



INTERNATIONAL CIVIL AVIATION ORGANIZATION

A United Nations Specialized Agency

Update on USOAP Continuous Monitoring Approach (CMA)

Outline



- 1) SAM States' USOAP CMA status
- 2) USOAP CMA
- 3) USOAP CMA Components
- 4) Annex 19 — *Safety Management*
- 5) USOAP CMA Computer-Based Training
- 6) USOAP CMA results report Jan13-Dec15

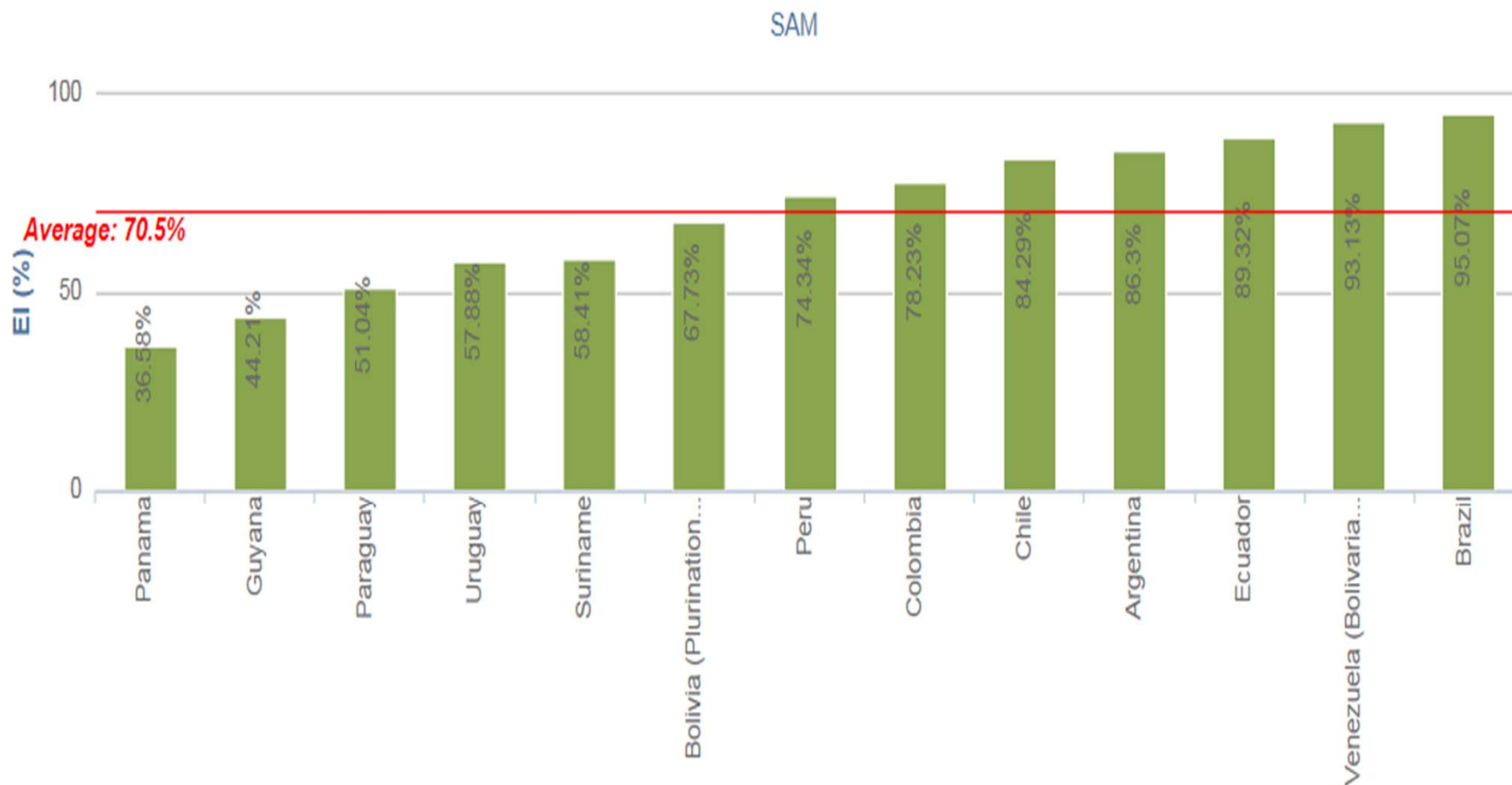


SNAPSHOT OF SAM STATES' USOAP CMA STATUS

SAM States' EI



Overall EI by State

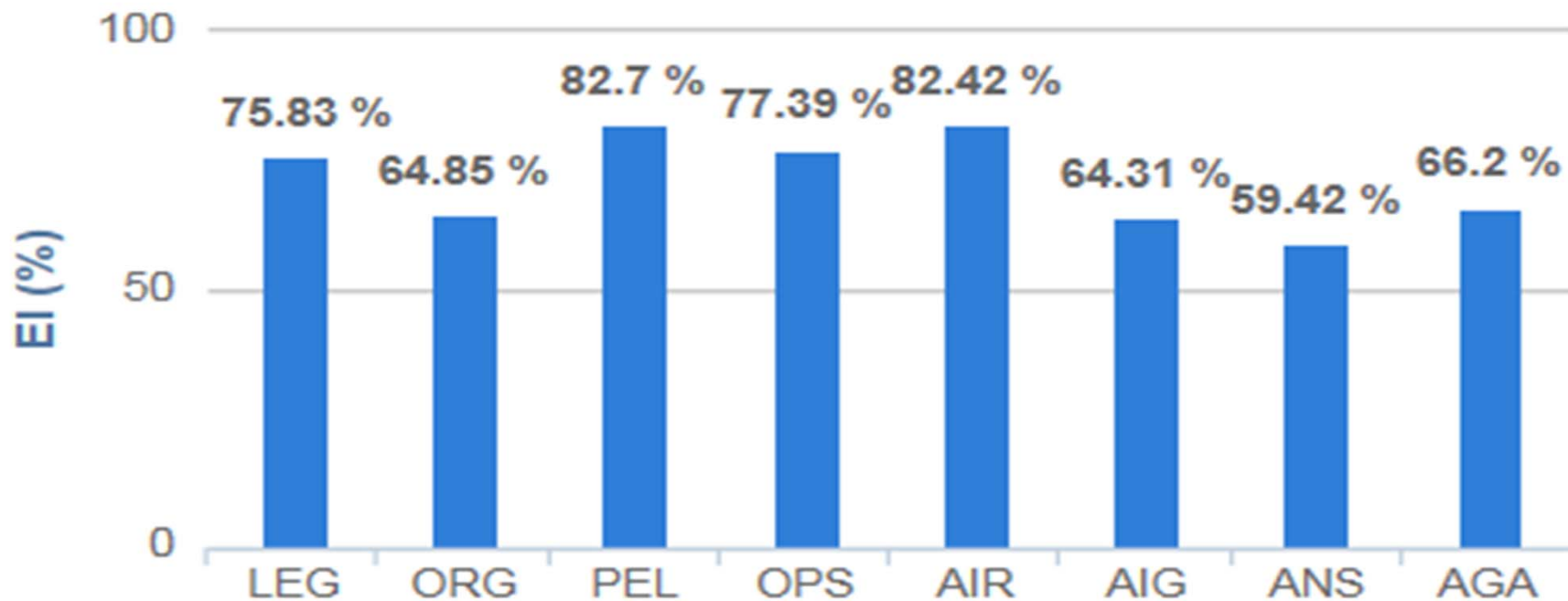


