



USOAP Continuous Monitoring Approach (CMA) Workshop

Module 2

Overview of USOAP CMA



The objective of this module is to provide an up-to-date overview of the USOAP CMA methodology and activities.



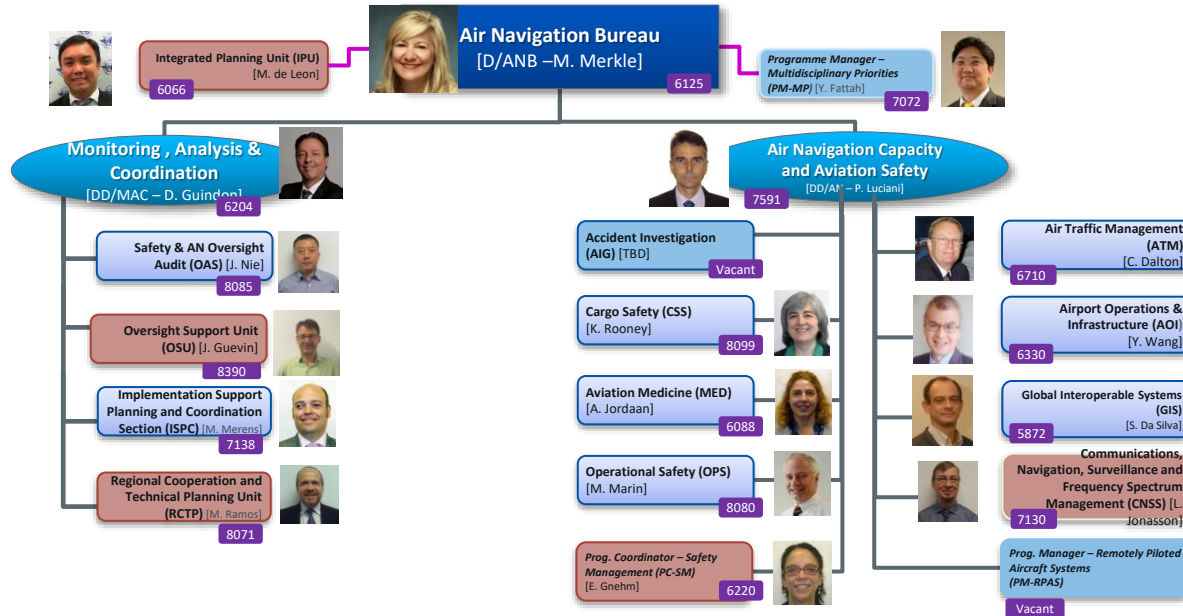
1. Monitoring, Analysis and Coordination (MAC)
2. Critical Elements (CEs) of a State Safety Oversight System
3. USOAP CMA Audit Areas and Protocol Questions (PQs)
4. USOAP CMA Components
 - a) collection of safety data and safety information
 - b) determination of the State safety profile under USOAP
 - c) prioritization and conduct of USOAP CMA activities
 - d) update of EI, the status of SSCs and the SSP maturity levels
5. Integration of SSP Implementation Assessments (SSPIAs) into USOAP CMA activities
6. USOAP CMA Computer-Based Training (CBT)
7. States' main obligations under USOAP CMA



Monitoring, Analysis and Coordination (MAC)



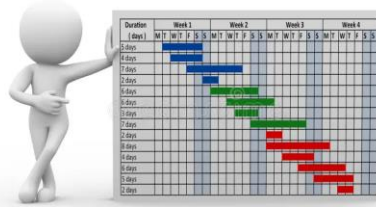
Air Navigation Bureau – Org Chart



Monitoring, Analysis & Coordination (MAC)



Continuous Monitoring
(Online Framework — OLF)



Planning and
Scheduling



On-site Activities



Off-site Activities



Reports, Analyses and
Working Papers



Training and
Workshops



Critical Elements (CEs) of a State Safety Oversight System

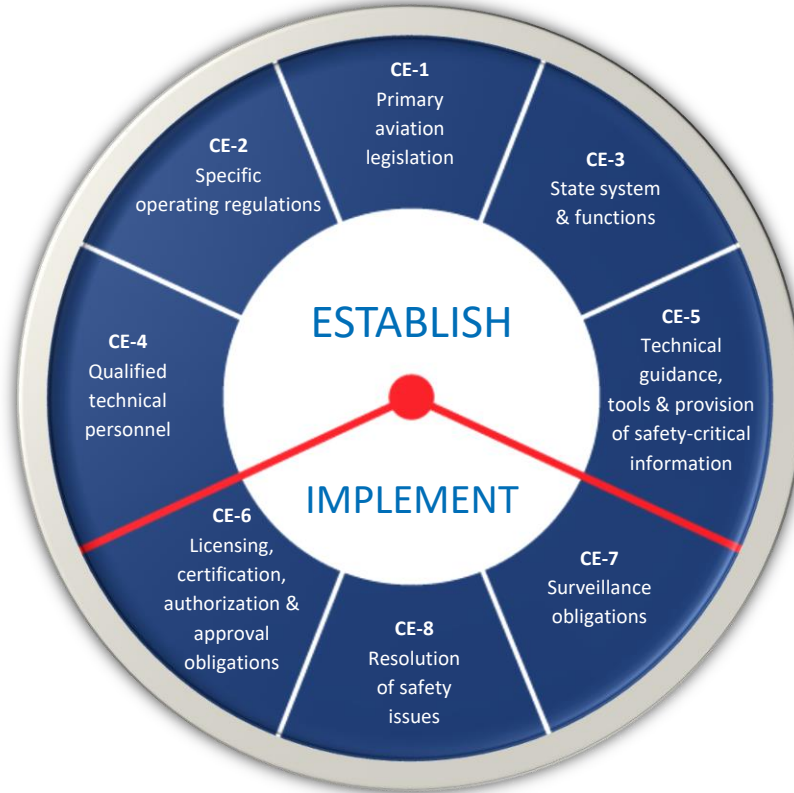


Critical Elements (CEs)

ICAO carries out audits and other monitoring activities to determine the effectiveness of Member States to perform safety oversight of aviation activities by:

- Assessing their effective implementation of the 8 CEs in 8 audit areas (i.e., LEG, ORG, PEL, OPS, AIR, AIG, ANS and AGA) through Protocol Questions (PQs); and
- Verifying the effectiveness of the Member States in managing the compliance with/implementation of:
 - Safety-related ICAO Standards and Recommended Practices (SARPs);
 - Associated procedures; and
 - Guidance material.





CE-1: Primary aviation legislation

- States shall promulgate a comprehensive and effective aviation law, commensurate with the size and complexity of their aviation activity and consistent with the requirements contained in the Convention on International Civil Aviation, to enable the oversight and management of civil aviation safety and the enforcement of regulations through the relevant authorities or agencies established for that purpose.

Note.— This includes ensuring that the aviation law remains relevant and appropriate to the State.

- The aviation law shall provide personnel performing safety oversight functions access to the aircraft, operations, facilities, personnel and associated records, as applicable, of individuals and organizations performing an aviation activity.



CE-2: Specific operating regulations

- States shall promulgate regulations to address, at a minimum, national requirements emanating from the primary aviation legislation, for standardized operational procedures, products, services, equipment and infrastructures in conformity with the Annexes to the Convention on International Civil Aviation.

Note.— The term “regulations” is used in a generic sense and includes but is not limited to instructions, rules, edicts, directives, sets of laws, requirements, policies and orders.



CE-3: State system and functions

- States shall establish relevant authorities or agencies, as appropriate, supported by sufficient and qualified personnel and provided with adequate financial resources for the management of safety.
- States authorities or agencies shall have stated safety functions and objectives to fulfil their safety management responsibility.

Note.— This includes the participation of the State aviation organizations in specific activities related to the management of safety in the State, and the establishment of the roles, responsibilities and relationships of such organizations.

- States shall ensure that personnel performing safety oversight functions are provided with guidance that addresses ethics, personal conduct and the avoidance of actual or perceived conflicts of interest in the performance of official duties.



CE-4: Qualified technical personnel

- States shall establish minimum qualification requirements for the technical personnel performing safety-related functions and provide for appropriate initial and recurrent training to maintain and enhance their competence at the desired level.
- States shall implement a system for the maintenance of training records for technical personnel.



CE-5: Technical guidance, tools and provision of safety-critical information

- States shall provide appropriate facilities, comprehensive and up-to-date technical guidance material and procedures, safety-critical information, tools and equipment, and transportation means, as applicable, to the technical personnel to enable them to perform their safety oversight functions effectively and in accordance with established procedures in a standardized manner.
- States shall provide technical guidance to the aviation industry on the implementation of relevant regulations.



CE-6: Licensing, certification, authorization and approval obligations

- States shall implement documented processes and procedures to ensure that individuals and organizations performing an aviation activity meet the established requirements before they are allowed to exercise the privileges of a licence, certificate, authorization or approval to conduct the relevant aviation activity.



CE-7: Surveillance obligations

- States shall implement documented surveillance processes, by defining and planning inspections, audits and monitoring activities on a continuous basis, to proactively assure that aviation licence, certificate, authorization and approval holders continue to meet the established requirements. This includes the surveillance of personnel designated by the Authority to perform safety oversight functions on its behalf.

