



INTERNATIONAL CIVIL AVIATION ORGANIZATION

A United Nations Specialized Agency

USOAP Continuous Monitoring Approach (CMA) Workshop

Module 2

Overview of the USOAP CMA

Objective



The objective of this module is to provide an updated overview of the USOAP CMA methodology.

Outline

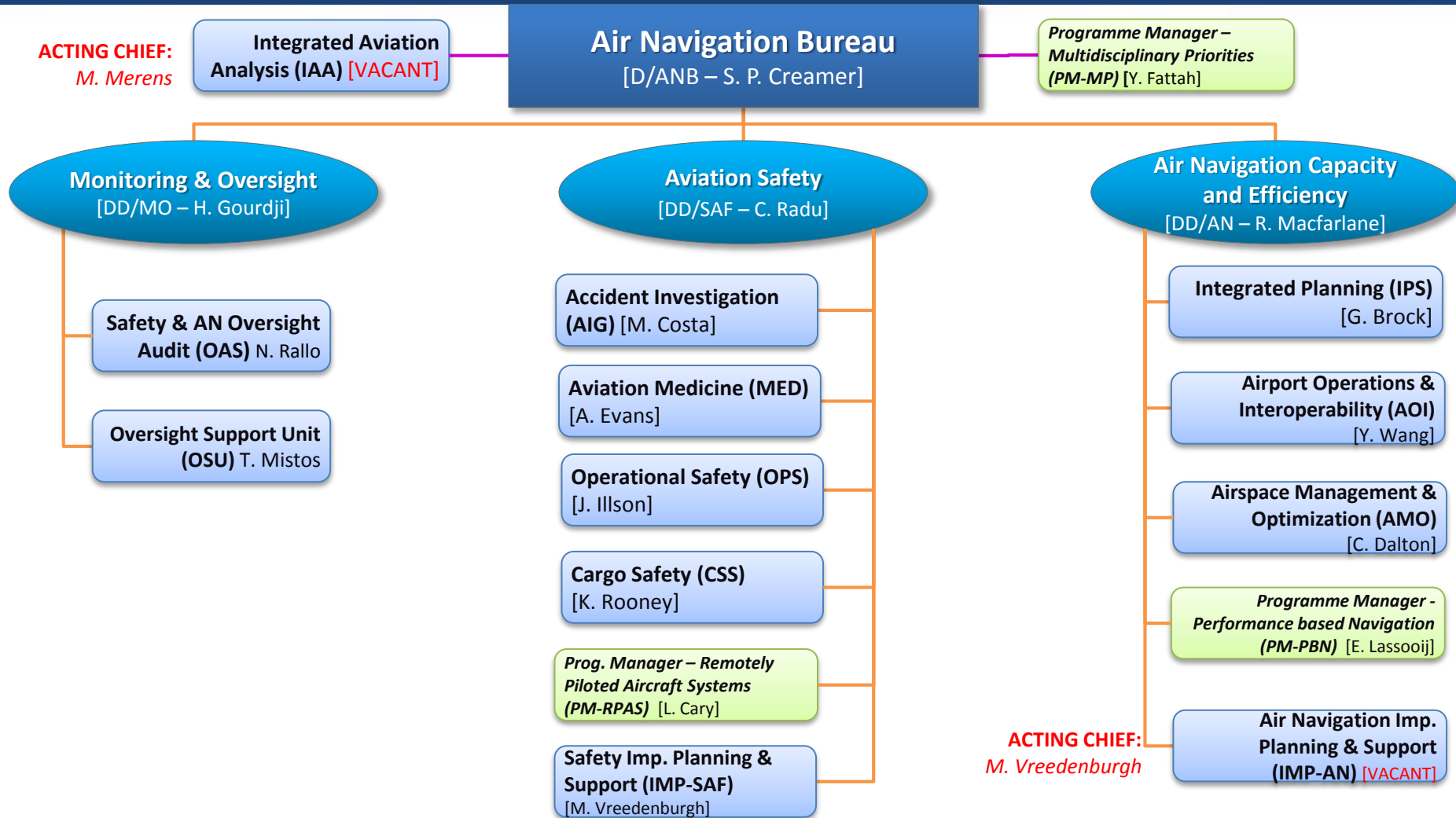


- 1) USOAP CMA
- 2) Components of the USOAP CMA
 - a) Collection of safety information
 - b) Determination of State safety risk profile
 - c) Prioritization and conduct of USOAP CMA activities
 - d) Update on Effective Implementation (EI) and status of Significant Safety Concerns (SSCs)
- 3) Critical Elements (CEs) of the safety oversight system
- 4) USOAP audit areas
- 5) Annex 19 — *Safety Management*
- 6) USOAP CMA computer-based training (CBT)



USOAP CMA

ANB Organizational Chart



USOAP CMA



Continuous Monitoring
(Online Framework)

AUGUST 2013

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3
4	5	6	7	8	9
10	11	12	13	14	15
16	17	18	19	20	21
22	23	24	25	26	27
28	29	30	31		

