CAR 100.B.015, applicable where the Sultanate of Oman is the State of Registry.

Application

These criteria apply to an operator conducting international general aviation operations of large aeroplanes or turbojet aeroplanes registered in the Sultanate of Oman.

Criteria

The operator shall establish and manage a safety management system addressing each of the twelve elements at Appendix 2, implemented in a manner commensurate with the size of the operator and the complexity of its operations. As a minimum the operator shall—

- define a safety policy signed by the accountable executive, including the statement of unacceptable behaviour and the disciplinary boundary;
- identify an accountable executive and a person responsible for the safety management system;
- define the scope of the system and prepare a system description identifying its interfaces, in particular with maintenance and handling providers;
- operate a safety reporting system and a process for identifying hazards using both reactive and proactive methods;
- operate a documented process for assessing and controlling safety risks, and record tolerability decisions;
- establish a small set of safety performance indicators and review safety performance at defined intervals;
- operate a process for managing change;
- provide safety training appropriate to each person's involvement in the system;
- maintain documentation describing the system and records evidencing its operation; and
- coordinate its emergency response arrangements with the organisations on which it depends.

APPENDIX 8 — TRANSITION SCHEDULE

For the purposes of CAR 100.A.025, compliance with the CAR-100 is required by the dates below.

Category	Status at commencement	Compliance required by
Service Providers holding an SMS accepted under Issue 1	Existing system continues in force	26 th November 2026
Operators holding an RPAS operator certificate — CAR 100.B.010(c)	New category	
Approved maintenance organisations serving RPAS operators — CAR 100.B.010(e)		
Operators of certified heliports — CAR 100.B.010(h)		
International general aviation operators — CAR 100.B.015		
Service Providers subject to a direction under CAR 100.B.020	As directed	As specified in the direction

APPENDIX 9 — SAFETY RISK ASSESSMENT: EXAMPLE METHODOLOGY, MATRICES AND FORMS

This Appendix gives an example methodology for meeting CAR 100.E.010 and AMC1 100.E.010: how to assess a safety risk, the matrices to use, and how to record the result. It is adapted from ICAO Doc 9859 and is illustrative. A Service Provider may adopt it, adapt it, or use its own methodology.

Adopting the example. A Service Provider that uses Tables 9-2 to 9-5 without changing the categories, values or bands meets AMC1 100.E.010(a) to (c). It may add its own quantitative criteria or descriptors. It should still define when a risk is reassessed (AMC1 100.E.010(d)).

1. The process

Table 9-1 — Safety risk management process

Step	Activity	What to do	Reference
1	Identify the hazard	Describe the condition or object that could cause harm.	CAR 100.E.005
2	List the consequences	Identify each possible outcome; assess each one separately.	CAR 100.E.010(b)(1)
3	Assess the risk	Rate probability (Table 9-2) and severity (Table 9-3); read the index from Table 9-4.	CAR 100.E.010(b)(1)
4	Decide tolerability	Read the band from Table 9-5 and apply the action it requires.	CAR 100.E.010(b)(2)
5	Control the risk	Reduce the probability, the severity, or both.	CAR 100.E.010(b)(3)
6	Reassess	Repeat step 3 for the risk remaining after the controls.	CAR 100.E.010(b)(4)
7	Accept and record	The authorised person accepts the risk; record the assessment on Form 9-1 and in the register.	CAR 100.E.010(b)(5); CAR 100.D.015(e)
8	Monitor	Check that the controls work; reassess when something changes.	CAR 100.E.010(c); CAR 100.F.005(c)

2. Identifying hazards

A hazard is a condition or object that could cause harm; a consequence is what may result. A contaminated runway is a hazard; a runway overrun is a consequence. State the hazard first, then list its consequences.

When identifying hazards, consider:

- equipment, systems and task design;
- human performance and human-machine interface;
- procedures, checklists and documentation;
- communication, terminology and language;
- organisational factors — staffing, training, resources and operating pressure;
- the operating environment — weather, noise, temperature and lighting; and
- interfaces with other organisations.

3. Probability and severity

Rate how likely the consequence is (Table 9-2), taking account of past occurrences, how often the activity takes place and how many people are exposed. Rate how serious it would be at its worst foreseeable (Table 9-3), including harm to people, damage to aircraft, and loss of separation or landing capability.

Table 9-2 — Probability

Likelihood	Meaning	Value
Frequent	Likely to occur many times (has occurred frequently)	5
Occasional	Likely to occur sometimes (has occurred infrequently)	4
Remote	Unlikely to occur, but possible (has occurred rarely)	3
Improbable	Very unlikely to occur (not known to have occurred)	2
Extremely improbable	Almost inconceivable that the event will occur	1

Table 9-3 — Severity

Severity	Meaning	Value
Catastrophic	Aircraft or equipment destroyed; multiple deaths	A
Hazardous	Large reduction in safety margins, or workload such that personnel cannot perform their tasks accurately or completely; serious injury; major equipment damage	B
Major	Significant reduction in safety margins or in the ability of personnel to cope; serious incident; injury to persons	C
Minor	Nuisance; operating limitations; use of emergency procedures; minor incident	D
Negligible	Few consequences	E

4. Risk matrix

Combine the probability value and the severity letter to give the risk index — for example, 4 and B give 4B.