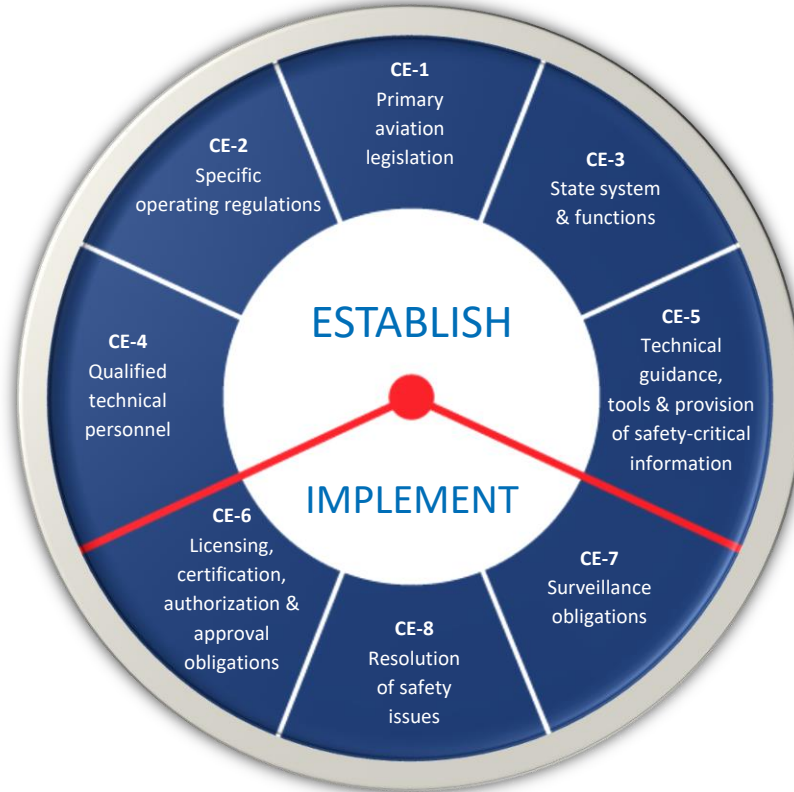


CE-8: Resolution of safety issues

- States shall use a documented process to take appropriate actions, up to and including enforcement measures, to resolve identified safety issues.
- States shall ensure that identified safety issues are resolved in a timely manner through a system which monitors and records progress, including actions taken by individuals and organizations performing an aviation activity in resolving such issues.



Critical Elements (CEs)



- **Definitions of CEs:**
in **Annex 19** — Safety Management, Appendix 1
(2nd edition, July 2016)
- **Guidance for CEs:**
Doc 9734 — Safety Oversight Manual,
Part A — The Establishment and Management of a State
Safety Oversight System (3rd edition, 2017)*

* Available on ICAO-Net and CMA Library of the CMA OLF.



As of January 2013, safety oversight information is available
on the [ICAO public website](http://www.icao.int/safety/Pages/USOAP-Results.aspx):

URL: <http://www.icao.int/safety/Pages/USOAP-Results.aspx>

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013+
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STATES

1997: Voluntary Assessment Program (Annexes 1-6-8)

1999: USOAP, States (Annexes 1-6-8)

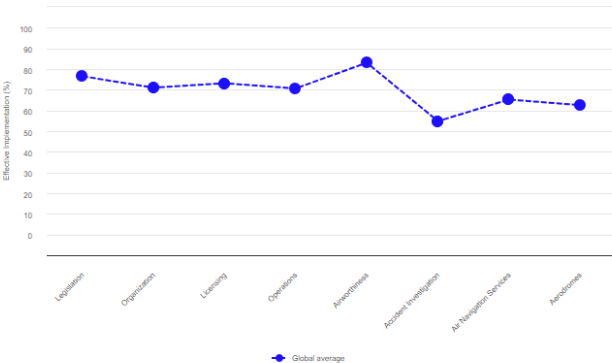
PUBLIC

Safety Audit Results: USOAP interactive viewer

Please select a country from the list below the viewer to see its audit 'Effective Implementation' (EI) score presented for the various categories covered under ICAO's Universal Safety Oversight Audit Programme (USOAP). Multiple countries may be selected at once to compare their respective performance, and users may also compare a country or countries against the current global average in each category.

Please note: A significant safety concern (SSC) does not necessarily indicate a particular safety deficiency in the air navigation service providers, airlines (air operators), aircraft or aerodrome; but, rather, indicates that the State is not providing sufficient safety oversight to ensure the effective implementation of applicable ICAO Standards. Full technical details of the ICAO findings have been made available to the State to guide rectification, as well as to all ICAO Member States to facilitate any actions that they may consider necessary to ensure safety. The State has undertaken to regularly report progress on this matter to ICAO. [Read more.](#)

Developers may also wish to consider accessing the EI data via the [iSTARS API Data Service](#).



Category	Effective Implementation (%)
Legislation	78
Organization	72
Licensing	75
Operations	72
Aerodromes	85
Accident Investigation	55
Air Navigation Services	65
Aerodromes	62

SSCs published on the USOAP CMA online framework

Proposed layout of the SSCs for the public to receive State feedback

2014

Unresolved SSCs to be made available to the public in format and conditions approved by Council



USOAP CMA Audit Areas and Protocol Questions (PQs)





- Primary tool used to assess States' safety oversight capabilities, for each CE.
- Enable standardization in the conduct of USOAP CMA activities.
- Percentage of "Satisfactory" PQs is reflected in the EI.
- Evidence-based approach:
 - Show me.
 - Lack of evidence or lack of sufficient evidence = PQ status becomes or remains N/S.
- N/S PQ generates a finding and under CMA, each finding is PQ-specific.



PQ No.	Protocol Question	Guidance for Review of Evidence	ICAO References	PPQ	CE
4.181	Has the State promulgated regulations for the air operator to establish and maintain training programmes, as part of the flight safety documents system, which include initial, (conversion), re-ide, recency of ization, differences and training, as applicable?	1) Verify regulations. 2) Ensure that regulations cover all types of training, including human factors.	STD A6 Part I, 4.2.1.3, 9.3, 10.3, 12.4 & App. 2, 2.4 Part III, Section II, 2.2.1.3, 7.3, 8.3 & 10.3 GM A6 Part I, Att. D, 3.3 Part III, App. 7, 2.4 Doc 9376	 Yes No	CE-2
4.183	Does the flight operations inspection organization ensure that an air operator outlines, in its training programmes, not only details of the initial and recurrent flight crew training, but also transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences and other specialized training, as applicable?	1) Verify the guidance m have been established and implemented 2) Sample some air operators' to confirm implementation and compliance 3) Review evidence during industry visit to confirm implementation.	STD A6 Part I, 4.2.1.3, 9.3 & App. 2, 2.4.1 Part III, Section II, 7.3 GM A6 Part I, Att. D, 3.3 Part III, App. 7, 2.4.1 Doc 8335 Part III, C5	Yes No	CE-6

PQ number

Shaded row indicates on-site only PQ



PQ No.	Protocol Question	Guidance for Review of Evidence	ICAO References	PPQ	CE
4.181	Has the State promulgated regulations for the air operator to establish and maintain training programmes, as part of the flight safety documents system, which include initial, recurrent, transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences and other specialized training, as applicable?	1) Verify regulations. 2) Ensure that regulations cover all types of training, including human factors.	STD A6 Part I, 4.2.1.3, 9.3, 10.3, 12.4 & App. 2, 2.4 Part III, Section II, 2.2.1.3, 7.3, 8.3 & 10.3 GM A6 Part I, Att. D, 3.3 Part III, App. 7, 2.4 Doc 9376	 Yes No	CE-2
4.183	Does the flight operator organization ensure that its training programmes, not only outlines of the initial and recurrent flight crew training, but also transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences and other specialized training, as applicable?	1) Verify that applicable operations inspectors' guidance material, manuals, checklists, etc. have been established and implemented. 2) Sample some air operators' manuals to confirm implementation and compliance. 3) Review evidence during industry visit to confirm implementation.	STD A6 Part I, 4.2.1.3, 9.3 & App. 2, 2.4.1 Part III, Section II, 7.3 GM A6 Part I, Att. D, 3.3 Part III, App. 7, 2.4.1 Doc 8335 Part III, CS	Yes No	CE-6

PQ asked by auditor



PQ No.	Protocol Question	Guidance for Review of Evidence	ICAO References	PPQ	CE
4.181	Has the State promulgated regulations for the air operator to establish and maintain training programmes, as part of the flight safety documents system, which include initial, recurrent, transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences and other specialized training, as applicable?	1) Verify regulations. 2) Ensure that regulations cover all types of training, including human factors.	STD A6 Part I, 4.2.1.3, 9.3, 10.3, 12.4 & App. 2, 2.4 Part III, Section II, 2.2.1.3, 7.3, 8.3 & 10.3 GM A6 Part I, Att. D, 3.3 Part III, App. 7, 2.4 Doc 9376	<input type="checkbox"/>	CE-2
4.183	Does the flight operations inspection organization ensure that an air operator outlines, in its training programmes, not only details of the initial and recurrent flight crew training, but also transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences and other specialized training, as applicable?	1) Verify that applicable operations inspectors' guidance material, manuals, checklists, etc. have been established and implemented. 2) Sample some air operators' manuals to confirm implementation and compliance. 3) Review evidence during industry visit to confirm implementation.	STD A6 Part I, 4.2.1.3, 9.3 & App. 2, 2.4.1 Part III, Section II, 7.3 GM A6 Part I, Att. D, 3.3 Part III, App. 7, 2.4.1 Part III, C5 Doc 8335	Yes <input type="checkbox"/>	CE-6

