



**IOSA**  
IATA OPERATIONAL  
SAFETY AUDIT

# Module 1 – IOSA Program



## IOSA Program - Overview

- Global Safety audit program managed and controlled by IATA
- Audit standards include ICAO safety and security provisions and industry best practices from ICAO Annexes 1, 2, 6, 8, 17, 18 and 19
- Available to all commercial passenger & cargo airlines, regardless of IATA membership status

## **IOSA Program – History**

- Program development was initiated in 2001
- After two years, IOSA was launched
  - First IOSA Audit conducted in September 2003

### **Some Highlights Since Inception**

- Upgrade of Standards to include all cargo operations and passenger flights without cabin crew
- In 2010, upgrade of Standards to incorporate all elements of SMS contained in the ICAO Framework for SMS

# IOSA Program - Overview

## Applicability

“The ISARPs as published in this version of the ISM are applicable only for the Audit of an operator that *operates* a minimum of one (i.e. one or more) multi-engine, two-pilot aircraft with a maximum certificated takeoff mass in excess of 5,700 kg (12,566 lb) to conduct:

- Passenger flights with or without cabin crew.
- Cargo flights with or without the carriage of passengers or supernumeraries.”

(ISM, Edition 9).

# IOSA Program – Purpose

- Improve worldwide airline safety levels
- Reduce the number of audits in the airline industry



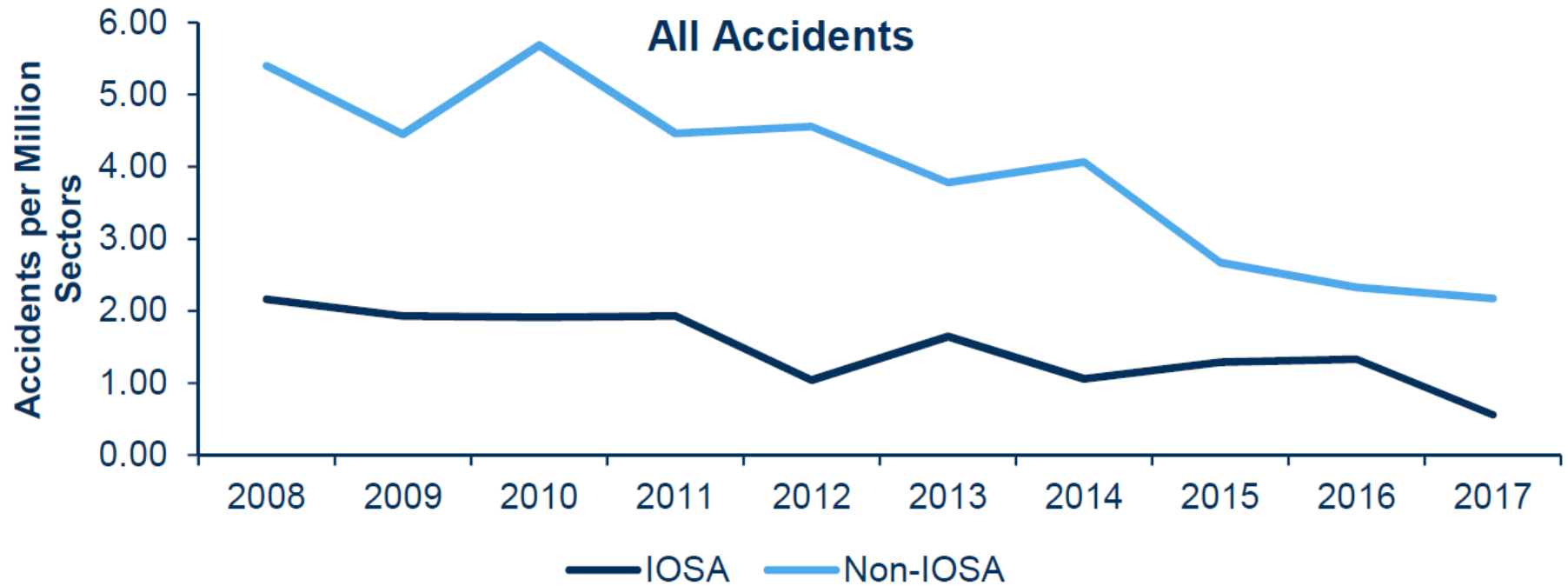
# Statistics - IOSA Registered Airlines

Displayed online to public ([www.iata.org/registry](http://www.iata.org/registry))