SAM States' average EI by area



EI by Area

SAM

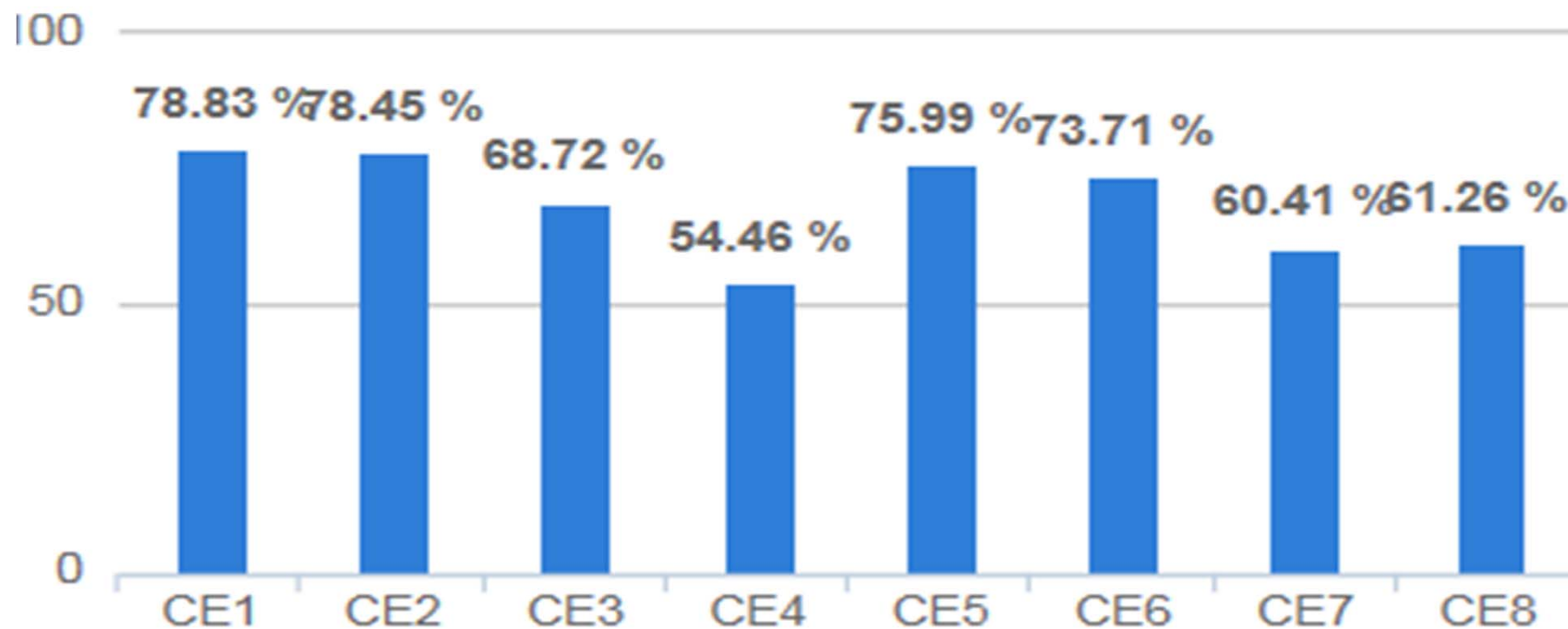


SAM States' average EI by CE



EI by CE

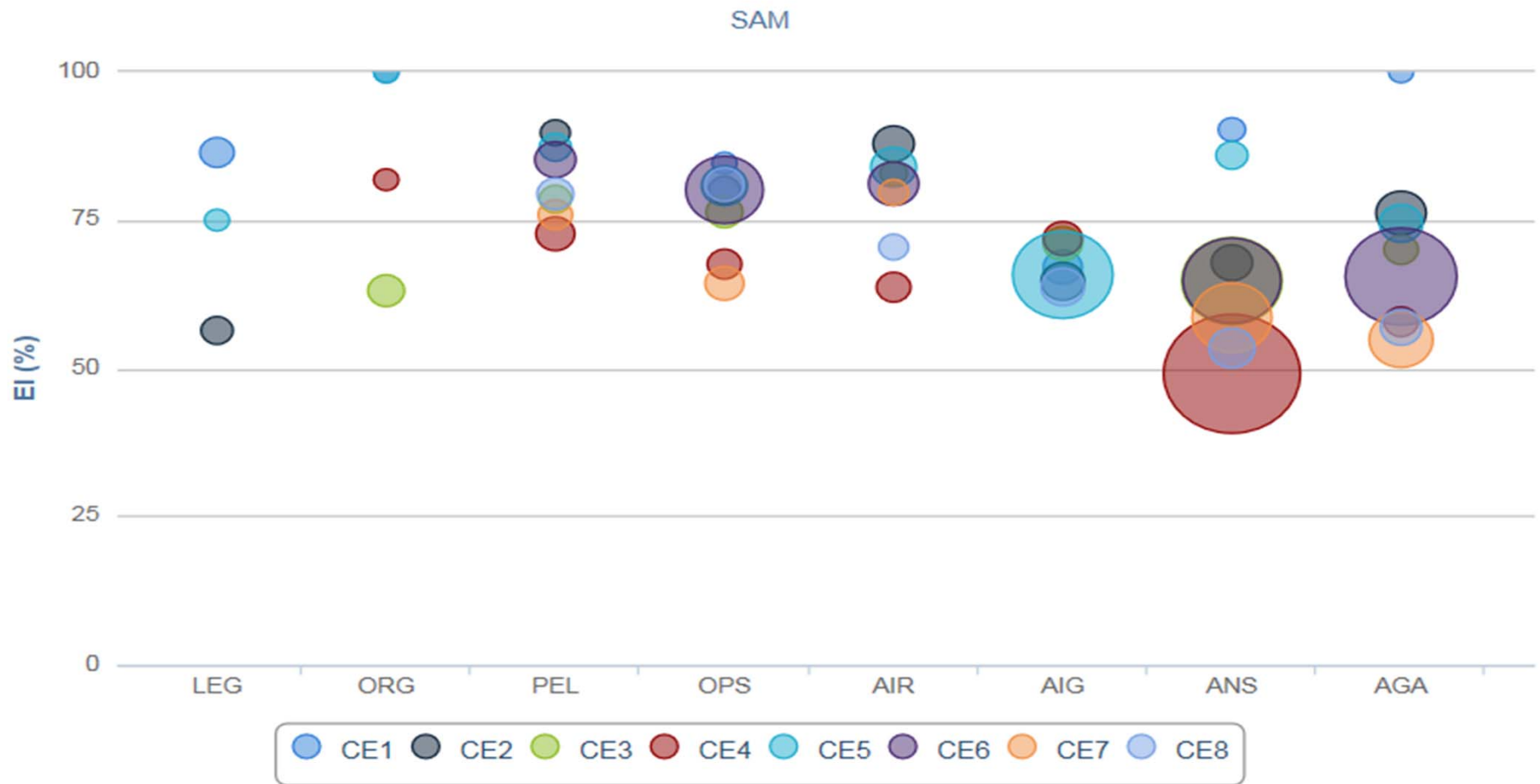
SAM



N/S PQs by CE/area combination for SAM States



Average Unsatisfactory PQs by CE/Area Combination



USOAP activities in SAM States in 2016



- ICVMs : Uruguay, Paraguay, Bolivia + possibly Guyana
- Off-site validation activities: Paraguay

Scheduled USOAP activities in SAM States in 2017 (tbc in EB June 2016)