Example of evidence to be presented by State



PQ No.	Protocol Question	Guidance for Review of Evidence	ICAO References	PPQ	CE
4.181	Has the State promulgated regulations for the air operator to establish and maintain training programmes, as part of the flight safety documents system, which include initial, recurrent, transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences and other specialized training, as applicable?	1) Verify regulations. 2) Ensure that regulations cover all types of training, including human factors.	STD A6 Part I, 4.2.1.3, 9.3, 10.3, 12.4 & App. 2, 2.4 Part III, Section II, 2.2.1.3, 7.3, 8.3 & 10.3 GM A6 Part I, Att. D, 3.3 Part III, App. 7, 2.4 Doc 9376	<input type="checkbox"/> Yes <input type="checkbox"/> No	CE-2
4.183	Does the flight operations inspection organization ensure that an air operator outlines, in its training programmes, not only details of the initial and recurrent flight crew training, but also transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences and other specialized training, as applicable?	1) Verify that applicable operations inspectors' guidance material, manuals, checklists, etc. have been established and implemented. 2) Sample some air operators' manuals to confirm implementation and compliance. 3) Review evidence during industry visit to confirm implementation.	STD A6 Part I, 4.2.1.3, 9.3 & App. 2, 2.4.1 Part III, Section II, 7.3 GM A6 Part I, Att. D, 3.3 Part III, App. 7, 2.4.1 Doc 8335 Part III, C5	<input type="checkbox"/> Yes <input type="checkbox"/> No	CE-6

ICAO References



PQ No.	Protocol-Question	Guidance for Review of Evidence	ICAO References	PPQ	CE
4.181	Has the State promulgated regulations for the air operator to establish and maintain training programmes, as part of the flight safety documents system, which include initial, recurrent, transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences and other specialized training, as applicable?	1) Verify regulations. 2) Ensure that regulations cover all types of training, including human factors.	STD A6 Part I, 4.2.1.3, 9.3, 10.3, 12.4 & App. 2, 2.4 Part III, Section II, 2.2.1.3, 7.3, 8.3 & 10.3 GM A6 Part I, Att. D, 3.3 Part III, App. 7, 2.4	<input type="checkbox"/>	CE-2
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New category: PPQ.
"Yes" means this is a PPQ.



PQ No.	Protocol Question	Guidance for Review of Evidence	ICAO References	PPQ	CE
4.181	Has the State promulgated regulations for the air operator to establish and maintain training programmes, as part of the flight safety documents system, which include initial, recurrent, transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences and other specialized training, as applicable?	1) Verify regulations. 2) Ensure that regulations cover all types of training, including human factors.	STD A6 Part I, 4.2.1.3, 9.3, 10.3, 12.4 & App. 2, 2.4 Part II, Section II, 7.3, 8.3 & 10.3 GM A6 Part I, Att. D, 3.3 Part III, App. 7, 2.4 Doc 9376	 Yes No	CE-2
4.183	Does the flight operations inspection organization ensure that an air operator outlines, in its training programmes, not only details of the initial and recurrent flight crew training, but also transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences and other specialized training, as applicable?	1) Verify that applicable operations inspectors' guidance material, manuals, checklists, etc. have been established and implemented. 2) Sample some air operators' manuals to confirm implementation and compliance. 3) Review evidence during industry visit to confirm implementation.	STD A6 Part I, 4.2.1.3, 9.3 & App. 2, 2.4.1 Part III, Section II, 7.3 GM A6 Part I, Att. D, 3.3 Part III, App. 7, 2.4.1 Doc 8335 Part III, C5	Yes No	CE-6

CE associated with this PQ



- Identified as required by GEUSR.
- A subset of PQs, which, if found not satisfactory, may indicate a lack of capability by a State to identify and/or resolve operational safety and fundamental accident investigation deficiencies effectively.
- PPQs are a subset of PQs from the existing PQs.



PPQs by audit area

Audit area	2017 PQs	2020 PQs			
	Total No.	Total No.	Number of		
			PPQ	On-Site	Off-Site
LEG	23	23	14	3	20
ORG	14	13	5	9	4
PEL	99	93	35	71	22
OPS	146	126	34	91	35
AIR	210	186	33	102	84
AIG	104	84	24	46	38
ANS	179	122	27	97	25
AGA	168	143	40	106	37
	943	790	212	525	265



	2020 PQs		CE-1		CE-2		CE-3		CE-4		CE-5		CE-6		CE-7		CE-8	
	TOTAL	PPQ	TOTAL	PPQ	TOTAL	PPQ	TOTAL	PPQ	TOTAL	PPQ	TOTAL	PPQ	TOTAL	PPQ	TOTAL	PPQ	TOTAL	PPQ
LEG	23	14	14	9	6	5	0	0	0	0	3	0	0	0	0	0	0	0
ORG	13	5	0	0	0	0	9	4	2	1	2	0	0	0	0	0	0	0
PEL	93	35	0	0	13	6	6	1	7	0	10	2	40	22	10	4	7	0
OPS	126	34	3	0	11	4	10	1	5	2	20	1	56	22	14	4	7	0
AIR	186	33	0	0	41	5	14	1	12	3	37	10	59	11	10	2	13	1
AIG	84	24	8	4	11	5	10	2	4	1	42	7	0	0	0	0	9	5
ANS	122	27	3	0	6	2	16	0	14	0	2	0	27	7	47	18	7	0
AGA	143	40	2	1	21	6	7	2	7	2	14	1	51	17	32	9	9	2
	790	212	30	14	109	33	72	11	51	9	130	21	233	79	113	37	52	8



- PPQs will assist States by providing them with an overview of those PQs with greater direct relationships to risks that are necessary to be addressed for the establishment and implementation of their safety oversight systems.
- The use of PPQs allows ICAO to create focused USOAP CMA activities to ensure its resources and oversight efforts are applied accurately to the areas of greater safety risks.
- PPQs are not a replacement for the entire set of protocol questions, which continues to be essential in a comprehensive assessment of the effectiveness of a State's safety oversight system.



- MAC revises and amends PQs on a periodic basis to:
 - a) reflect changes to the ICAO provisions; and
 - b) harmonize and improve PQ references and content.
- Amendment of PQs incorporates inputs from:
 - a) ICAO ANB;
 - b) ICAO ROs;
 - c) external stakeholders; and
 - d) lessons learned and experiences drawn.
- PQ amendments may have a positive or negative impact on the level of EI of all States, as PQs may be added, changed, merged, separated, and/or deleted.



- In addition to the periodic amendment of USOAP PQs, the 2020 edition of the PQs was mainly a result of the implementation of the recommendations of the Group of Experts for a USOAP CMA Structured Review (GEUSR).
- This 2020 edition of the PQs is posted in the “CMA Library” on the OLF.
- The 2020 edition of the PQs became applicable for all USOAP CMA activities **starting after 1 January 2022**.

(EB 2021/40, dated 31 December 2021, refers)

CMA Library



Impact on EI:

- With the introduction of the 2020 edition of the PQs, the global EI decreased by 1.53 per cent when calculated against the previous edition of the PQs.
- There is no recognized correlation in the changes to States' EIs by audit area, critical element (CE) or region.

(EB 2021/36, dated 26 November 2021, refers)





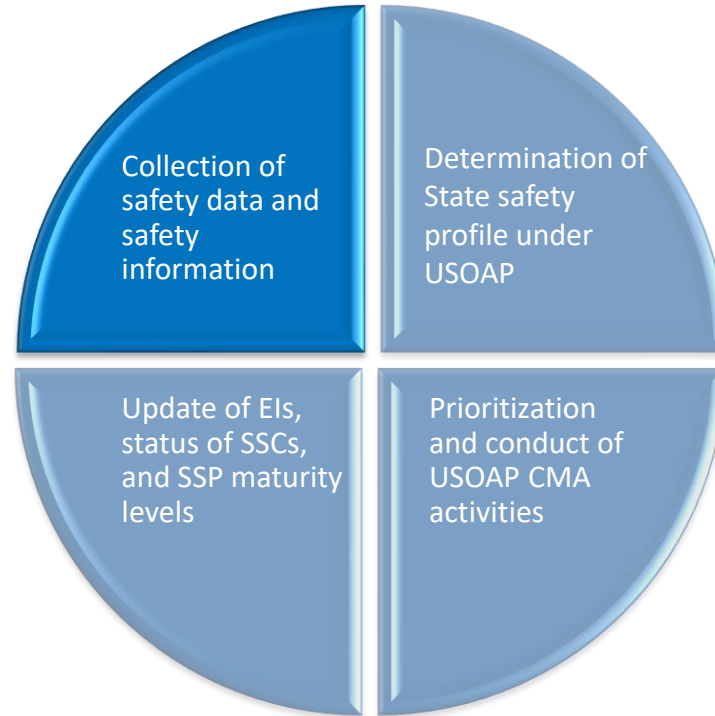
USOAP CMA Components



USOAP CMA Components



USOAP CMA Components Cont.



- Member States provide the primary source of safety information by completing, submitting and regularly updating the following:
 - 1) State Aviation Activity Questionnaire (SAAQ);
 - 2) PQ self-assessment;
 - 3) Compliance Checklists (CCs) on the Electronic Filing of Differences (EFOD) system; and
 - 4) State responses to MIRs.





- **Internal stakeholders** include the entire ICAO Secretariat (HQ and ROs).
- **External stakeholders** include national, regional, supranational and international organizations with a standing legal agreement with ICAO on monitoring activities, such as FAA, EASA, IATA, etc.

Note.— Some of these organizations conduct audit activities that generate safety information used as indicators for the USOAP CMA.





- Based on agreements with ICAO, the internal and external stakeholders collect and provide safety data and safety information to ICAO and/or share information that can be used to monitor States' safety oversight and safety management capabilities through USOAP.
- The sharing of safety data and safety information reduces duplication of resources and effort by ICAO and the recognized organizations, increases the effectiveness of monitoring activities, and reduces the burden placed on States as a result of repetitive audits, inspections and monitoring activities.