Table 9-4 — Risk matrix

Probability		Catastrophic A	Hazardous B	Major C	Minor D	Negligible E
Frequent	5	5A	5B	5C	5D	5E
Occasional	4	4A	4B	4C	4D	4E
Remote	3	3A	3B	3C	3D	3E
Improbable	2	2A	2B	2C	2D	2E
Extremely improbable	1	1A	1B	1C	1D	1E

5. Tolerability and acceptance

Table 9-5 — Tolerability

Risk index	Band	Action	Who may accept (CAR 100.D.015(e))
5A, 5B, 5C, 4A, 4B, 3A	INTOLERABLE	Stop the activity or mitigate immediately. Reduce the risk to tolerable before continuing.	No one. The risk cannot be accepted.
5D, 5E, 4C, 4D, 4E, 3B, 3C, 3D, 2A, 2B, 2C, 1A	TOLERABLE	Accept only with controls in place and monitored.	The person authorised for this band in the SMS manual.
3E, 2D, 2E, 1B, 1C, 1D, 1E	ACCEPTABLE	Accept as is. No further action required.	As defined in the SMS manual.

Where data are limited or unreliable, take this into account when deciding the band.

6. Recording the assessment

Record each assessment on Form 9-1 at the end of this Appendix, or an equivalent, and enter each consequence in the hazard register (Table 9-6). The record must show the assessment, the controls, the decision and the person who took it (CAR 100.E.010(b)(5)). Keep records for the periods in Appendix 5.

Table 9-6 — Example hazard register (illustrative)

Ref.	Hazard	Consequence	Owner	Initial risk				Controls	Residual risk				Accepted by	Review
				P	S	Index	Band		P	S	Index	Band		

Enter one line per consequence, under the same hazard reference. P, S, Index and Band are taken from Tables 9-2 to 9-5.

7. Points to note

- Apply the methodology the same way every time, so that risks can be compared (GM1 100.E.010).
- Involve people with human factors expertise when a risk depends on human performance (CAR 100.C.025).
- Consider whether security, facilitation or environmental measures create aviation safety risk (CAR 100.E.010(d)).

Form 9-1 — Safety risk assessment form (illustrative)

Annex 19, App. 2 (2.1, 2.2); Doc 9859, Ch. 2. One form per hazard; assess each consequence using the key at section 3.

1. IDENTIFICATION											
Service Provider				Certificate / approval ref.							
Assessment ref. / date				Related change (F.015)							
Assessment team				Human factors expertise (C.025) ☐ Yes ☐ No							
2. HAZARD IDENTIFICATION — CAR 100.E.005											
Hazard (condition or object, not its consequence)											
Source / factors				☐ Reactive ☐ Proactive Ref.: ☐ Design ☐ Human performance ☐ Procedures ☐ Communication ☐ Organisation ☐ Environment ☐ Interface							
Interface dependency (C.015(b))				Organisation / arrangement:							
3. ASSESSMENT KEY — ICAO Doc 9859											
3a Probability (P)		3b Severity (S)		3c Risk index					3d Band		
				P\S	A	B	C	D	E		
5	Frequent — many times	A	Catastrophic — destroyed; deaths	5	5A	5B	5C	5D	5E	INTOLERABLE — stop; cannot be accepted	
4	Occasional — sometimes	B	Hazardous — serious injury; major damage	4	4A	4B	4C	4D	4E	TOLERABLE — accept with controls; authorised person	
3	Remote — unlikely, possible	C	Major — serious incident; injury	3	3A	3B	3C	3D	3E	ACCEPTABLE — accept as is	
2	Improbable — very unlikely	D	Minor — nuisance; minor incident	2	2A	2B	2C	2D	2E		
1	Extremely improbable	E	Negligible — few consequences	1	1A	1B	1C	1D	1E		
4. ASSESSMENT, MITIGATION AND RESIDUAL RISK — CAR 100.E.010(b)(1)–(4)											
No	Consequence (worst foreseeable)	Existing controls	Initial risk		Additional controls (required if INTOLERABLE)		Owner / target date	Residual risk			
			P	S	Index	Band		P	S	Index	Band
1											
2											
3											
5. DECISION AND ACCEPTANCE — CAR 100.E.010(b)(2), (5); CAR 100.D.015(e)											
Highest residual band		☐ ACCEPTABLE — as is ☐ TOLERABLE — with the controls above ☐ INTOLERABLE — not accepted; activity stops									
		Name	Position		Authority (SMS manual ref.)		Signature	Date			
Risk accepted by											
Reviewed by (safety manager)											
6. MONITORING AND REVIEW — CAR 100.E.010(c); CAR 100.F.005(c)											
How effectiveness is monitored				Review date / effective?				☐ Yes ☐ No — reassess			
Reassess when (AMC1 E.010(d))				☐ Change ☐ Occurrence or report ☐ Control ineffective ☐ Periodic review — due:							
Hazard register ref. (E.005(d))				Retention				Appendix 5			