Planning and
scheduling



On-site activities



Off-site validation
activities



Reports, analyses
and working papers

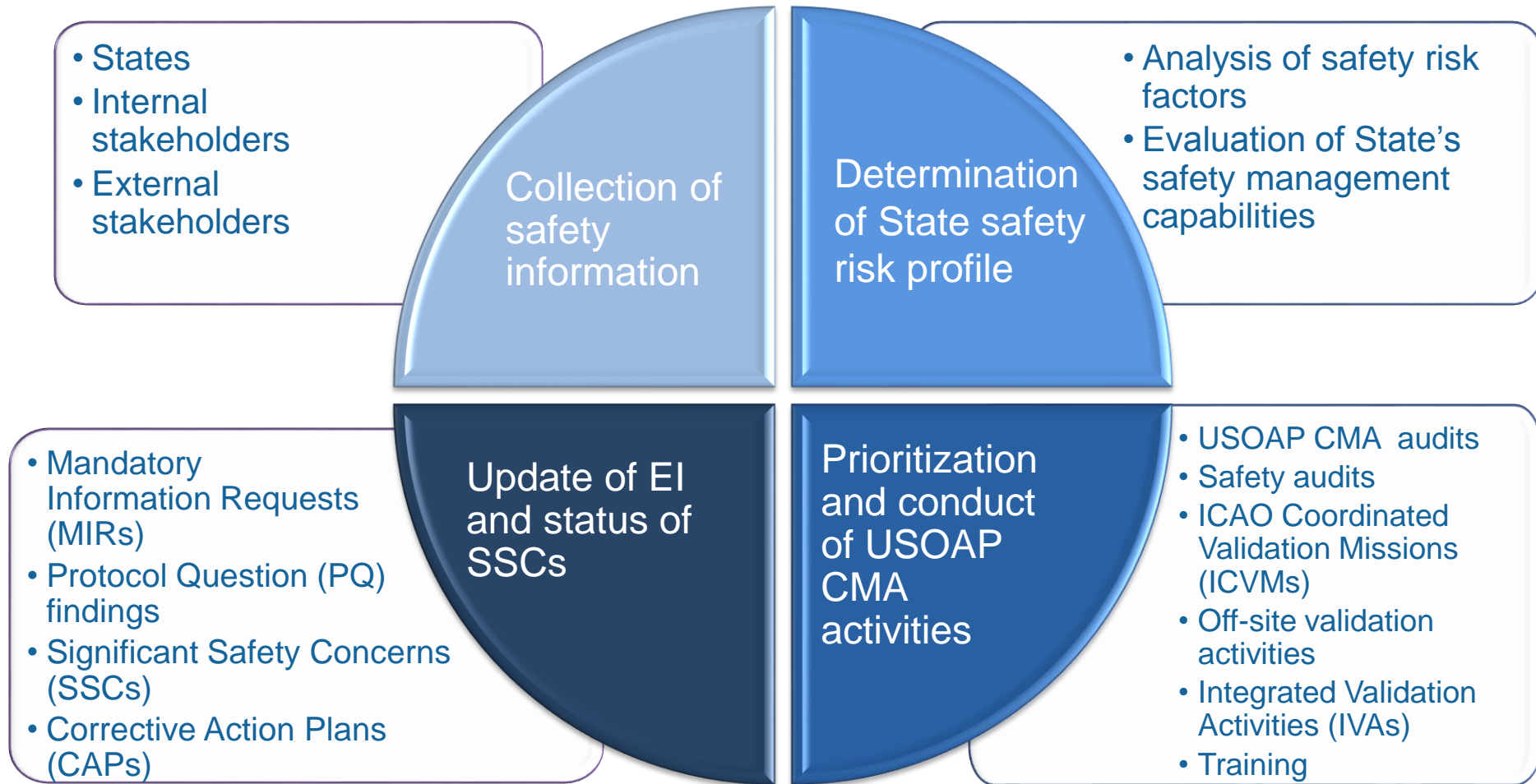


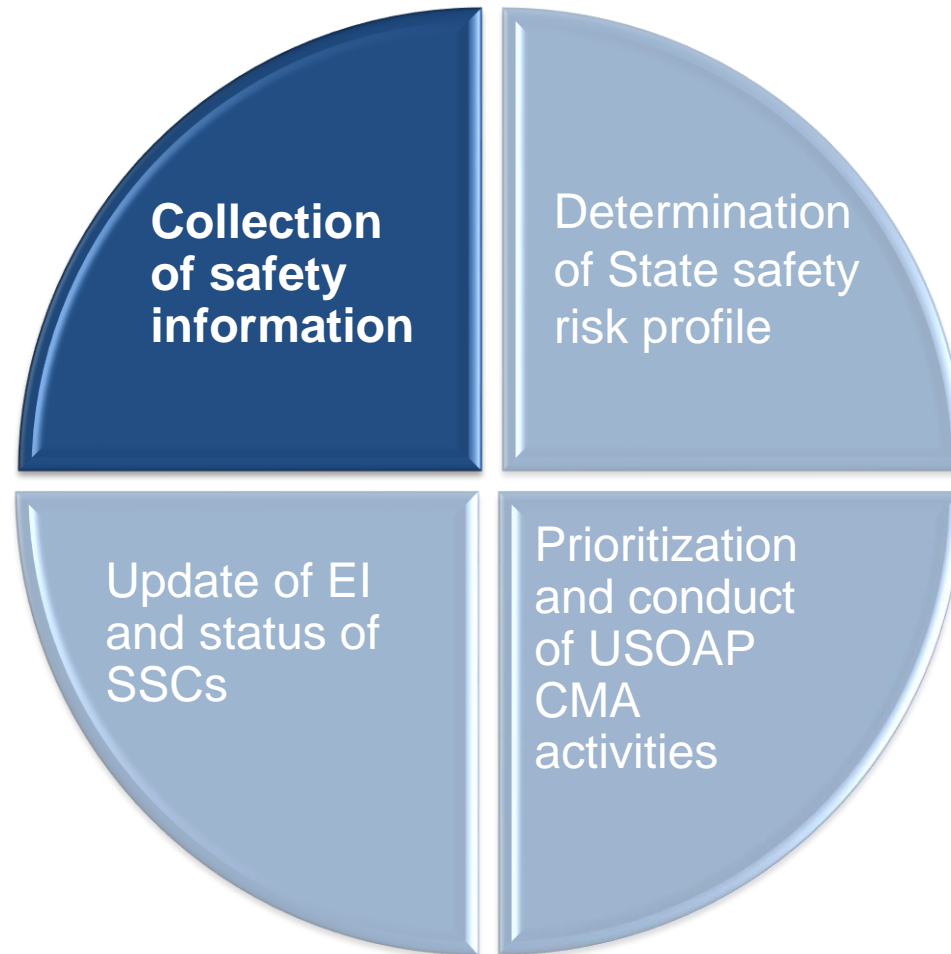
Training and
workshops



Components of the USOAP CMA

USOAP CMA components





Collection of safety information



States provide:

- State Aviation Activity Questionnaire (SAAQ);
- Compliance Checklists (CCs) on the Electronic Filing of Differences (EFOD) system;
- Self-assessment; and
- Updated CAPs.

Collection of safety information



Internal stakeholders include:

- ICAO Secretariat Bureaus/Sections; and
- Regional Offices (ROs).

Collection of safety information



External stakeholders include:

- Airports Council International (ACI);
- Civil Air Navigation Services Organisation (CANSO);
- European Aviation Safety Agency (EASA);
- European Commission (EC);
- EUROCONTROL;
- Interstate Aviation Committee (IAC);
- International Air Transport Association (IATA); and
- other national, regional, supranational and international organizations recognized by ICAO.

Note.— These organizations conduct activities that generate safety information.



Main factors for determining State safety risk profile



- a) EI (determined through previous USOAP CMA activity);
- b) Existence of SSC(s);
- c) Level of aviation activities in the State for each audit area;
- d) Projected growth of air traffic and aviation activities;
- e) State's capability in submitting CAPs acceptable to ICAO;
- f) Level of progress made by State in implementing CAPs;
- g) Major changes in organizational structure of State's CAA;
- h) Ongoing or planned assistance projects;
- i) State's progress in achieving GASP objective on safety management;
- j) Air navigation deficiencies; and
- k) Regional Office (RO) mission reports.

LEI versus Traffic

Dataset: LEI
 Last updated: 27/01/2013
 Items: 188

Description

The below chart shows LEI versus commercial scheduled departures in 2011 per State for a defined group of States.

You can select a group of States from the drop-down menu. If a specific group of States does not exist, you can create that group through the "Manage my groups" section on the left. you can also view the composition of a selected group.

The LEI values may differ slightly from those published in the USOAP audit reports that were published from the period 2006 to 2010 due to changes in the LEI calculation algorithm as well as changes in the protocol question grouping structure performed since the State's audit.

Select a group

WORLD (Merens Marco, 1913 hits)

Show State Names:

[View group composition](#)

[Generate graph](#)

Manage my Groups

Add or modify your custom groups of States.