Main Indicators for Determining State Safety Profile under USOAP

- a) EI (determined through a previous USOAP CMA activity);
- b) date and scope of the last USOAP CMA activity;
- c) any postponement or cancellation by the State of a previously planned USOAP CMA activity;
- d) existence of SSC(s);
- e) a State's progress in resolving an SSC, and/or the resolution thereof;
- f) level of (international) aviation activity and its trend (e.g. traffic);
- g) aviation accidents rate and its trend;
- h) level of progress made by a State in completing and updating PQ self-assessment on the OLF;
- i) level of progress made by a State in completing and updating the State Aviation Activity Questionnaire on the OLF;
- j) level of progress made by a State in submitting and implementing CAPs to resolve identified deficiencies in each audit area on the OLF; and
- k) level of progress made by a State in completing and updating the CC/EFOD system on the OLF.



USOAP CMA Components Cont.



MAC prioritizes CMA activities in States based on:

- a) State safety profiles under USOAP; and
- b) The following factors, non-exhaustively:
 - major changes in legislation/regulations in a State's civil aviation;
 - major changes in the organizational structure of a State's civil aviation authority;
 - significant changes in any of the audit areas within the State's civil aviation system;
 - level of aviation activities in the State for each audit area, such as the number of aircraft movements (arrivals and departures), personnel licences issued or validated, air operator certificates (AOCs) issued, aircraft registered, and serious aviation incidents and accidents;
 - information and recommendations from the ROs;
 - information shared by ICAO safety partners;
 - air navigation deficiencies;
 - State's progress in achieving GASP objectives on safety management;
 - evidence of a robust and sustainable safety oversight system and an aircraft accident/incident investigation system;
 - evidence of an effective mandatory safety reporting system, State aircraft accident and incident database, and safety analyses; and
 - regional representation.



All USOAP CMA activities are planned, scheduled and conducted for a Member State based on available resources, i.e.

- a) Approved MAC budget; and
- b) Available MAC resources.



- There are three categories of USOAP CMA activities:
 - a) Audits;
 - b) Validations; and
 - c) SSPIAs.
- USOAP CMA activities are conducted in the following modes:
 - a) **On-site activities** – an audit, validation or SSPIA where the ICAO activity team reviews, assesses, and validates submitted evidence in person;
 - b) **Off-site activities** – an audit or validation where the ICAO activity team reviews, assesses, and validates submitted evidence at ICAO Headquarters with minimal interaction with the States; and
 - c) **Virtual activities** – an off-site audit or validation where the ICAO activity team reviews, assesses and validates remotely, using videoconferencing software to conduct interviews and discussions, as well as email or other electronic means to exchange and review evidence.

ACTIVITIES



The different types of audits:

- a) **Documentation-based audit (DBA).** A USOAP CMA activity conducted off site during which ICAO conducts a systematic and objective review of the establishment and/or implementation of a State safety oversight system for a State whose security situation, as classified under the UN Security Level System, precludes an on-site activity by ICAO and/or whose limited level of aviation activities does not warrant an on-site activity.
- b) **Focused audit.** A type of USOAP audit which covers exclusively a subset of Protocol Questions (PQs), such as Priority PQs or a specific audit area.
- c) **Follow-up audit.** A type of USOAP audit which covers PQs assessed previously as not satisfactory, not applicable, and undetermined.
- d) **Full-scope audit.** A type of USOAP audit which covers the PQs associated with the entire scope of a State's safety oversight and accident/incident investigation system, as applicable.
- e) **Integrated audit activity (IAA).** An audit, integrated with a scheduled visit to a State by ICAO, during which ICAO conducts a systematic and objective review of a small subset of PQs from a State that has not had previous audit or validation activities in the past five years.



The different types of validations:

- a) **ICAO Coordinated Validation Mission (ICVM).** A validation during which ICAO collects and assesses evidence provided by the State demonstrating that the State has implemented corrective actions (or mitigating measures for significant safety concerns (SSCs)) to address previously identified findings.
- b) **Integrated validation activity (IVA).** A validation, integrated with a scheduled visit to a State by ICAO or its stakeholders, where ICAO samples and collects evidence provided by the State for identified PQs, demonstrating effective implementation of corrective actions to address previously identified findings. ICAO HQ validates the collected evidence and information provided by the on-site team member.
- c) **Off-site validation activity.** A USOAP CMA activity during which ICAO assesses and validates documented progress indicated by the State on the OLF as implementing its corrective action plan (CAP), including the assessment of relevant evidences uploaded to the OLF, without an on-site visit to the State.



- The SSPIA is a performance-based activity conducted under the framework of the USOAP CMA, in which ICAO assesses the level of maturity achieved by a State in the implementation and maintenance of its State safety programme (SSP) using SSP protocol questions (PQs). The assessment results complement, but do not impact, the value of the effective implementation (EI) of the eight critical elements of a State safety oversight system.
- On 4 March 2022, the ICAO Council approved ICAO to take action to integrate SSPIAs into traditional USOAP CMA activities (C-DEC 225/7).
- MAC is currently developing the methodology to integrate SSPIAs into traditional USOAP activities. (Details of the integration work will be provided late on in this module).
- The integrated methodology to conduct USOAP activities including SSPIAs had been planned to be officially launched in 2025.





Factors Affecting the Determination of the Type of an USOAP CMA Activity – an Audit or an ICVM

CMA Audit	ICVM
State safety profile under USOAP	
Information submitted by State through PQ self-assessment	
Recommendations from RO or ANB sections	
Information shared by recognized international organizations	
Regional balance	
Date of last audit	State's readiness (via reported progress in CAP implementation)
Significant changes in any audit area within the State's civil aviation system	State's progress in resolving SSCs

ACTIVITY
TYPE



Factors Affecting the Determination of the Scope of an Audit or an ICVM

Factors Determining Scope	ICVM	CMA Audit
Level of aviation activity in the State	✓	✓
Any changes to the State's system		✓
Acceptability of CAPs	✓	
Level of progress reported by the State in CAP implementation	✓	
State's self-assessment, including submitted evidence	✓	✓
Request by State (cost-recovery activity)	✓	✓
Availability of resources	✓	✓

ACTIVITY
SCOPE



Factors affecting the determination of the Duration and Team Composition of the mission

Factors Determining Duration and Team Composition	ICVM	CMA Audit
Mission scope	✓	✓
Complexity of the State's system	✓	✓
Number of Not-Satisfactory PQs to be addressed	✓	
Other factors, such as State's official language	✓	✓

TEAM
COMPOSITION



Criteria Used to Select a State for a Validation Activity

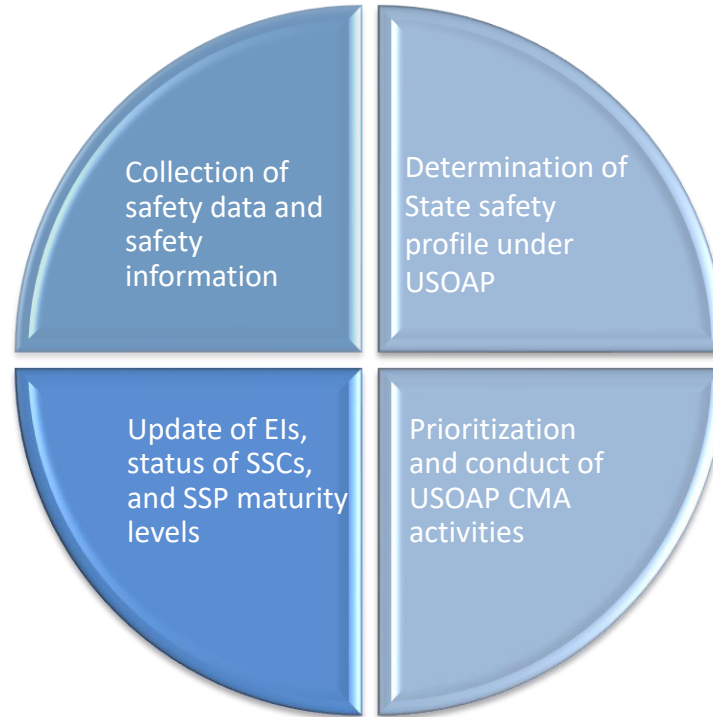
- 1) For an off-site validation activity: PQ findings associated with eligible PQs (PQs mostly from CEs 1 to 5);
- 2) For an ICVM: Most (about 75%) of the State's corresponding CAPs, for the audit area considered, meet the following three conditions:
 - a) CAPs fully address the corresponding PQ findings;
 - b) CAPs are reported by the State as fully implemented; and
 - c) The State has submitted all relevant evidence for the corresponding PQs through PQ self-assessment on the OLF.



Criteria Used to Select a State for a Validation Activity

- CAPs related to the majority of PQ findings associated with CEs 6, 7 and 8 (collectively known as the “Implementation” CEs) do not qualify for an off-site validation activity.
- Such CAPs must be assessed and validated through an on-site or virtual activity.





EI calculation:

$$\text{Overall EI (\%)} = \frac{\text{Number of Satisfactory PQs}}{\text{Total Number of Applicable PQs}} \times 100$$



- The conduct of USOAP CMA audits or validations enable ICAO to continuously update (i.e. increase or decrease) a State's EI.
- State's EI is reported on the OLF.



Status of PQs can only be changed following completion of a **USOAP CMA activity**, namely:

- 1) an audit activity (**DBA, Focused audit, Follow-up audit, full scope audit and IAA**); or
- 2) a validation activity (**ICVM, IVA or Off-site validation**).



- A MIR is issued by ICAO under the USOAP CMA process when concerns are raised by internal and/or external stakeholders about aspects of a State's safety oversight system.
- A MIR is a tool used under USOAP to seek information or documentation from a State in regard to the State's capability to perform safety oversight of its aviation system.



When can a MIR be issued?