- Audit: Colombia
- ICVMs: Chile, Panama
- Workshop: Lima, Peru, 12-14 Dec 2017

Provision of information on the OLF

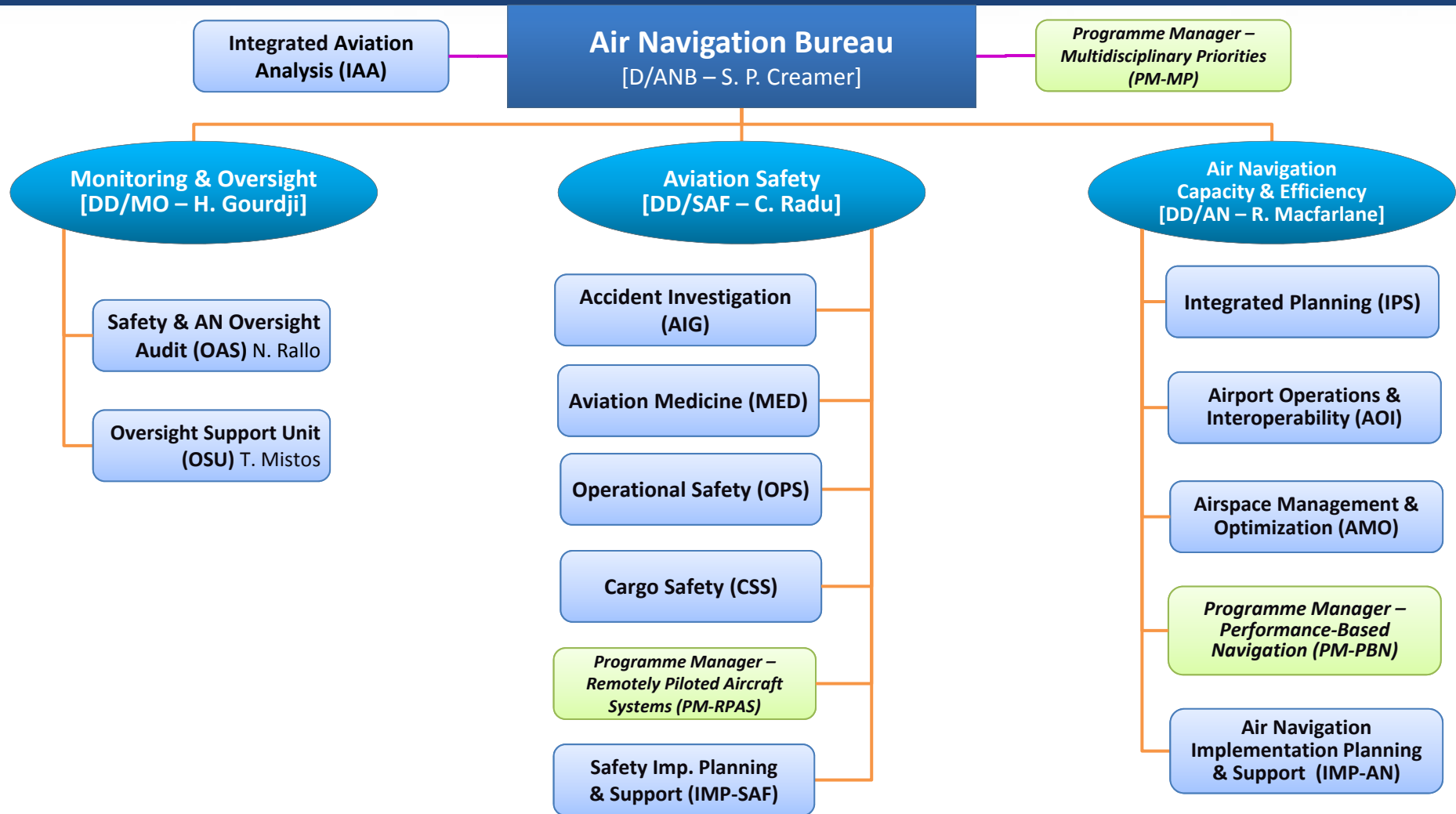


- Some SAM States have made good progress in the update of their CAP and/or CAP progress. Other SAM States have not.
- Only three SAM States have completed at least 50% of the PQ self-assessment on the OLF (Bolivia, Panama & Peru).
- Self-assessment is time consuming but should be seen not only as tool to share information with ICAO, but also as “safety oversight risk control tool” for the State itself, within its SSP.