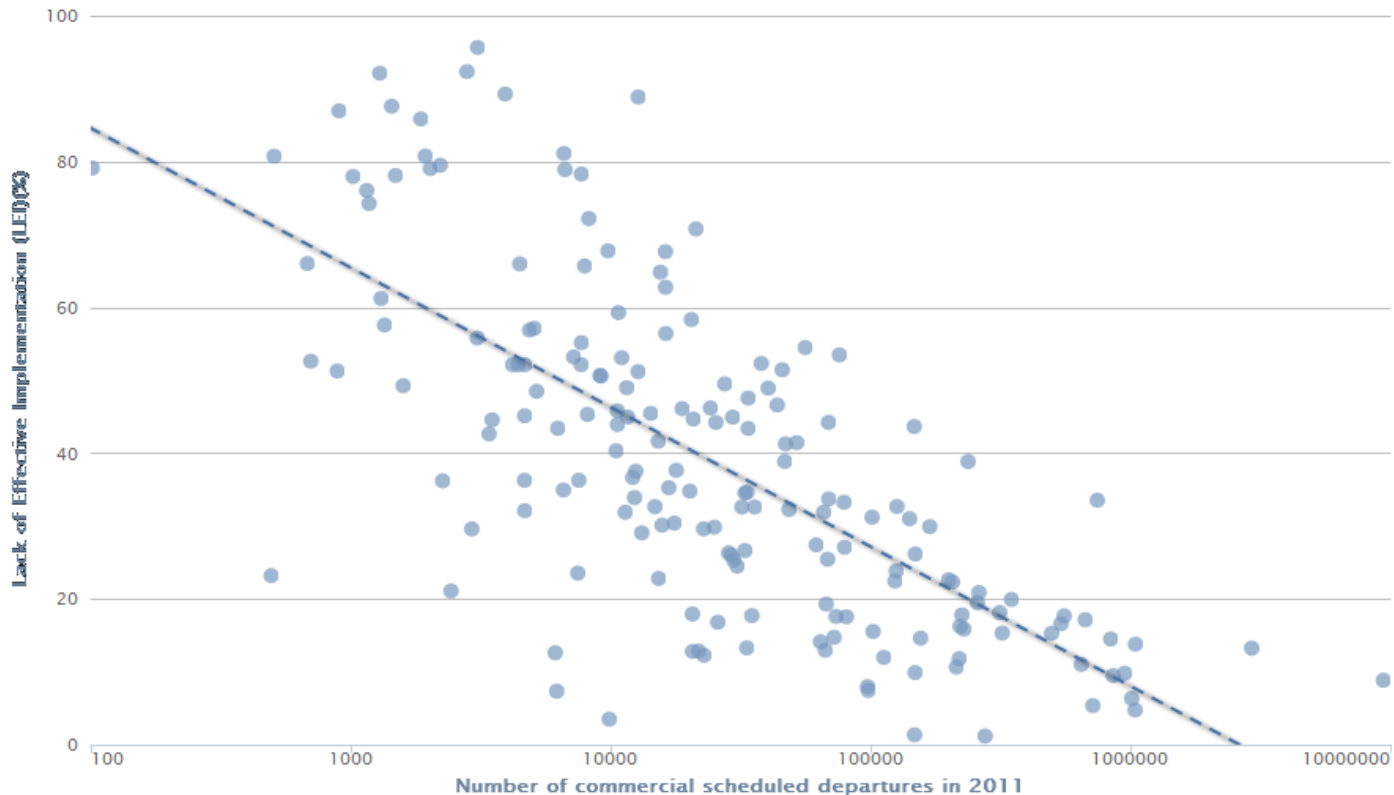


New Edit

Choose your predictor (s)

Build a priority list

Overall LEI versus Traffic by State



Select a group

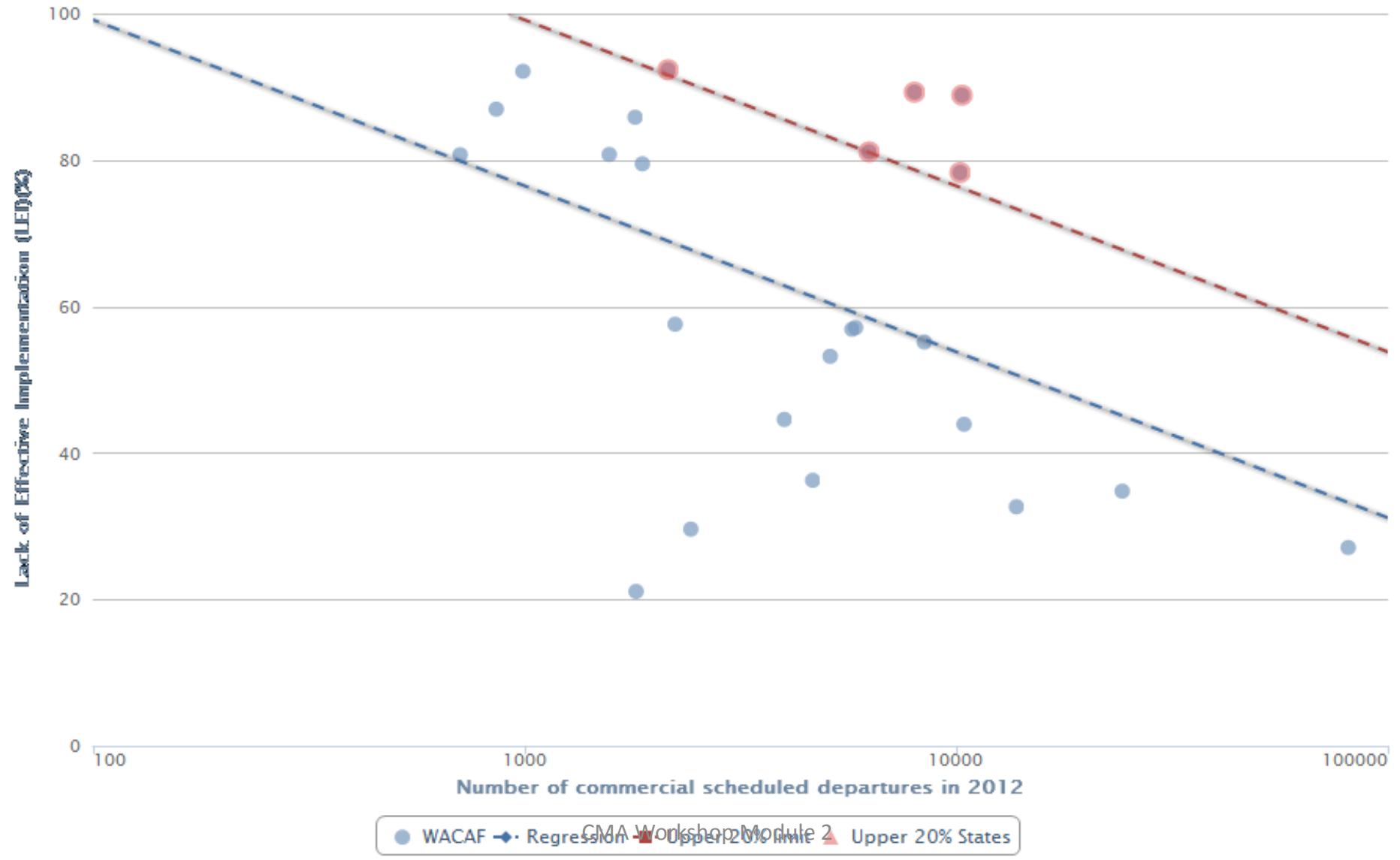
WACAF (Merens Marco, 375 hits)

Show State Names:

[View group composition](#)

[Generate graph](#)

Overall LEI versus Traffic by State





Prioritization and conduct of USOAP CMA activities



MO prioritizes CMA activities in States based on:

- a) State's safety risk profile;
- b) Approved MO budget; and
- c) Available MO resources.

Prioritization and conduct of USOAP CMA activities



Criteria used to select a State for an *audit*:

- a) State's safety risk profile;
- b) Date of last audit;
- c) Significant changes in any audit area within State's civil aviation system;
- d) Information submitted by State through PQ self-assessment;
- e) Recommendations from RO or ANB sections;
- f) Information shared by recognized international organizations; and
- g) Regional balance.