Generally, MIRs will be issued for one or more of the following instances, but not limited to these instances:

- a) a State has not submitted and/or maintained its SAAQ, CC/EFOD, CAPs and/or PQ self-assessment complete and up-to-date;
- b) information in the SAAQ, CC/EFOD and/or PQ self-assessment provided by the State contradicts information found in other documents or provided by other stakeholders;
- c) a significant change is observed in the organization responsible for a State's aviation safety oversight;
- d) credible evidence indicates that a potential deficiency or an SSC may exist, and additional information is required to validate this potential deficiency; it also allows the State the opportunity to clarify the issue;
- e) Concerns raised about a State's lack of compliance in the conduct of its aviation activities; e.g. in the process of an aircraft accident or incident investigation;
- f) information is needed in addition to an ICAO RO visit; and
- g) information collected during a USOAP CMA activity is incomplete or insufficient.



- States are required to respond to a MIR.
- Failure by a State to respond to a MIR with:
 - a) complete, clear and relevant information addressing the associated PQs and/or
 - b) within the specified timeframe will result in findings and/or SSC(s) for the State.
- In the absence of response by State, the status of all associated PQs becomes Not Satisfactory.
- PQ status change as the result of the review of State responses to a MIR will be made following the off-site validation process.



State's Response to a MIR Cont.

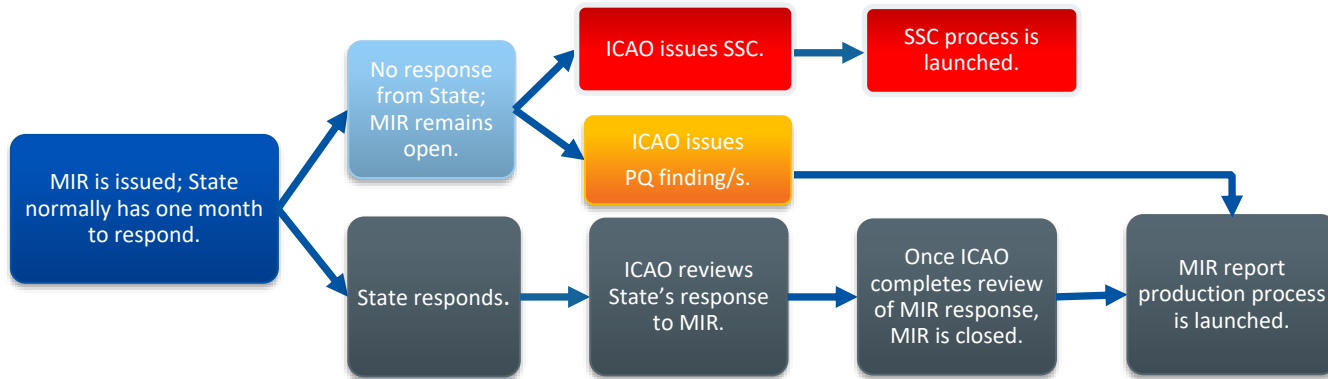
- Deadline to respond to a MIR will be determined by ICAO on a case-by-case basis depending on the severity and urgency of the issue.
- No deadline extension will be granted in case of serious safety concerns.
- Once State submits MIR response requested by ICAO, ICAO starts review of MIR response.
- MIR is closed once ICAO completes review of MIR response.
- MIR report production process is then launched as an off-site validation activity.



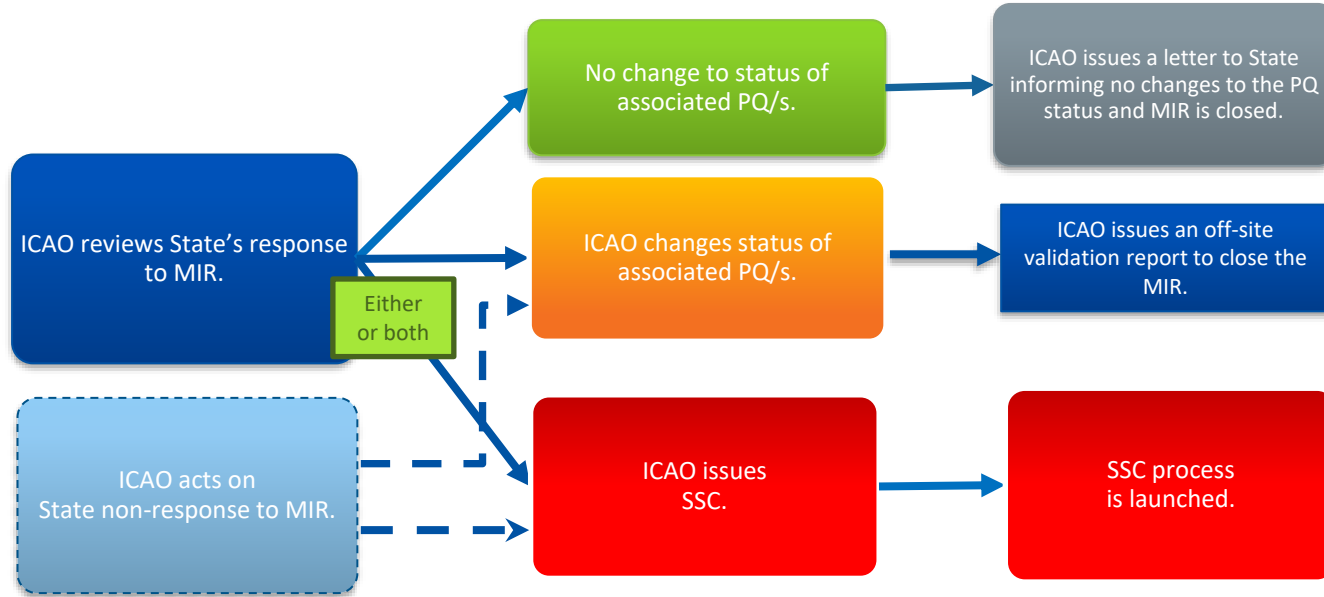
- State's response to a MIR is reviewed and assessed by ICAO (i.e. relevant SPOs/TOs of OAS/MAC).
- Assessment of information and other related evidences will lead to one or two of the following scenarios:
 - a) no change in status of associated PQs; and
 - b) change in status of associated PQ/s and a MIR Report is produced in the form of an off-site validation activity report; and/or
 - c) in the most serious cases, an SSC is issued and the SSC process is launched.



Step 1 — A MIR is issued...



Step 2 — MIR Review and Report Production Process



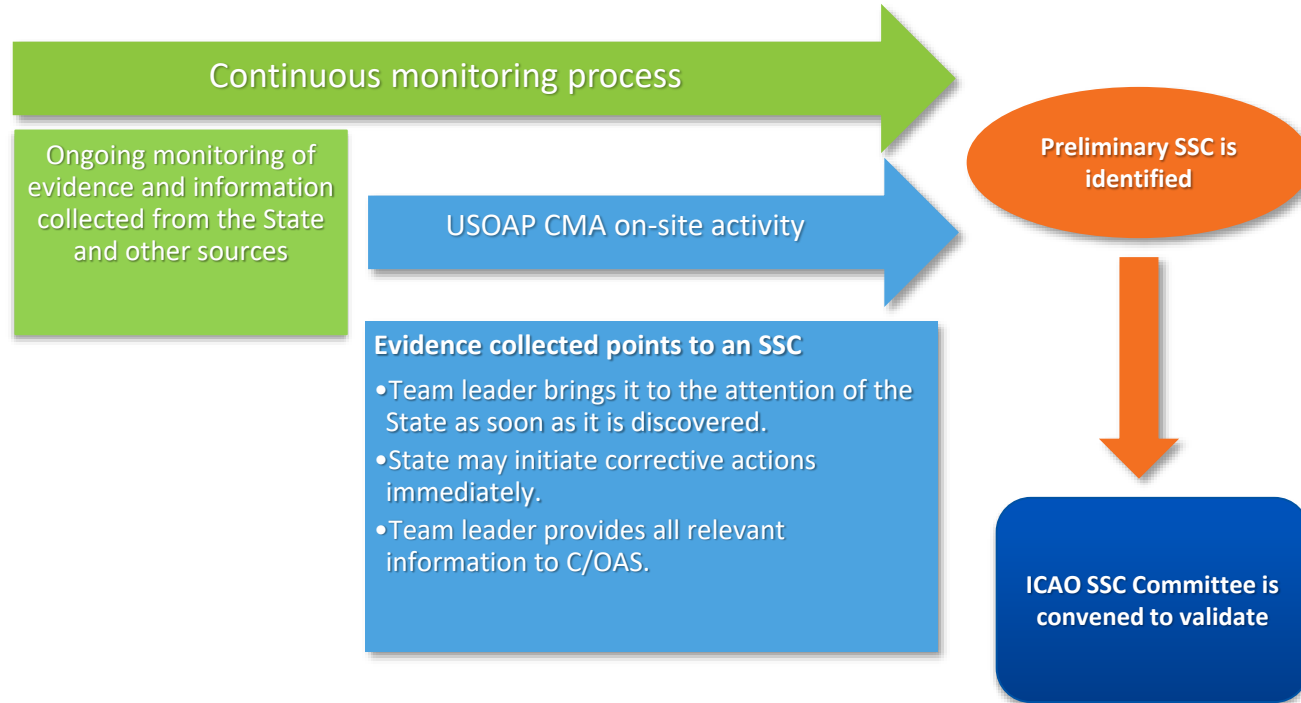
Definition of an SSC

“An **SSC** occurs when the audited State allows the holder of an authorization or approval to exercise the privileges attached to it, although the minimum requirements established by the State and by the Standards set forth in the Annexes to the Chicago Convention are not met, resulting in an immediate safety risk to international civil aviation.”