USOAP CMA

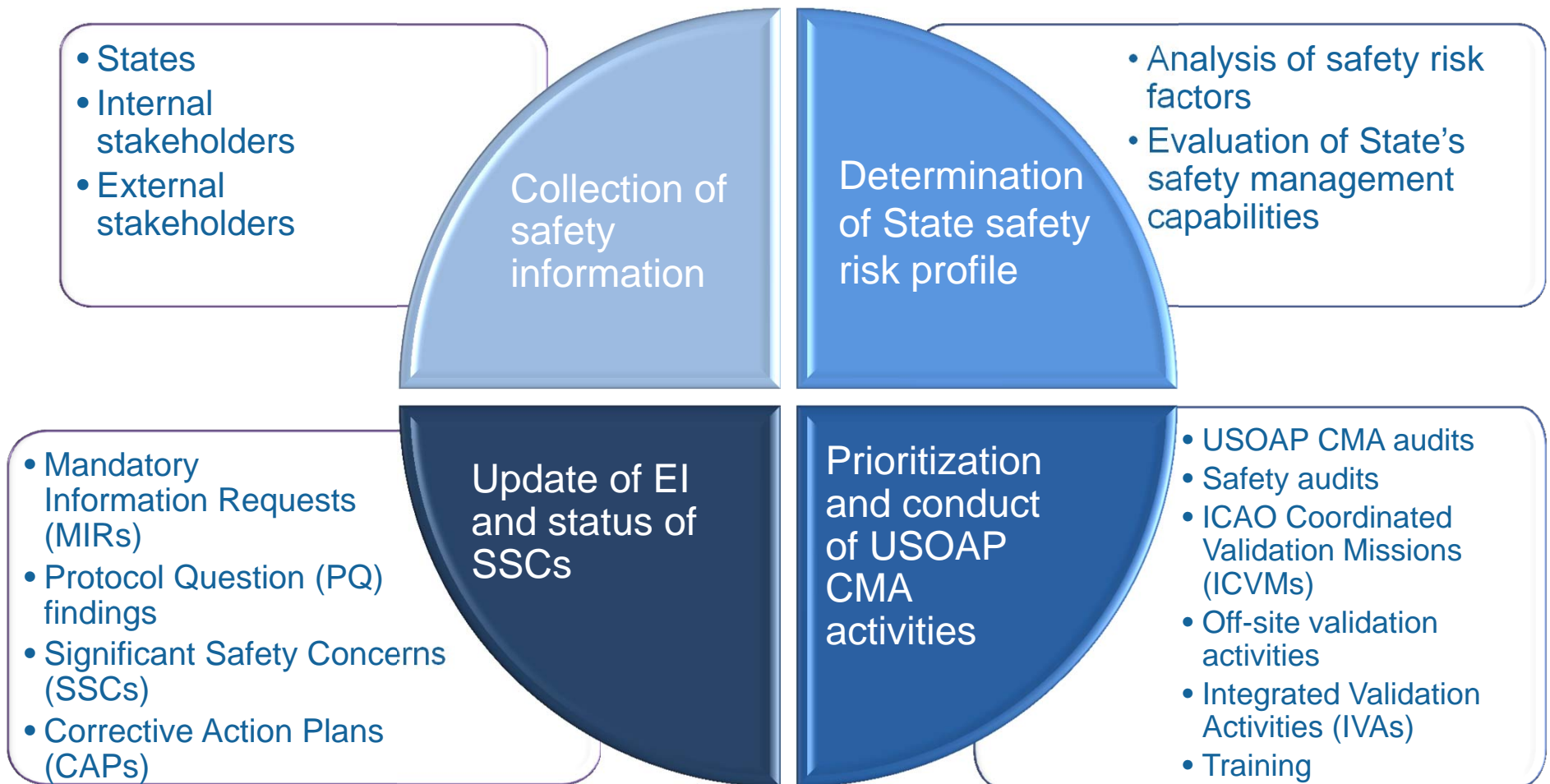
ANB Organizational Chart





USOAP CMA Components

USOAP CMA Components



USOAP CMA Components



Collection of Safety Information



States provide:

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

Collection of Safety Information



Internal stakeholders include:

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

Collection of Safety Information



External stakeholders include:

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

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

USOAP CMA Components



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 to submit 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.

USOAP CMA Components



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.

Criteria Used to Select a State for:



CMA Audit	ICVM
State's safety risk profile	
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 State's civil aviation system	State's progress in resolving identified SSCs

Criteria Used to Select a State for an *Off-Site Validation Activity*:



- 1) State has PQ findings associated with eligible PQs (Most of the PQs from CEs 1 to 5);
- 2) About 75% of 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 the OLF; and
- 3) Information submitted by State through PQ self-assessment.