Prioritization and conduct of USOAP CMA activities



Criteria used to select a State for an *ICVM*:

- a) State's safety risk profile;
- b) State's readiness (via reported progress in CAP implementation);
- c) State's progress in resolving identified SSCs;
- d) Information submitted by State through PQ self-assessment;
- e) Recommendations from RO or ANB sections;
- f) Information shared by international organizations;
and
- g) Regional balance.

Prioritization and conduct of USOAP CMA activities



Criteria used to select a State for an *off-site validation activity*:

- a) State has PQ findings associated with CEs 1 to 5;
- b) At least 50% of State's corresponding CAPs meet the following three conditions:
 - 1) They fully address PQ findings;
 - 2) They are fully implemented; and
 - 3) State has submitted all evidence of implementation through OLF; and
- c) Information submitted by State through PQ self-assessment.

Prioritization and conduct of USOAP CMA activities



Factors determining scope	ICVM	CMA Audit
Level of aviation activity in the State	✓	✓
Any changes to the State's system		✓
CAPs' acceptability	✓	
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	✓	✓

Prioritization and conduct of USOAP CMA activities



Factors determining duration and team composition	ICVM	CMA Audit
Scope	✓	✓
Complexity of the State's system	✓	✓
Number of Not-Satisfactory PQs to be addressed	✓	
Other factors, such as State's official language	✓	✓

Prioritization and conduct of USOAP CMA activities



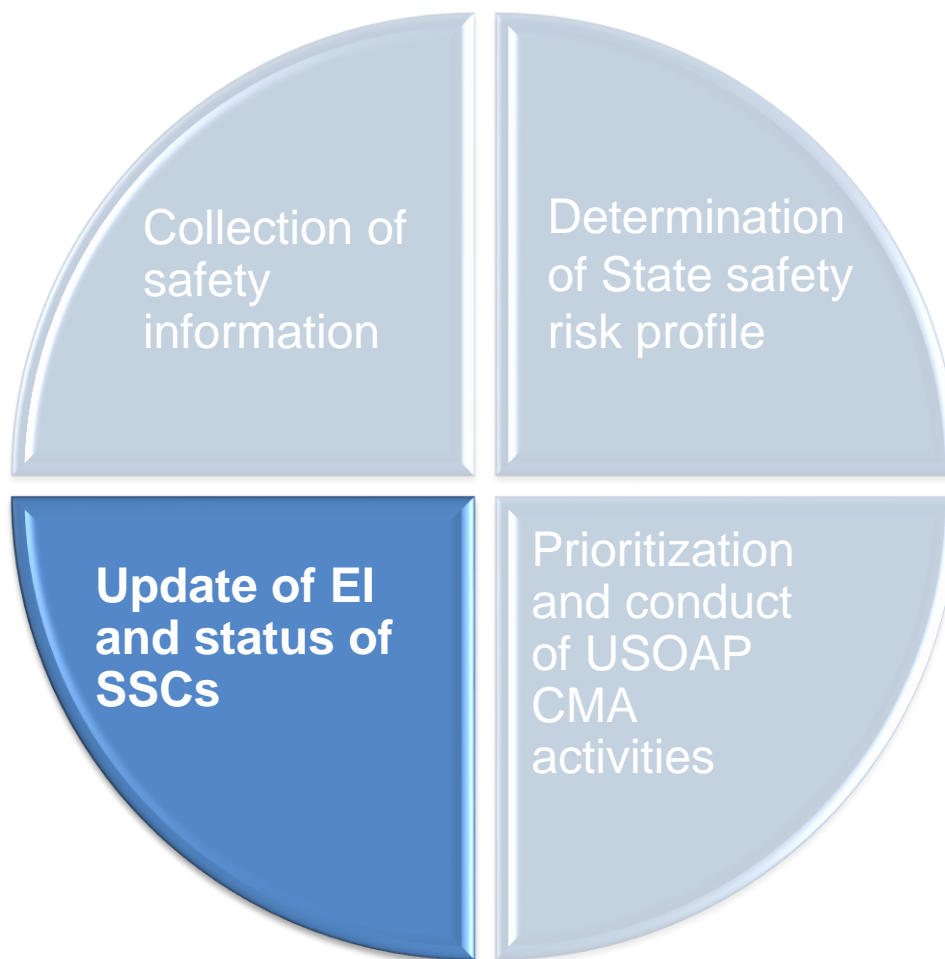
Off-site validation activity:

- The objective is to validate CAPs implemented by a State without conducting an on-site activity, i.e. an audit or ICVM.
- This activity is conducted at ICAO HQ.
- To qualify for an off-site validation activity, CAPs should address most of the PQ findings associated with CEs 1 to 5 (collectively known as “establishment” CEs).
- Will be considered only if these three criteria are met:
 - 1) CAPs fully address PQ findings;
 - 2) Most CAPs are fully implemented; and
 - 3) Relevant evidence uploaded by the State on the OLF.

Prioritization and conduct of USOAP CMA activities



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



Update of EI



EI calculation:

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

Effective Implementation (EI)

- The validation of collected safety information enables ICAO to continuously update a State's EI.
- State's EI is reported on the Online Framework (OLF) and on iSTARS 2.0, i.e. SPACE.

Update of EI – amendment process



Effective Implementation (EI)

- PQs have been revised and updated and are now applicable following a progressive transition which began in May 2013.
- The implementation of new/amended PQs will result in minor impact to States' EI due to:
 - a) deletion of some PQs,
 - b) addition of new PQs, and
 - c) merging of existing PQs with others.

Update of EI – amendment process



- MO revises and updates PQs on a periodic basis to:
 - a) reflect the latest changes in ICAO provisions, and
 - b) harmonize and improve PQ references and content.
- Revision of PQs incorporates inputs from:
 - a) States,
 - b) ICAO Air Navigation Bureau (ANB),
 - c) ROs,
 - d) USOAP mission team members, and
 - e) external stakeholders.

Update of EI – amendment process



- Latest amendments to the PQs related to Annex 19 provisions have been completed and are published on the OLF.
- Mapping between the previous and new/amended PQs are also available in all areas.

Mandatory Information Request (MIR)

- can be issued by MO when concerns are raised by internal/external stakeholders regarding a State's safety oversight capabilities.
- can lead to a finding or even an SSC.

Mandatory Information Request (MIR)

- States are required to provide status of PQ compliance using the “*Manage State Self-Assessment*” tool on the OLF.
- MO may communicate with States through MIRs to seek additional information on compliance with requirements.

Update of EI



- Status of PQs may be changed through the validation process conducted by MO based on:
 - CAPs or other information received from States, supported by appropriate evidence; and
 - Information received from ICAO ROs, recognized organizations and other stakeholders.
- Status of PQs may also change based on information received from States in response to MIRs.

Update of EI



With the new online monitoring activities, MO may review and validate, off-site, some PQs related to CE-1 to CE-5.

However, validation of PQs related to CE-6 , CE-7 and CE-8 will typically require an on-site activity.