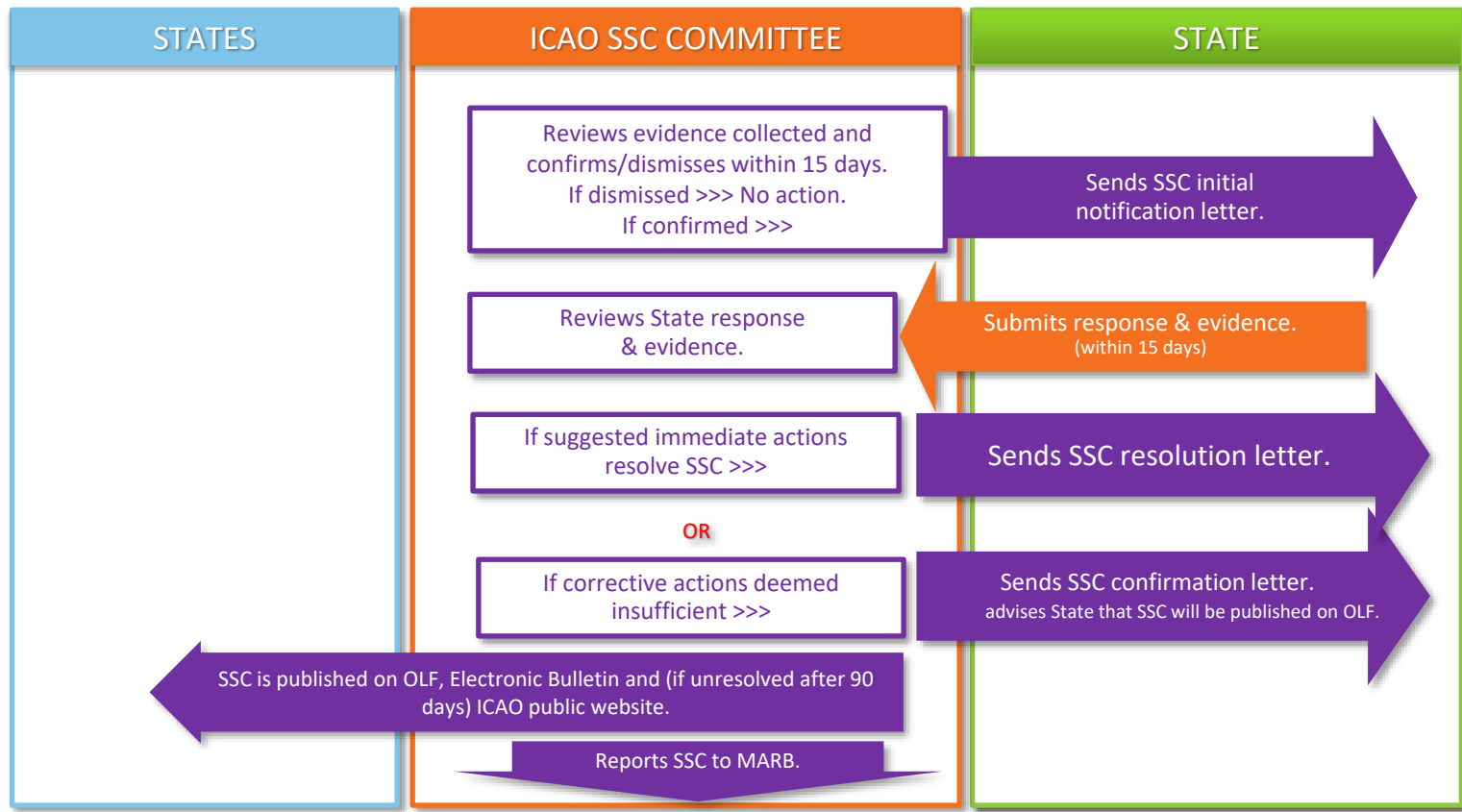
Reference: **EB 2010/7** dated 19 February 2010



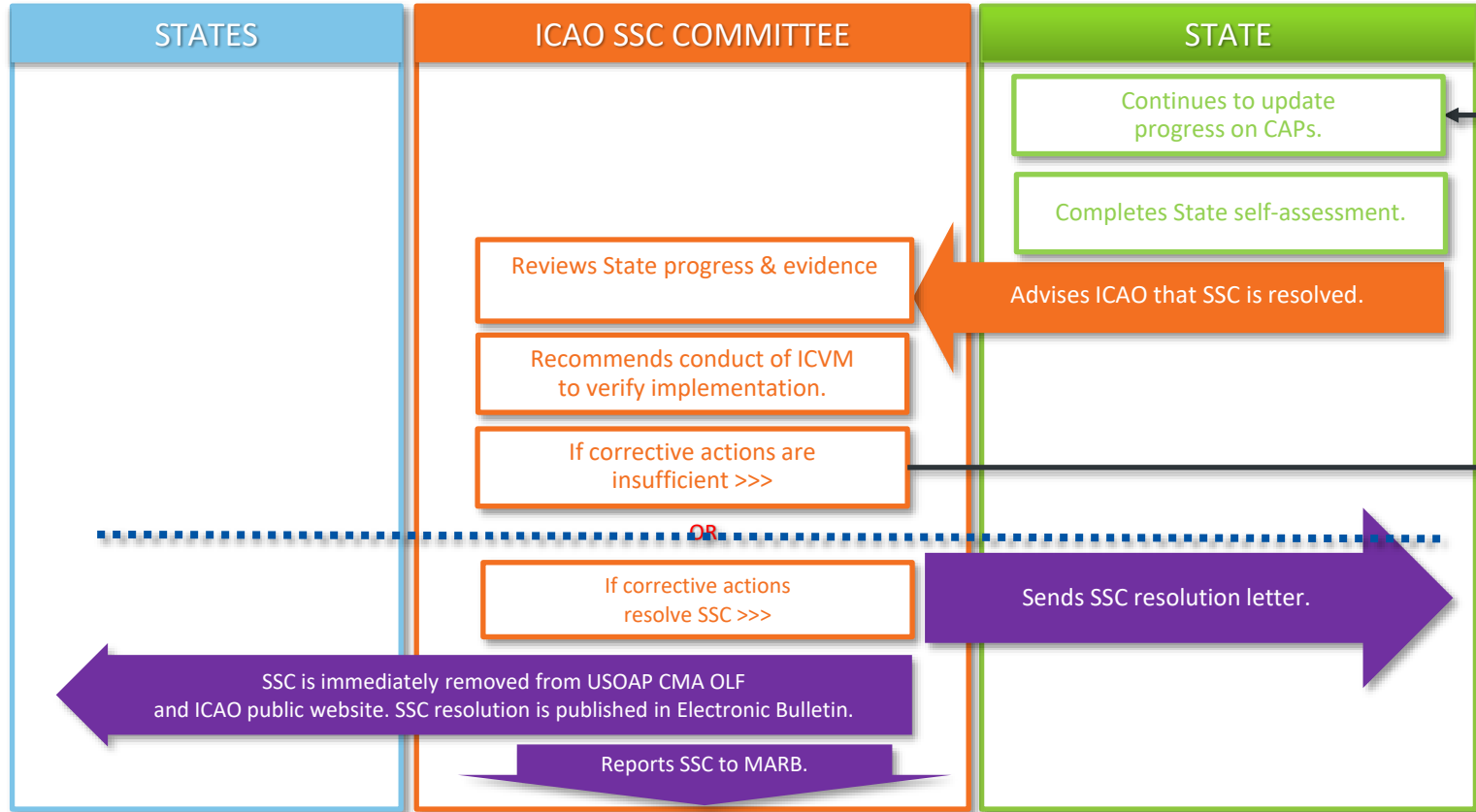
SSC Mechanism: Identification



SSC Mechanism: Notification



SSC Mechanism: Resolution



Integration of SSP Implementation Assessments (SSPIAs) into USOAP CMA activities





Overview

1

Background

2

Plans for 2023-2024-2025

3

How to integrate?

4

PQs after integration

5

Integrated mission report

6

On-site mission organization

7

Integration timelines



Background

- On 4 March 2022, the Council approved the follow-up actions to be taken by ICAO regarding the HLCC 2021 Recommendations (C-WP/15312) which includes integrating SSPIAs into traditional USOAP CMA activities (hereinafter referred to as “integrated activity”) (C-DEC 225/7).
- Following this decision, MO presented a transition timeline toward the integrated activity to the Council (April 2022), with the goal to have an official launch in 2025.

Plans for 2023-2024-2025

Integration of SSPIAs into USOAP activities



USOAP CMA builds experience assessing and its pool of assessors



- Development of new methodology for integrated activities
- Identification of indicators for prioritization of States for integrated activities
 - Identification of data and information needed to determine the scope of integrated missions
 - Develop an audit/assessment methodology for the activity
 - Define training needs for dual auditors/assessors



Development of new policies and beta testing of new integrated activities.



Deployment of new integrated methodologies

How to Integrate?

- USOAP is reorganizing the SSP and SMS PQs to fit in the current audit PQs structure/topics
- SSP vs. SMS
 - Implementation of an SSP is a State function. PQs on SSP implementation and maintenance will be separately grouped and added following LEG/ORG PQs.
 - SMS is one of the systems that need to be implemented by service providers in compliance with relevant ICAO SARPs. SMS PQs will be added to each technical area as a subgroup of safety oversight PQs following the traditional PQ structure.
- Performance-related aspects will be reflected in the design of the PQs
 - New methodology will follow the “satisfactory” or “not-satisfactory” approach for consistency.

PQs after integration

- Audit PQ checklist:*

PQ #	Ref.	PQ	Guidance for review	Status	CE	SSP Comp.
				S/NS/NA	✓	✓

- Additional SSP PQ checklist:*

PQ #	Ref.	PQ	Guidance for review	Status	CE	SSP Comp.
				S/NS/NA	✗	✓

- The current method to calculate the effectiveness implementation will be applied to both safety oversight and SSP, i.e. USOAP will produce safety oversight EIs by area, CE and overall, and SSP EIs by area, component, and overall.