as of 24 January 2018

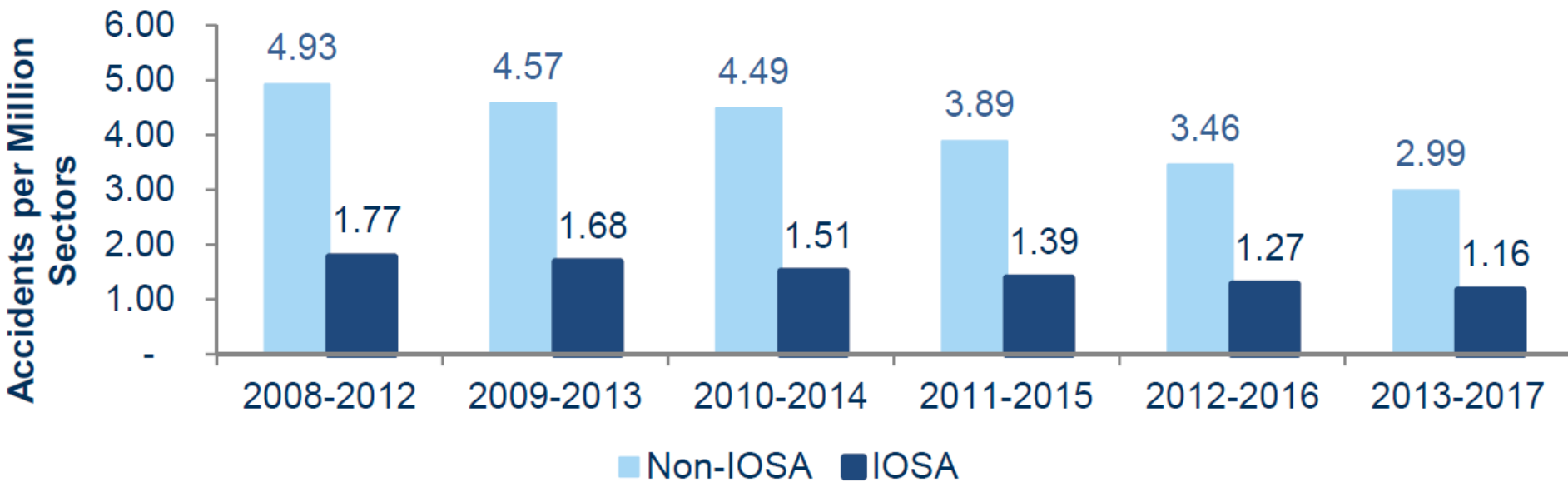
## Safety Performance: All Accidents





## All Accident Rate for IOSA Operators vs. Non-IOSA (includes Jet & Turboprop aircraft)

### Jet and Turboprop | All Accidents



# **Module 2 – Documentation System**

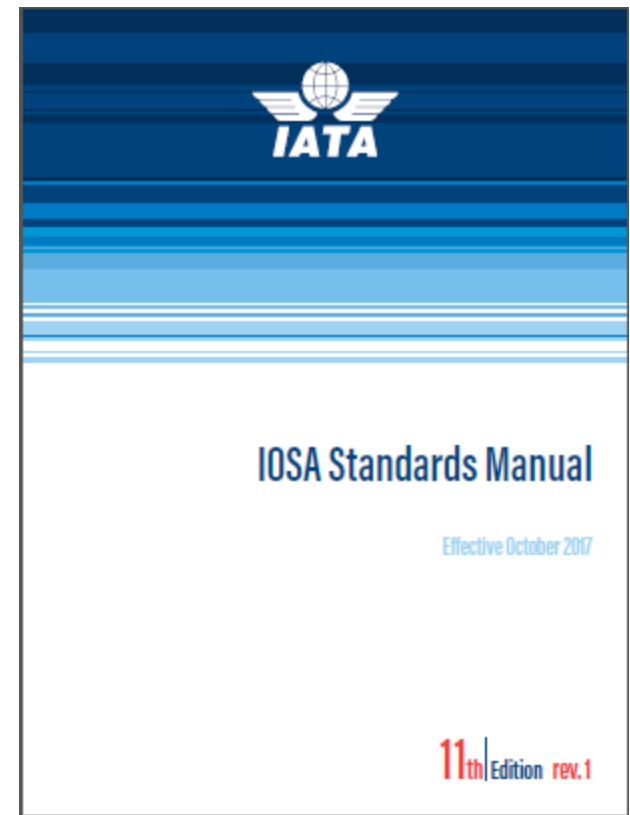
# Documentation System

- **IOSA Standards Manual (ISM) (Edition 11)**
- **IOSA Program Manual (IPM) (Edition 9)**
- **IATA Reference Manual (IRM) (Edition 8)**
- **IOSA Audit Handbook (IAH) Procedures and Guidance (Edition 8)**

All manuals are strictly controlled by IATA and are available at [www.iata.org/iosa](http://www.iata.org/iosa)

# IOSA Standards Manual (ISM)

- Contains
  - All IOSA Standards and Recommended Practices (ISARPs)
  - Guidance Material
  - Other supporting information
- The new edition is published every year, usually in April
- Becomes effective a minimum of four months after publication, usually in September



# IOSA Standards Manual (ISM)

- Approximately 1000 ISARPs in Edition 10
- ISM content & ongoing revisions maintained and updated by permanent taskforces made up of experts in airline operational safety and security
- Meets or exceed ICAO operational safety requirements
- Incorporates all elements of the ICAO-mandated SMS framework (Annex 19).
- Conformity with all Edition 8 SMS provisions will result in a “baseline” SMS