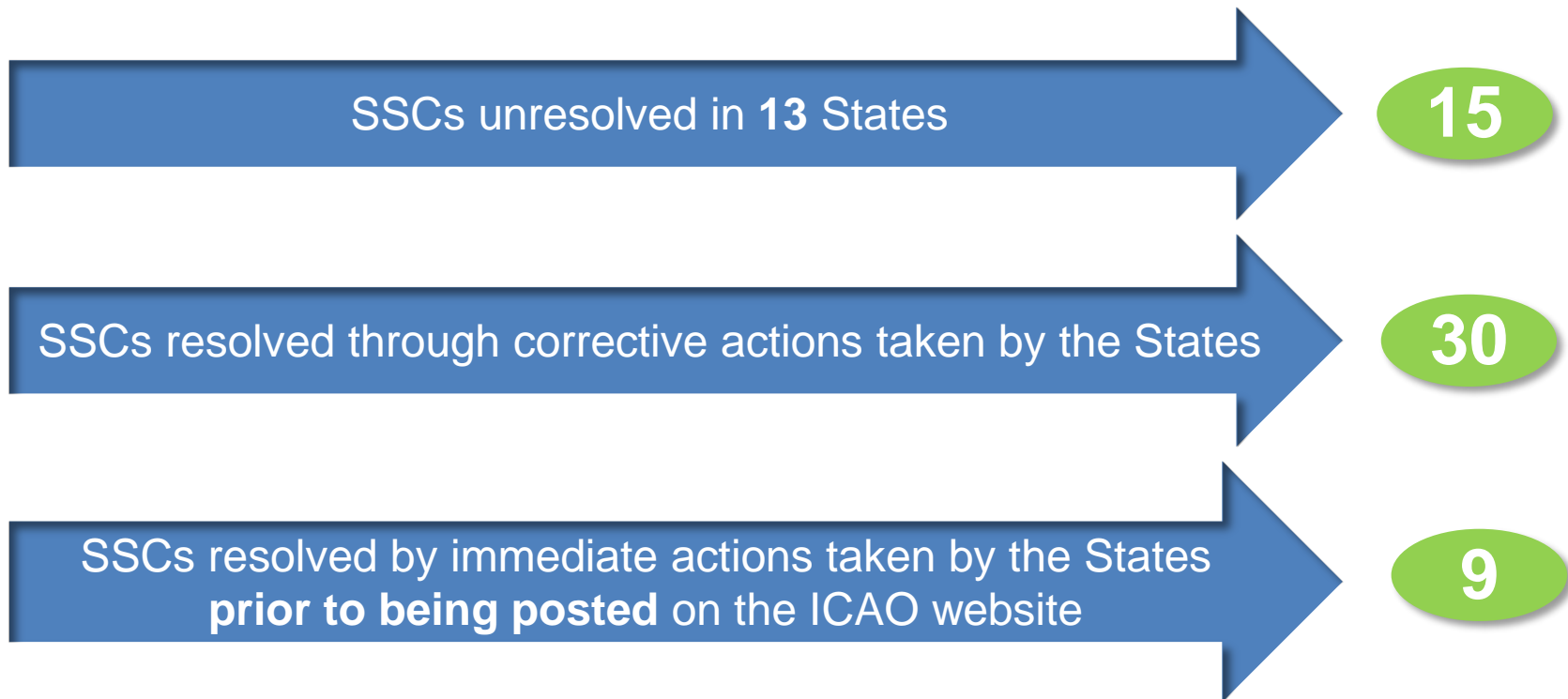


Definition of an SSC

“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.”

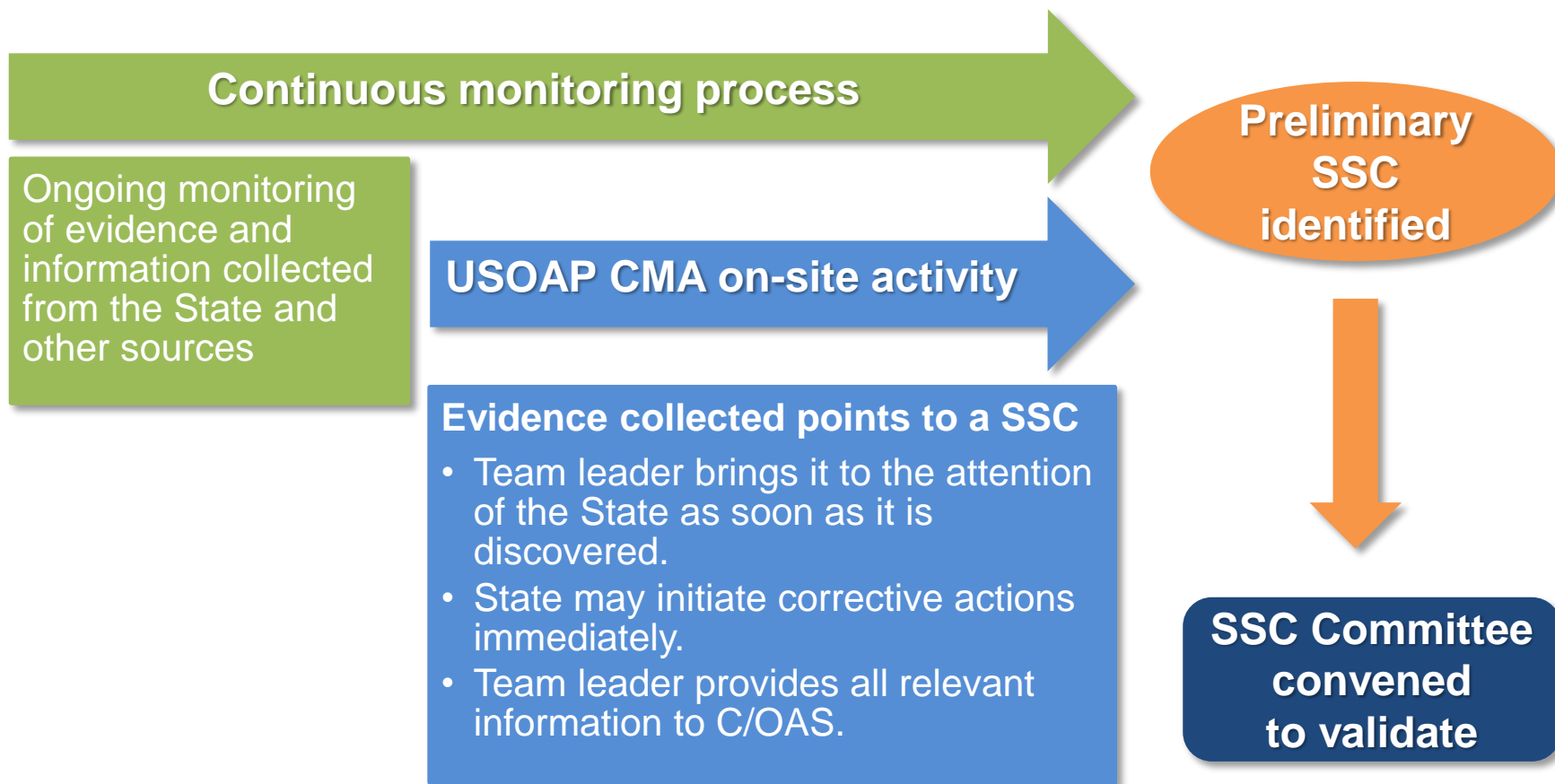
Reference: EB 2010/7 dated 19 February 2010