- Main body of the report
 - +
- Appendices:
 - Oversight
 - *Priorities by area*
 - *Els (overall, by area and by CE)*
 - *PQ status dashboard*
 - SSP
 - *Opportunities for enhancement by component*
 - *Els (overall, by area and by SSP component)*
 - *Additional SSP PQ status dashboard*

On-site mission organization

- 1st week:*

Work Day	Mon.	Tue.	Wed.	Thu.	Fri.
Activities	Arrival of team	Team internal briefing and prep.	Opening LEG/ORG	ORG SSP	AM: SSP PM: Tech. areas

- 2nd week:*

Work Day	Mon.	Tue.	Wed.	Thu.	Fri.
Activities	PEL/OPS/AIR/ AIG/ANS/AGA	PEL/OPS/AIR/ AIG/ANS/AGA	PEL/OPS/AIR/ AIG/ANS/AGA	PEL/OPS/AIR/ AIG/ANS/AGA	Industry visit/ AIG (cont.)

- 3rd week:*

Work Day	Mon.	Tue.
Activities	Evidences and reports	AM: Evidences and reports PM: Closing

- After the integration, a typical mission will be:

- 10 working days (one additional day may be required for the language reason)
- 1 additional TM may be required to support the TL (depending on the complexity of the mission)



Integration timelines

- First draft of SSP and SMS PQs → 30 Apr. 2024
- External comments on the SSP and SMS PQs → 14 Jun. 2024
- 2024 version of the USOAP PQs (including both the SSP and SMS PQs as well as the updated safety oversight PQs) → 30 Sep. 2024
- Beta test of the integrated methodology → Q2 of 2025



USOAP CMA Computer-Based Training (CBT)



As per EB 2011/44, the computer-based training (CBT) was launched to:

- Provide participants with a thorough understanding of the USOAP CMA methodologies and the essential knowledge required to participate in USOAP CMA activities; and
- Serve as an opportunity for States to enhance the competencies of their aviation safety personnel in the areas addressed by USOAP CMA.



- Assembly Resolution A40-13 urges all Member States to support ICAO in the evolution of the USOAP CMA and, for those able to do so, to second qualified and experienced technical staff to ICAO on a long- or short-term basis.
- State-nominated experts who meet stated qualifications and experience criteria for the various audit areas (per SL AN19/34-15/35, 13 May 2015) will be enrolled at no fee.
- More information is available at:
<https://www.icao.int/safety/CMAForum/Pages/USOAPCMA-CBT.aspx>.



States' Main Obligations under USOAP CMA



As per the USOAP CMA MOU and by using the OLF, States shall:

- participate fully in the USOAP CMA by taking part in all USOAP CMA activities and by committing to provide information related to the establishment and implementation of its safety oversight system on an ongoing basis, in particular:
 - Continuously update their SAAQ and CCs/EFOD;
 - Continuously update their CAPs and PQ status (self-assessment), providing all related evidence; and
- Reply promptly to MIRs sent by ICAO.

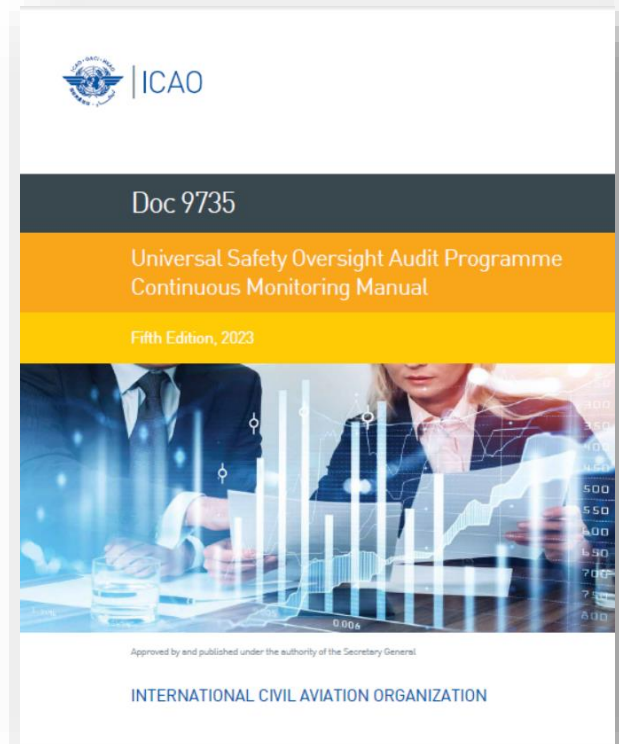




Introduction to the 5th Edition of Doc 9735 – USOAP Continuous Monitoring Manual



The **USOAP Continuous Monitoring Manual – Doc 9735** was recently revised, and its latest edition, i.e. the **5th edition** was published in 2023.



- The 5th edition of Doc 9735 introduces updates and changes to the Programme since 2013:
 - a) Addition of Annex 19 — Safety Management to USOAP coverage and Introduction of SSPIA as a new USOAP activity (a separate chapter is devoted to SSPIA)
 - b) Implementation of the recommendations of GEUSR
 - c) Implementation of the recommendations of the USOAP-AG
 - d) Introduction of new or modified USOAP activities in response to COVID-19
 - e) general programmatic improvements based on State and stakeholder feedback as well as experience and lessons learned; and
 - f) update stemming from the 41st Assembly of ICAO
- In addition, the 5th edition of Doc 9735:
 - a) reflected the organizational changes to ICAO, such as MO became MAC;
 - b) Optimized the organization of the contents of the manual, such as
 - separate chapters for Audits and Validations, and SSPIAs; and
 - consolidate all info on the OLF in one chapter, i.e. Ch. 6.





[Definitions and terminology](#)

[Acronyms and abbreviations](#)

[Chapter 1. Introduction](#)

[Chapter 2. General information](#)

[Chapter 3. Continuous monitoring approach](#)

[Chapter 4. Audits and validations](#)

[Chapter 5. State Safety Programme implementation assessment](#)

[Chapter 6. Online framework](#)

[Chapter 7. Programme management](#)

[Chapter 8. USOAP CMA activity teams](#)

[Chapter 9. USOAP CMA activity phases and procedures](#)

[Appendix A. USOAP CMA activity timelines](#)

[Appendix B. MOU between State and ICAO regarding USOAP CMA \(generic version\)](#)

[Appendix C. Significant Safety Concern: Procedure and Process Flowchart](#)

[Appendix D. Guidance for States on developing corrective action plans](#)

[Appendix E. Corrective action plan: assessment and monitoring workflow](#)

[Appendix F. Guidelines for National Continuous Monitoring Coordinators](#)



1. Monitoring, Analysis and Coordination (MAC)
2. Critical Elements (CEs) of a State Safety Oversight System
3. USOAP CMA Audit Areas and Protocol Questions (PQs)
4. USOAP CMA Components
 - a) collection of safety data and safety information
 - b) determination of the State safety profile under USOAP
 - c) prioritization and conduct of USOAP CMA activities
 - d) update of EI, the status of SSCs and the SSP maturity levels
5. Integration of SSP Implementation Assessments (SSPIAs) into USOAP CMA activities
6. USOAP CMA Computer-Based Training (CBT)
7. States' main obligations under USOAP CMA





Thank You!



Chapter 1. Introduction

1.1 Purpose

1.2 References





Chapter 2. General information

- 2.1 History of the Programme
- 2.2 USOAP CMA Objective and Principles
- 2.3 USOAP CMA Implementation
- 2.4 USOAP CMA Activities
- 2.5 Elements of the USOAP CMA
- 2.6 USOAP CMA Outcomes
- 2.7 States' Responsibilities under the USOAP CMA



Chapter 3. Continuous monitoring approach

3.1 Objective

3.2 Concept

3.3 Collection of the safety data and safety information

3.4 Determination of State safety profile under USOAP

3.5 Prioritization and conduct of USOAP CMA activities

3.6 Outcomes of USOAP CMA activities





Postponement and Cancellation of USOAP CMA Activities

- States are strongly urged to accept scheduled activities without any changes, unless there are compelling reasons not to do so.
- Postponements and cancellations of USOAP CMA activities have a direct adverse impact on the Programme, affecting resource allocation, activity planning, and team member scheduling. Changes to the USOAP Activity Plan also affect the sustainability of the Programme in terms of human resources because staff scheduling and on-the-job training (OJT), which depend on the planned activities and the availability of short-term secondments.
- Postponements and cancellations of USOAP CMA activities may result in unaddressed oversight priorities for the Programme that must be re-assessed within the planning cycle for the following year.





Postponement and Cancellation of USOAP CMA Activities

- If needed, requests for postponement or cancellation of a USOAP CMA activity shall be made as soon as possible and no later than 120 days before the start of the scheduled activity. The request shall clearly indicate the compelling reasons for the postponement or cancellation.
- No change to a scheduled USOAP CMA activity will be allowed within 90 calendar days prior to the starting date of an audit, and within 60 calendar days prior to the starting date of a validation, except for a compelling reason.

Note.— A compelling reason to postpone or cancel a USOAP CMA activity includes, but is not limited to, a severe, unanticipated natural event for which no human is responsible (e.g. earthquake, typhoon/hurricane, and tsunami), war (e.g. declared war, armed conflict, regardless of declaration of war, between two or more nations, or armed conflict between military forces of any origin), or civil unrest, etc.