## IOSA Audit Scope

**ORG** – *Organization & Management System*

**FLT** – *Flight Operations*

**DSP** – *Operational Control and Flight Dispatch*

**MNT** – *Aircraft Engineering & Maintenance*

**CAB** – *Cabin Operations*

**GRH** – *Ground Handling Operations*

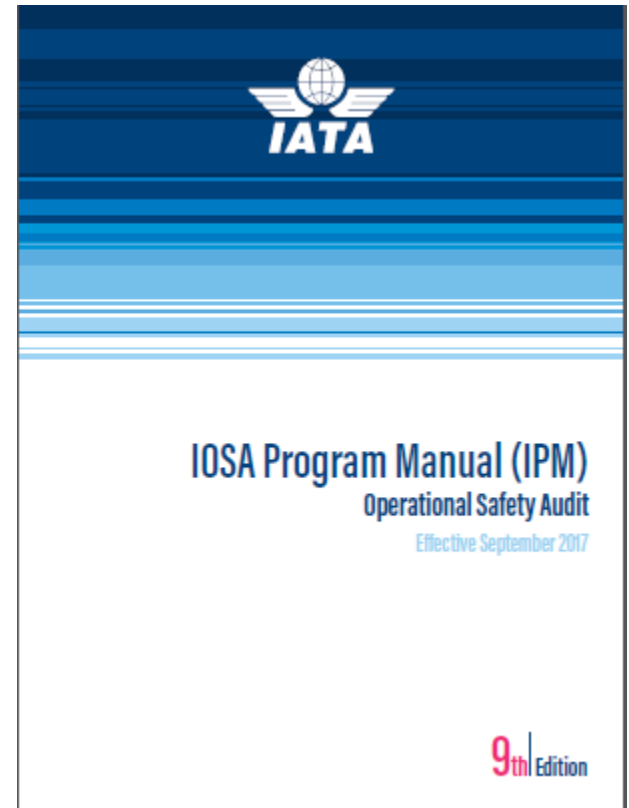
**CGO** – *Cargo Operations*

**SEC** – *Security Management*

***Bottom line: A well-managed airline will meet IOSA Standards***

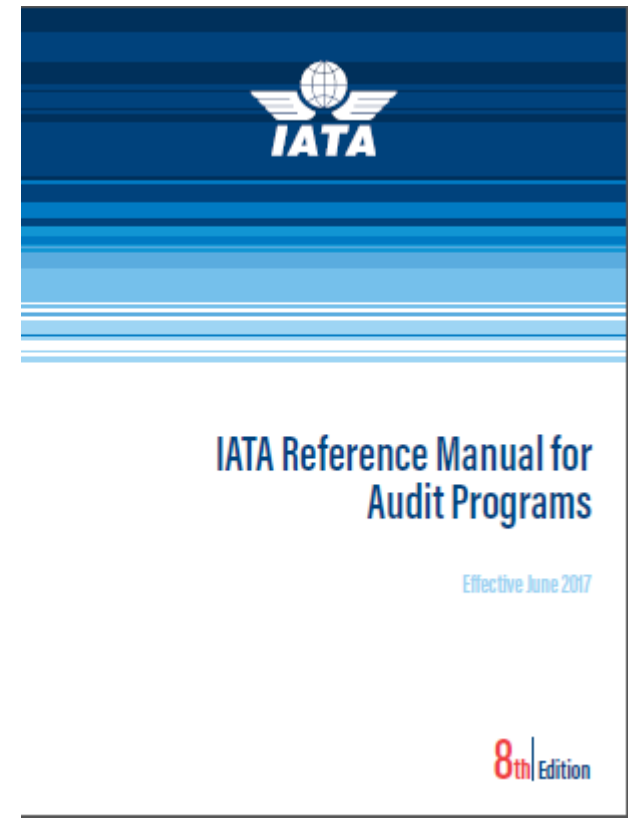
# IOSA Program Manual (IPM)

- Contains standards that govern all aspects of the IOSA Program
- Provisions are applicable primarily to:
  - IATA
  - Airlines
  - Audit Organisations (AOs)
  - Operators
  - Endorsed Training Organisations (ETOs)



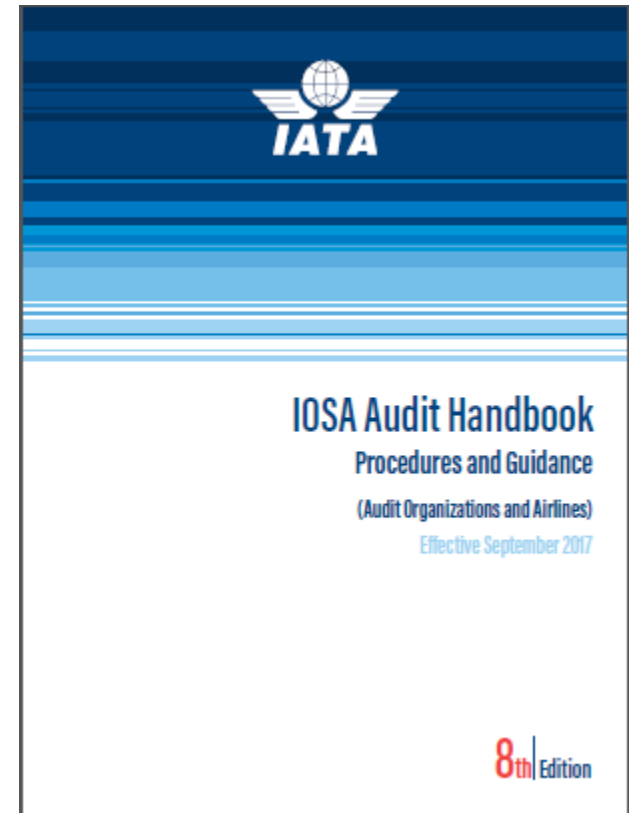
# IATA Reference Manual (IRM)

- Defines abbreviations and terms that are associated with provisions in:
  - IOSA Standards Manual (ISM)
  - ISAGO Standards Manual (GOSM)
  - IOSA Program Manual (IPM)
  - ISAGO Program Manual (GOPM)



# IOSA Audit Handbook (IAH)

- Contains:
  - Procedures, guidance for audits
  - Audit techniques
  - Procedures for compiling the report
  - Use of Program Options
- Used by AOs, IOSA Auditors and Operators