Status of SSCs

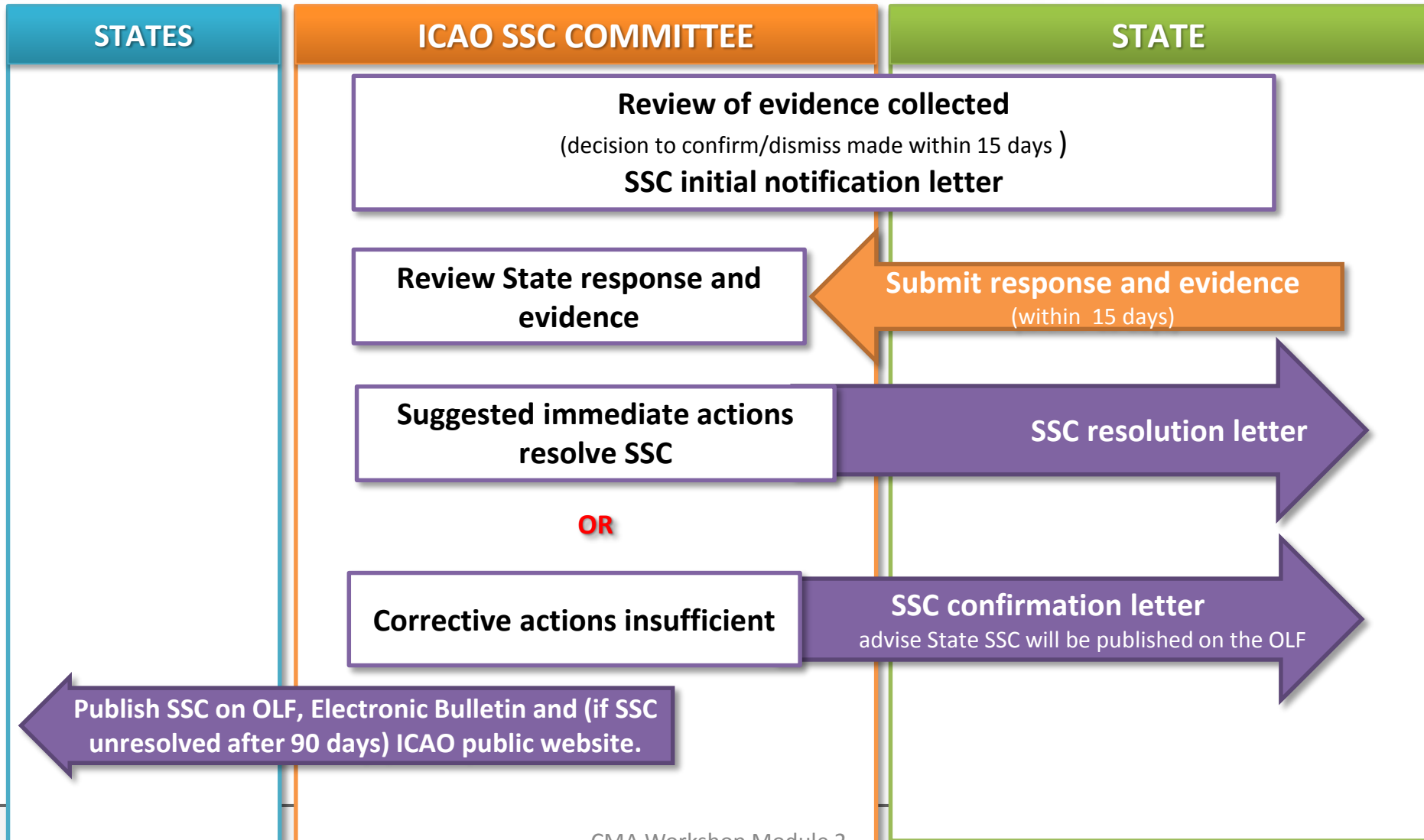


Note.— Numbers last modified on 28 May 2015.