Postponement and Cancellation of USOAP CMA Activities

- A request for postponement or cancellation must be submitted to the President of the Council of ICAO for consideration, with a copy to the Deputy Director of MAC/ANB. The request should include the following information:
 - a) formal statement of request for postponement or cancellation of the USOAP CMA activity;
 - b) reason(s) in support of the request;
 - c) proposed time frame for rescheduling the USOAP CMA activity;
 - d) name and contact information of the State's NCMC; and
 - e) contact information for use in responding to the State's request.





Postponement and Cancellation of USOAP CMA Activities

- The MAC will review the request and make a final determination regarding the request. The MAC will forward a confirmation letter to the State regarding its acceptance, or not, of the overall request.
- Unless a scheduled activity is postponed or cancelled for a compelling reason, States will be invited to reimburse ICAO for the expenditure of financial resources in preparation for the USOAP CMA activity.
- Cancellations and postponements will be reported to the Council through the Annual Report.
- ICAO publishes all postponements and cancellations and the associated justifications in the USOAP Activity Plan.



Postponement and Cancellation of USOAP CMA Activities



- States that repeatedly request postponements and cancellations without compelling reasons and/or fail to assist ICAO in rescheduling the USOAP CMA activity may be subject to an escalating process, which may include the issuance of an MIR and a subsequent SSC, if appropriate, or the referral of the State to the Monitoring and Assistance Review Board (MARB).
- ICAO does not issue MIRs or SSCs based solely on the postponement or cancellation of a USOAP CMA activity.





Chapter 4. Audits and validations

4.1 Audits

4.2 Validations

4.3 Scope of activity





Chapter 5. State Safety Programme implementation assessment

5.1 Objective

5.2 State Safety Programme protocol questions

5.3 Assessment areas

5.4 State Safety Programme components

5.5 Maturity levels





Chapter 6. Online framework

6.1 Overview

6.2 Modules for States to submit information

6.3 Modules for States to obtain information

6.4 Administration and support modules





Chapter 7. Programme management

7.1 General

7.2 Roles and responsibilities of the ICAO Secretariat

7.3 Roles and responsibilities of Member States

7.4 Roles and responsibilities of recognized organizations

7.5 Roles and responsibilities of regional safety oversight organizations

7.6 Memorandum of Understanding

7.7 Programme records

7.8 Programme quality management

7.9 Confidentiality

7.10 Language

7.11 Resolution of disputes





Chapter 8. USOAP CMA activity teams

8.1 Team composition

8.2 Training of auditors, subject matter experts and assessors

8.3 Team members

8.4 Team leader and focal persons

8.5 Competencies

8.6 Personal attributes

8.7 Conflict of interest





Chapter 9. USOAP CMA activity phases and procedures

9.1 Phases of USOAP CMA activities

9.2 Preparation phase

9.3 Conduct phase

9.4 Report production phase



USOAP CMA Activity Timelines – before the start of the activity

Responsibilities/tasks		Timelines by activity (days noted below are calendar days)		
ICAO	State	Validations	Audits and SSPIAs	Cost-recovery activities
Publication/posting of USOAP CMA schedule		Periodic (typically 12 months)		ICAO and the Member State shall mutually agree on the dates and timelines for cost-recovery activities on a case-by-case basis.
Notification letter to States about conduct of activity		Minimum of 120 days before start of activity		
	Acknowledging receipt of notification letter and acceptance of activity	30 days after receipt of notification letter		
Confirmation letter to States about the validation scope		Minimum of 90 days before start of activity	N/A	
	Acknowledging receipt of confirmation letter	30 days after receipt of confirmation letter		
	Updating CAPs	Ongoing submission of CAP updates at least 45 days before start of validation	N/A	
Latest date for changing scheduled activity		60 days before start of validation	90 days before start of audit and SSPIA	



USOAP CMA Activity Timelines – before the start of the activity

Responsibilities/tasks		Timelines by activity (days noted below are calendar days)		
ICAO	State	Validations	Audits and SSPIAs	Cost-recovery activities
Submission of release requests for short-term seconded auditors, SMEs or assessors to their sponsoring organization		60 days before start of validation	90 days before start of audit and SSPIA	
Preparation of activity plan (includes notifying States of activity team composition)		45 days before start of on-site activity		





<i>Responsibilities/tasks</i>		<i>Timelines by activity (days noted below are calendar days)</i>		
<i>ICAO</i>	<i>State</i>	<i>Validations</i>	<i>Audits and SSPIAs</i>	<i>Cost-recovery activities</i>
Provide draft report to State		90 days after last day of on-site activity		
	Provide comments on draft report	45 days from receipt of draft report		
Publication of final report		30 days from receipt of State comments		
Translation of report		Additional days as required		
	Submission/updating of CAPs	45 days from ICAO sending the final report to State (<i>audits and validations only</i>)		

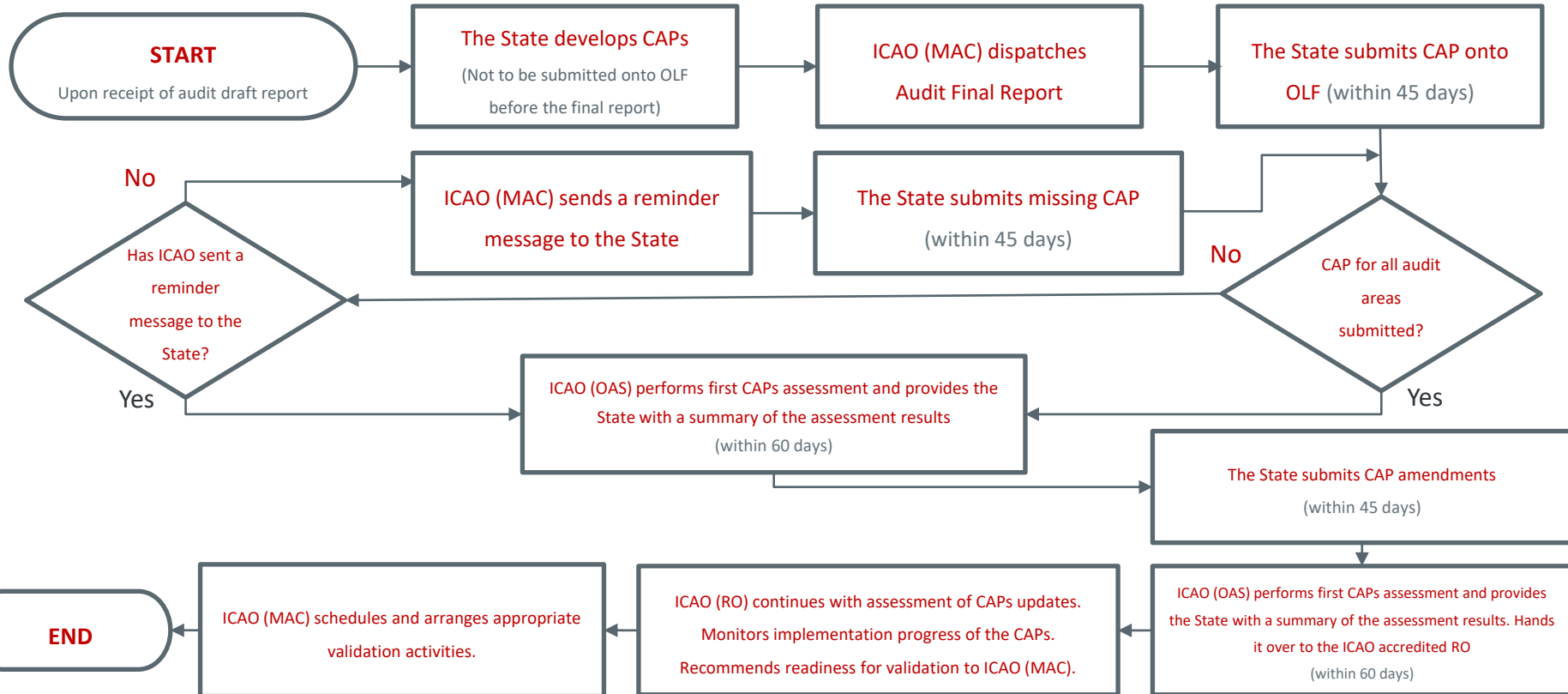


CAP Assessment and Monitoring Workflow

- OAS assesses proposed CAPs on the OLF to ensure that they address the associated findings. If a CAP does not address the finding or only partially addresses it, the State will be requested to revise and resubmit the CAP.
- The State can start implementing the corrective actions prior to OAS acceptance, though the State should be prepared to make changes to their activities if ICAO requests the revision and resubmission of a CAP.
- If the State makes any changes to the accepted CAP, the State shall submit a CAP update through the OLF. ICAO ROs will be responsible for the monitoring and assessment of the CAP updates submitted by the State.



CAP Assessment and Monitoring Workflow



- The NCMCs play an integral and pivotal role in supporting a State's participation in USOAP.
- The NCMCs serve as the primary point of contact of the Member State in interacting with ICAO on all matters related to USOAP. This includes familiarizing, implementing and completing all of the State's responsibilities and duties as part of USOAP CMA processes and activities.
- Appendix F provides the guidelines relating to the responsibilities, functions, and duties of NCMCs. It is directed at State authorities and intended as a guide to assist States in selecting NCMCs and supporting their roles and responsibilities.





1. General

2. Why States Need a National Continuous Monitoring Coordinator?

2.1 State Obligations Under USOAP

2.2 NCMC's Roles And Responsibilities

2.3 NCMC Coordination With Regional Continuous Monitoring Coordinators (RCMCs)

2.4 Selecting An NCMC

2.5 Training An NCMC

3. What Does An NCMC Do?

3.1 Preparing The State For USOAP CMA Activities

3.2 (During) USOAP CMA On-Site Activities

3.3 (During) USOAP CMA Off-Site Activities

3.4 USOAP CMA Post-Activity Actions