# **Module 3 – IOSA Operations and Program Options**

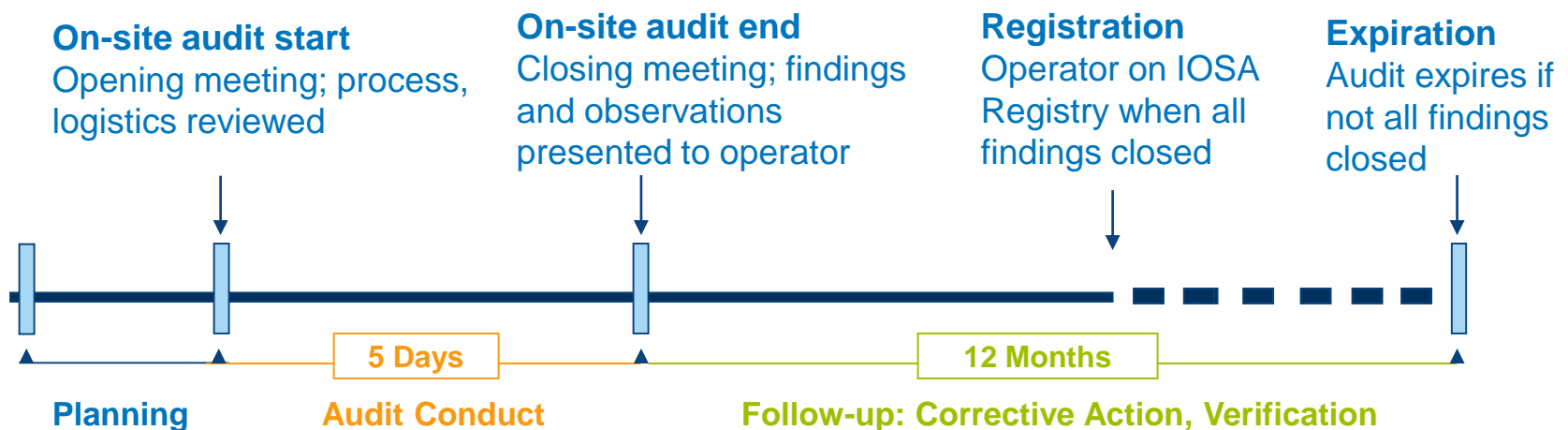
# Audit Process



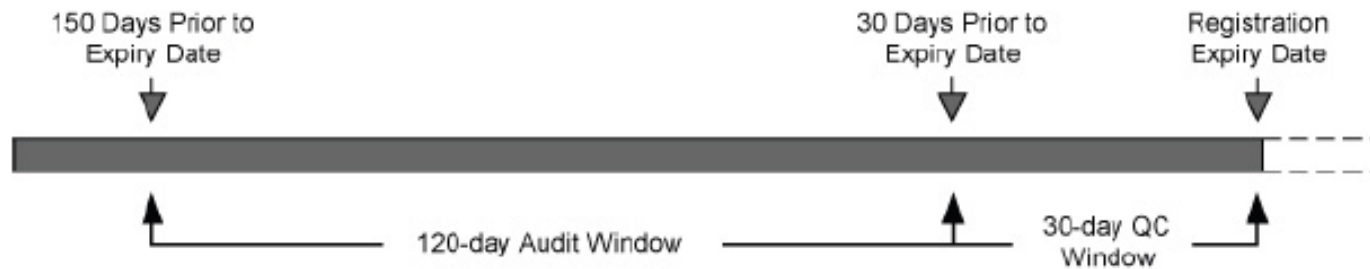
- On-site audit – 25 auditor man-days
- Audit follow-up – 1 year/ until expiry date (for initial/renewal audits)
- Audit Report provided to IATA – min. 1 month prior to expiry

# IOSA Audit Process

- No consecutive audits from the same AO
- Conformity with ISARPs when fully *documented* and *implemented*
- IOSA registration is valid for, and renewed every 2 years



# Registration Renewal



- An Operator is removed from the IOSA registry if Audit closure has not been achieved prior to the current registration expiry date, unless extenuating circumstances have been claimed by the operator and verified/approved by IATA

# IOSA Audit Report

## Report Description

- Official record of the IOSA audit, produced by the AO
- Subjected to rigorous quality control by the AO & IATA before finalization
- Owned by the operator
- IATA is the custodian of all reports, providing access to interested parties, including regulators, only with operator approval and per non-disclosure agreement
- New IOSA Repository System