Status of SSCs — Mechanism

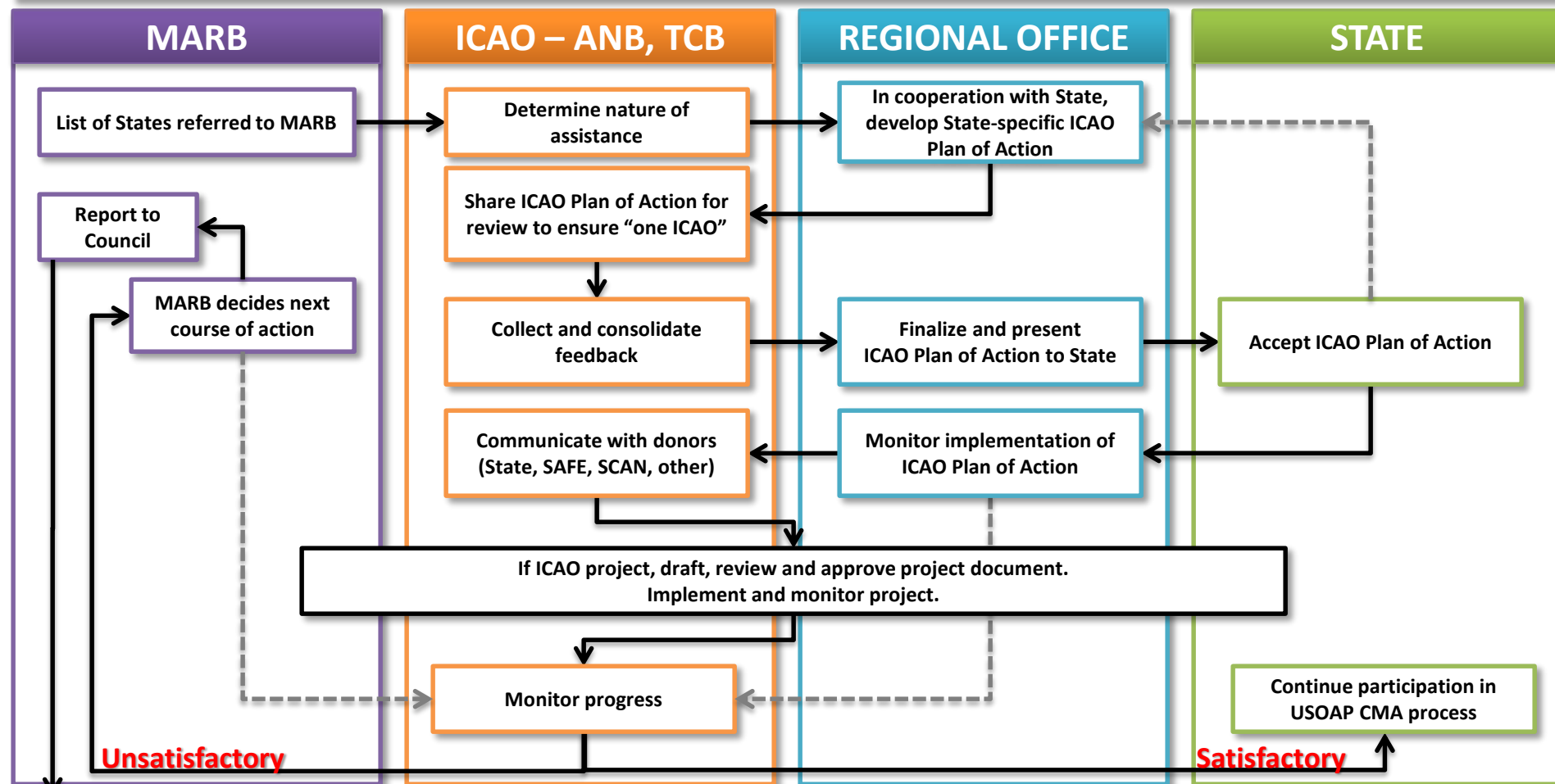


Status of SSCs – Mechanism



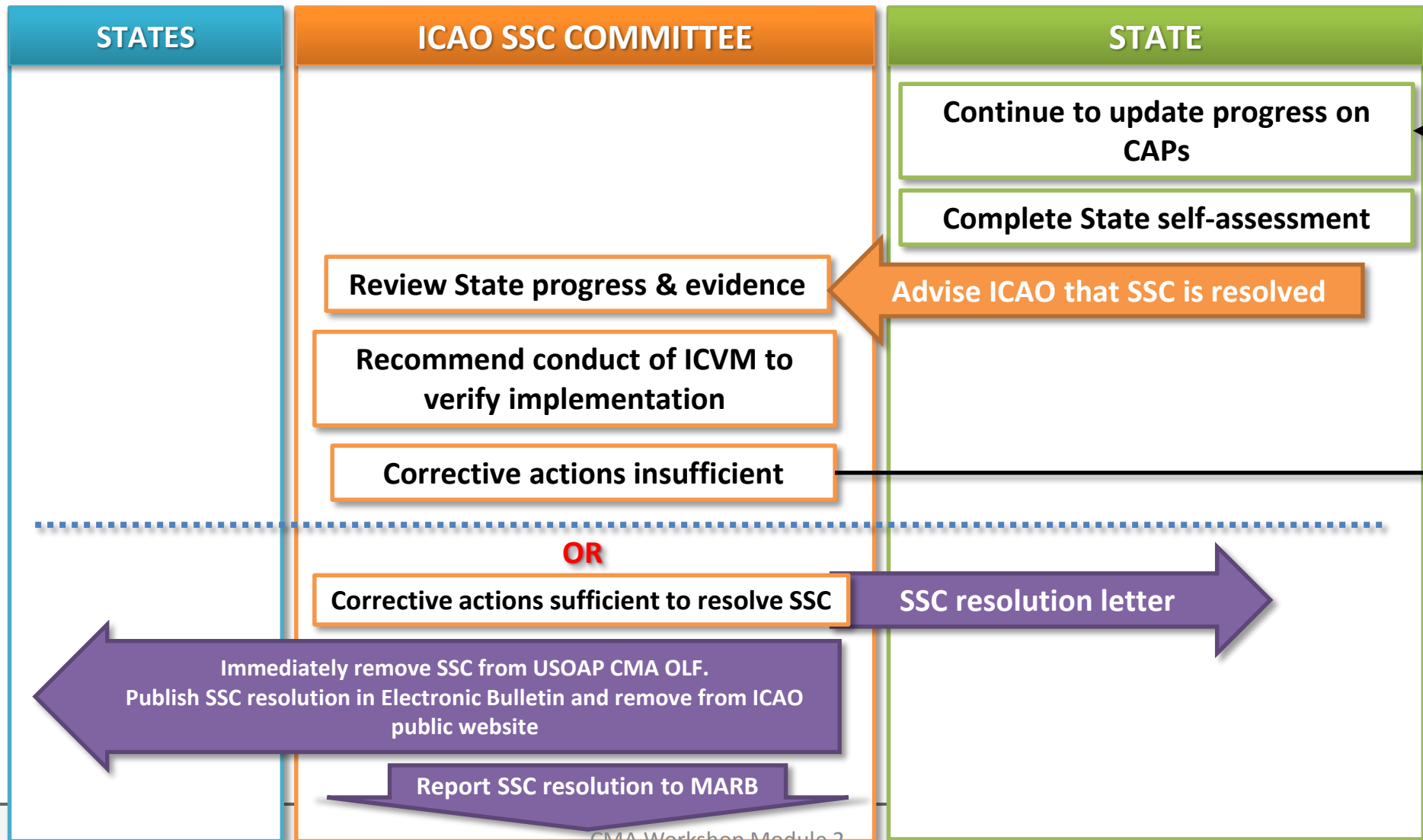
Status of SSCs – Mechanism

ICAO PLAN OF ACTION



COUNCIL

Status of SSCs – Mechanism

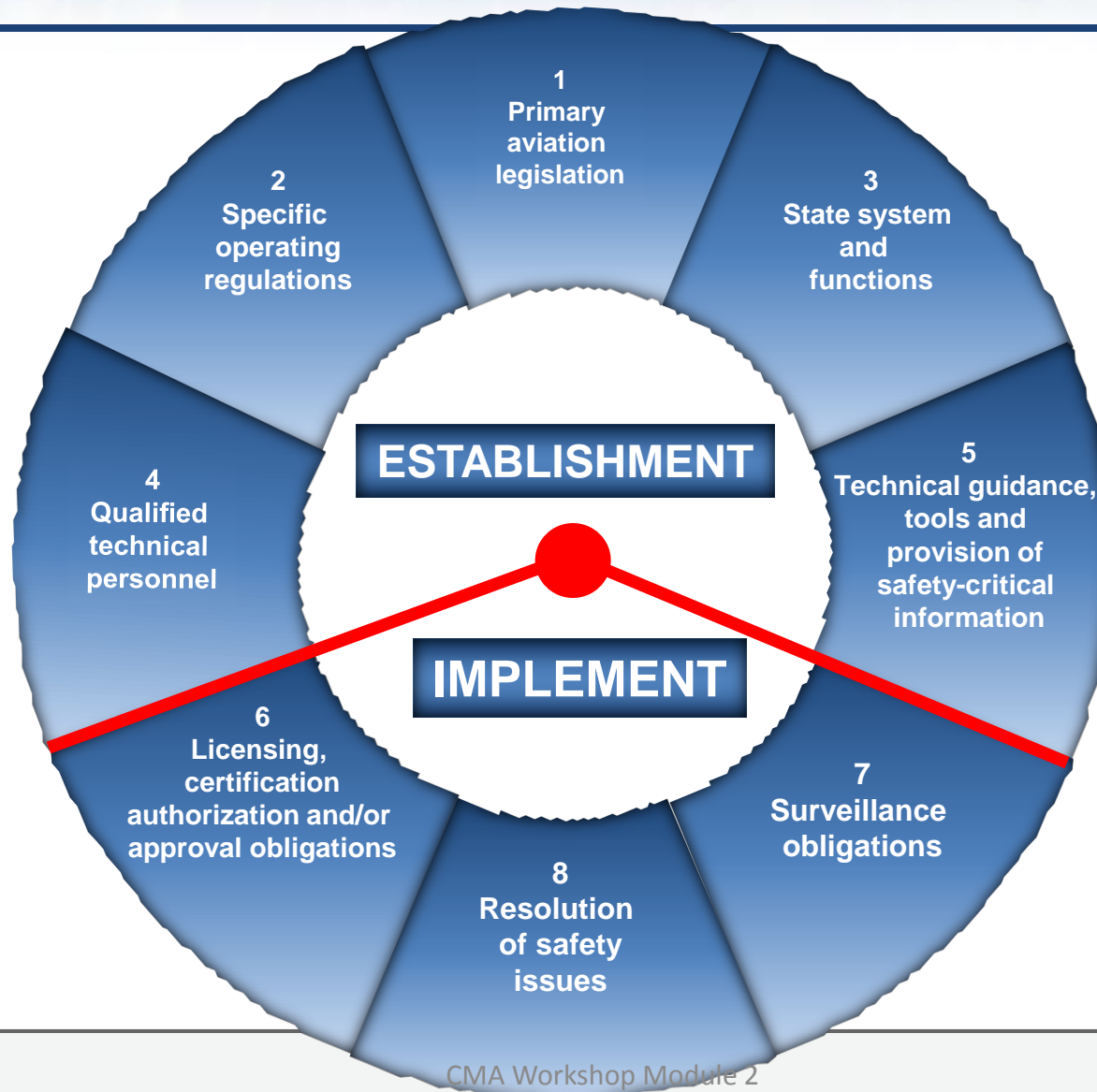


Critical Elements of the safety oversight system

ICAO carries out audits and other monitoring activities to determine its Member States' safety oversight capabilities by:

- Assessing the 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 status of the Member States' implementation of:
 - Safety-related ICAO Standards and Recommended Practices (SARPs);
 - Associated procedures; and
 - Guidance material.