# **Module 4 – Quality Management System**

# **IOSA Quality Management System**

## **Program Quality Assurance Goals**

- IOSA Management in accordance with recognized quality principles
- Consistency and standardization of all audits conducted under IOSA
- Customer satisfaction for all IOSA Program users and stakeholders
- Continual improvement of IOSA

# IOSA Quality Management System

## Elements

### Quality Control

- Rigorous **verification** of audit reports and improvement of program **using risk-based/data-driven approach**

### Quality Assurance

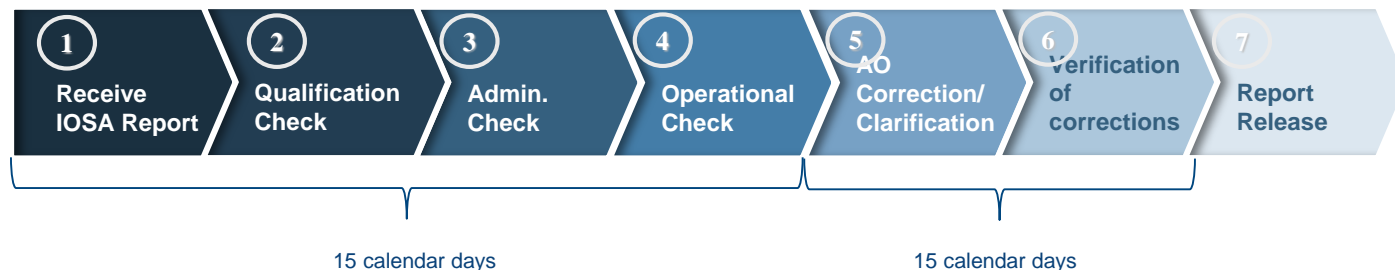
- Audits of AOs, ETOs and other suppliers
- Onsite observations of Audits, evaluations of IATs



# IOSA Quality Management System

## Quality Control

- Goal of maintaining the standard and accuracy of audit results and audit reports
- Protection and maintenance of the program quality and integrity
- In 2015, approximately 200 Audit Reports went through IOSA QC



# **IOSA Quality Management System**

## **Quality Assurance**

Performed on a risk-based approach:

- Audit Organisation (AO) HQ Audits
- AO On-site Audit Evaluations
- Endorsed Training Organisation (ETO) HQ Audits
- ETO IOSA Auditor Training (IAT) Session Evaluations
- External Supplier audits (i.e. Q5 Systems)

# **IOSA Quality Management System**

## **Quality Assurance**

### **Internal Audits:**

- Management system and control
- Documentation and Program processes
- Logistics providers
- Other divisional activities

# IOSA Quality Certifications

- First ISO 9001:2008 certification in 2005
- In 2012, completed gradual integration of all audit programs into the ISO 9001:2008 certification (IOSA, ISAGO, IFQP, DAQCP, IDQP)
- In 2017, upgraded to ISO 9001:2015 standard.

# **Module 5 – IOSA Audit Functionality**

# IOSA Standards Manual (ISM)

The Introduction in the ISM contains **essential** information on audit functionality, under the following headings:

- 1 Purpose
- 2 Structure
- 3 Sources for ISARPs
- 4 Applicability of ISARPs
- 5 Explanation of ISARPs
- 6 Guidance Material
- 7 Operational Audit
- 8 Safety Management Systems (SMS)

# ISARPs - Notes and Symbols

## Located before the ISARP:

- <PA>: provision applicable only to passenger flights operations with a cabin crew in the passenger cabin
- <AC>: provision applicable only to cargo flights operations.
- ▶: symbol: an ORG provision repeated almost verbatim in one or more of the other 7 sections of the ISM.
- ◀: symbol: the provision in the ORG Section is repeated almost verbatim in all other disciplines

# ISARPs - Notes and Symbols

Located after the ISARP:

**[SMS]:** indicates the provision specifies one or more of the elements of a safety management system (SMS)

**(GM):** indicates the existence of associated guidance material





# Definition of Notes

- An italicized note (*Note:...*) immediately following a provision contains information relevant to the specification(s) in the provision, and is integral part of the provision.



# Definition of Guidance Material (GM)

- Information for auditors that supplements or clarifies the meaning or intent of an ISARP
- Provides additional detail on interpreting the ISARP
- Audit specifications are contained only in the ISARPs, never in the Guidance Material



# ISARPs

## Standards

- Identified by a “shall”
- Must be in conformity to close the audit

## Recommended Practices

- Identified by a “*should*”
- Conformity  
Recommended, but optional
- The “*should*” is always in italic font

## Determining the Audit Scope

- As specified in the ISM Introduction, all fleets on the AOC must be audited
- All active operations, functions structures etc., must be audited
- This will ensure that the audit scope for the Operator and for the renewal IOSA audit are the same



## Out of Scope

- Aircraft/fleets that are on the operator's AOC, but do not fall under the IOSA applicability, e.g.:

Non-commercial operations, operations with single pilot or single engine, helicopters, seaplanes, aircraft below 5,700Kg MTOW

## Exemptions

- Aircraft/fleets on the AOC which fall under the IOSA scope, but must be exempted because they cannot be audited, e.g:

Aircraft is not yet delivered, has been sold, phased-out, grounded, etc.

# Mandatory Assessments

## Conducted by AOs during IOSA Audit

Operational Discipline	Activities and/or Processes (* Mandatory)
Flight Operations	<ul style="list-style-type: none"><li>▪ Line flight – flight deck operations*</li><li>▪ Simulator session*</li><li>▪ Training flight</li></ul>
Operational Control & Flight Dispatch	<ul style="list-style-type: none"><li>▪ Flight planning*</li><li>▪ Flight monitoring*</li></ul>
Aircraft Engineering & Maintenance	<ul style="list-style-type: none"><li>▪ AD/ASB process*</li><li>▪ Maintenance activities (minimum of 2 of the 12 listed items)</li><li>▪ Maintenance processes* (minimum of 1 of the 5 listed items)</li></ul>

# Mandatory Assessments

Conducted by AOs during IOSA Audit

Operational Discipline	Activities and/or Processes (* Mandatory)
Cabin Operations	<ul style="list-style-type: none"><li>▪ Line flight - passenger cabin operations only*</li></ul>
Ground Handling	<ul style="list-style-type: none"><li>▪ Weight and balance calculation*</li><li>▪ Ground handling activities*</li></ul>
Cargo Operations	<ul style="list-style-type: none"><li>▪ Aircraft loading or unloading*</li></ul>
Operational Security	<ul style="list-style-type: none"><li>▪ Baggage reconciliation*</li><li>▪ Pre-Board/hold room screening</li><li>▪ Aircraft access control</li><li>▪ Pre-flight crew security briefing</li></ul>

# **Module 6 – IOSA and its Use by Regulators**



# IOSA and Regulators

## ICAO Endorsement

35<sup>th</sup> Session of ICAO Assembly:

*“recognized value of IOSA as complementary measure to the regulatory oversight activities of States.”*

and stated that IOSA

*“.. will need the continued support of regulatory authorities worldwide..”*

# IOSA and Regulators

## ICAO

- Fully **complementary** to USOAP
- Recognized for safety benefits at ICAO 38th Assembly and Safety conference

## EASA/ FAA

- Accepted by FAA under DOT/FAA Code-share Safety Guidelines
- Incorporated as AMC to EASA OPS for Code-Share arrangements and as source for evaluation of TCOs

## Regulatory Oversight

- **Not intended to replace** Regulatory Oversight, but to **complement it**
- Turkey, Chile, Madagascar, Mexico, Brazil, Costa Rica, Panama, China, etc. support IOSA

# IOSA and Regulators

## ICAO Endorsement

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# EASA Regulation Air Operations

## Authorities Requirements

- ARO.GEN.305 Oversight Programme
- ARO.OPS.105 Code-share arrangements
  - AMC1 ARO.OPS.105
  - AMC2 ARO.OPS.105

## Operators Requirements

- ORO.AOC.115 Code-share agreements
  - AMC1 ORO.AOC.115(a)(1)
  - AMC1 ORO.AOC.115(b)
  - AMC2 ORO.AOC.115(b)

# EASA Regulation Air Operations

## ARO.GEN.305 Oversight Programme

### Oversight Planning Cycle

- 24 months
- May be reduced if evident that operator's safety performance decreased