Critical Elements of an Effective Safety Oversight System



CEs of the safety oversight system



CE-1: Primary aviation legislation

- The State shall promulgate a comprehensive and effective aviation law, consistent with the size and complexity of the State's aviation activity and with the requirements contained in the Convention on International Civil Aviation, that enables the State to regulate civil aviation and enforce regulations through the relevant authorities or agencies established for that purpose.
- The aviation law shall provide personnel performing safety oversight functions access to the aircraft, operations, facilities, personnel and associated records, as applicable, of service providers.

CEs of the safety oversight system



CE-2: Specific operating regulations

- The State 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.

CEs of the safety oversight system



CE-3: State system and functions

- The State shall establish relevant authorities or agencies, as appropriate, supported by sufficient and qualified personnel and provided with adequate financial resources. Each State authority or agency shall have stated safety functions and objectives to fulfill its safety management responsibilities.
- The State shall ensure that inspectors 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.

Note.— In addition, Appendix 5 to Annex 6, Part I, and Appendix 1 to Annex 6, Part III, require the State of the Operator to use such a methodology to determine its inspector staffing requirements. Inspectors are a subset of personnel performing safety oversight functions.

CEs of the safety oversight system



CE-4: Qualified technical personnel

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

CEs of the safety oversight system



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

- The State 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.
- The State shall provide technical guidance to the aviation industry on the implementation of relevant regulations.

CEs of the safety oversight system



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

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

CEs of the safety oversight system



CE-7: Surveillance obligations

- The State shall implement documented surveillance processes, by defining and planning inspections, audits, and monitoring activities on a continuous basis, to proactively assure that aviation license, certificate, authorization and/or 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.

CEs of the safety oversight system



CE-8: Resolution of safety issues

- The State shall use a documented process to take appropriate corrective actions, up to and including enforcement measures, to resolve identified safety issues.
- The State shall ensure that identified safety issues are resolved in a timely manner through a system which monitors and records progress, including actions taken by service providers in resolving such issues.

CEs of the safety oversight system



The definitions of the eight CEs of a safety oversight system are found in Annex 19, Appendix 1.

Guidance on the eight CEs is provided in the *Safety Oversight Manual, Part A — The Establishment of a State's Safety Oversight System* (Doc 9734).

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>

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Safety Oversight Information

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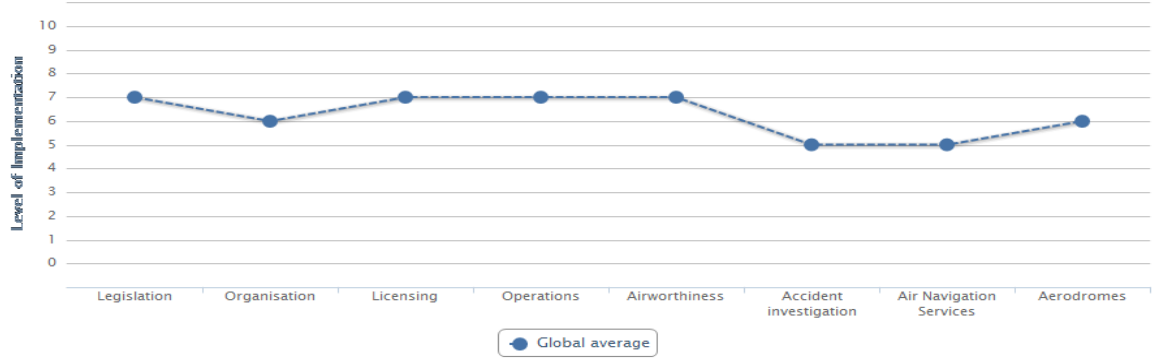
USOAP Continuous Monitoring Approach (CMA) Activities - Results

Description

This information has been generated and updated from the former ICAO Flight Safety Information Exchange (FSIX) website. You can use the search box to find a State and then compare the result of its last USOAP CMA activity with the global average or any other State on the list. The Level of Implementation of each Audit Area is rated from 0 to 10, with 0 being "not implemented" and 10 being "fully implemented".

Level of Implementation

[Reset graph](#)



State	Audit period	Progress validation period	Graph
Albania	01-Dec to 10-Dec-2009		Compare
Algeria	31-May to 09-Jun-2011		Compare
Andorra	26-Feb to 28-Feb-2007		Compare
Angola	26-Nov to 05-Dec-2008	15-Feb to 18-Feb-2010	Compare
Antigua and Barbuda	05-Nov to 14-Nov-2007		Compare
Argentina	25-Nov to 05-Dec-2008		Compare

USOAP CMA audit areas

USOAP CMA audit areas



Primary aviation legislation and
civil aviation regulations (LEG)
Chicago Convention &
Annexes 2 and 19

Civil aviation organization
(ORG)
SAAQ

Personnel licensing and
training (PEL)
Annexes 1 and 19

Aircraft operations (OPS)
Annexes 6, 9, 18, 19 and
PANS-OPS

Airworthiness of aircraft
(AIR)
Annexes 6, 7, 8, 16 and 19

Aircraft accident and
incident investigation (AIG)
Annexes 13 and 19

Air navigation services (ANS)
Annexes 2, 3, 4, 5, 10, 11, 12,
15, 19 and PANS-ATM

Aerodromes and ground
aids (AGA)
Annexes 14 and 19

Annex 19 — *Safety Management*

Annex 19 — *Safety Management*



Annex 19 — *Safety Management*

The Air Navigation Commission, at the fourth and fifth meetings of its 190th Session on 8 May 2012, considered proposals developed by the Safety Management Panel (SMP) to transfer the provisions on safety management responsibilities and processes from existing Annexes for consolidation in new Annex 19 — *Safety Management* and related consequential amendment proposals to existing Annexes developed by the Secretariat.

The new Annex 19 and consequential amendments to Annexes 1, 6, 8, 11, 13 and 14, Volume I have been applicable since 14 November 2013.

USOAP CMA CBT

As per EB 2011/44, the first series of 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.

USOAP CMA CBT



- Per Assembly Resolution A37-5, States and recognized organizations are called upon to nominate experts for secondment to ICAO on a long-or short-term basis to support USOAP CMA.
- Those who have already completed the CBT course will be re-registered to go over the revised course material without having to write another exam.
- The LEG/ORG CBT are now available.
- ICAO will waive CBT fees for State-nominated experts who meet stated qualifications and experience criteria for the various audit areas (per SL AN19/34-15/35, 13 May 2015).
- More information on:
<http://www.icao.int/safety/CMAForum/Pages/USOAPCMA-CBT.aspx>

States' Main Obligations

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

Review



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(MID) Office
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Southern African
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THANK YOU