### Extension of Oversight Planning Cycle

- May be extended to a max. of 36 months, if:
  - (1) "the organisation has demonstrated an effective identification of aviation safety hazards and management of associated risks;
  - (2) the organisation has continuously demonstrated under ORO.GEN.130 that it has full control over all changes;
  - (3) no level 1 findings have been issued; and
  - (4) all corrective actions have been implemented within the time period accepted or extended by the competent authority as defined in ARO.GEN.350(d)(2)."
- May be **further** extended to 48 months, if:

"in addition, the organisation has established, and the competent authority has approved, an effective continuous reporting system to the competent authority on the safety performance and regulatory compliance of the organisation itself."

# EASA Regulation Air Operations

## ARO.GEN.305 Oversight Programme

### Oversight Planning Cycle

- CAAs and IATA are discussing how to utilize IOSA for the risk based oversight process

# EASA Regulation Air Operations

## ARO.OPS.105 Code-share arrangements

“In considering the safety of a code-share agreement involving a third-country operator, the competent authority shall:

- (1) satisfy itself, following the verification by the operator as set out in ORO.AOC.115, that the third-country operator complies with the applicable ICAO standards;
- (2) liaise with the competent authority of the State of the third-country operator as necessary.”

# EASA Regulation Air Operations

## **AMC1 ARO.OPS.105 Code-share arrangements – Cont'd**

- Authority should check that the operator has established a code-share audit programme for monitoring continuous compliance with applicable ICAO standards.

## **AMC2 ARO.OPS.105 Code-share arrangements – Cont'd**

- When audits performed by a “third party provider”, authority should verify that provider meets criteria under AMC2 ORO.AOC.115(b)



# EASA Regulation Air Operations

## ORO.AOC.115 Code-share agreements

Operators have to:

- Verify their code-share partners comply with applicable ICAO Standards
- Provide their authority with documented information
- During the implementation of the agreement, the operator must ensure and regularly assess the partner's ongoing compliance with ICAO Standards
- Airlines subject to operating bans cannot enter a code-share agreement with EU operators.

# EASA Regulation Air Operations

## **AMC1 ORO.AOC.115(a)(1) Code share agreements**

- The operator's audit should focus on operational, management and control systems of the operator, verifying compliance with ICAO Annexes, in particular 1,2,6 (Part I and III), 8 and 18

## **AMC1 ORO.AOC.115(b) Code share arrangements**

- Outlines the contents of the code-share audit program
- IOSA satisfies all requirements under this AMC (except sub-tem (e), which is already operator responsibility)

# EASA Regulation Air Operations

## AMC2 ORO.AOC.115(b) Code-Share Audit Arrangements

The requirements under this AMC are satisfied by the IOSA Program.

# EASA Regulation TCO

## Authorities Requirements

- ART.200 Initial evaluation procedure-general
- ART.215 Monitoring

# EASA Regulation TCO

## ART.200 Initial evaluation procedure - general

- EASA will assess continued compliance of TCOs with Part-TCO requirements
- Assessment will, amongst others, be based on:

“(2) relevant information on the safety performance of the third country operator, including ramp inspection reports, information reported in accordance with ARO.RAMP.145(c), **recognised industry standards**, accidents records and enforcement measures taken by a third country;”

# EASA Regulation TCO

## ART.215 Monitoring

- EASA will assess continued compliance of TCOs with Part-TCO requirements
- Assessment criteria in initial evaluation and monitoring parts have been aligned and are the same

# IOSA – Summary of Benefits

## ➤ States

- Opportunity to complement regulatory oversight

## ➤ Regulators/Oversight Entities

- Provides audit data for use in continuous monitoring of operators
- Complements existing audit programmes (USOAP, SAFA)
- Provides an AMC for code share approval
- Primary safety data source for Global Safety Information Exchange (GSIE)

## ➤ Airlines

- Drives worldwide implementation of proven safety/security practices
- Significantly reduces the number of industry audits conducted



If you have any questions, contact  
us at [iosa@iata.org](mailto:iosa@iata.org)

>> IATA  
LEADING INDUSTRY  
CHANGE WITH IOSA