Conduct of USOAP CMA Activities — Scope



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	✓	✓

Conduct of USOAP CMA Activities — *Duration and Team Composition*



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	✓	✓

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.

Six criteria for a good CAP (“RCDSRC”)



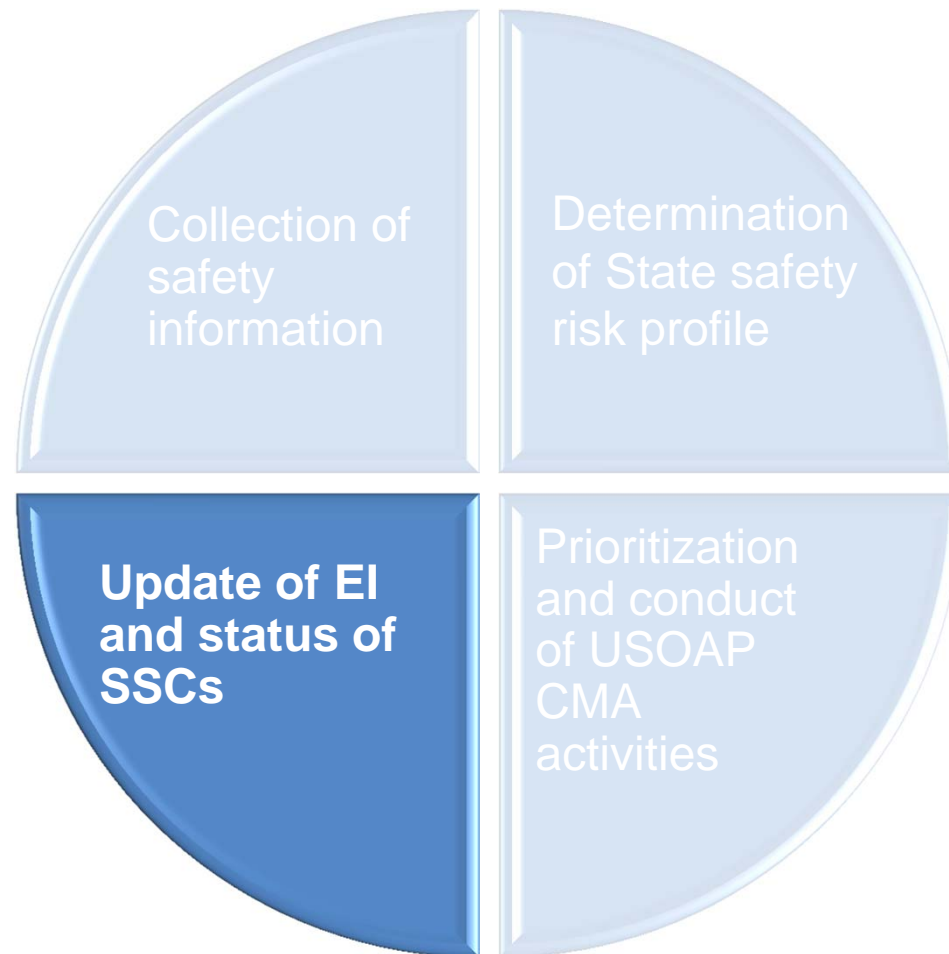
- 1) **Relevant:** CAP addresses the *issues* and *requirements* related to the finding and corresponding PQ.
- 2) **Comprehensive:** CAP is *complete* and includes *all elements or aspects* associated with the finding.
- 3) **Detailed:** CAP outlines implementation process using *step-by-step approach*.
- 4) **Specific:** CAP identifies *who will do what, when* and in coordination with other entities, if applicable.
- 5) **Realistic:** In terms of *contents* and *implementation timelines*.
- 6) **Consistent:** In relation to *other CAPs* and with the *State's self-assessment*.

Off-Site 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 activity.

USOAP CMA Components



Update of EI



EI calculation:

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

Update of 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.

PQ Amendment



- 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.

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.

- 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.

PQ Status Change



- 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.

Off-Site vs On-Site Activity



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.

Status of Significant Safety Concerns (SSCs)

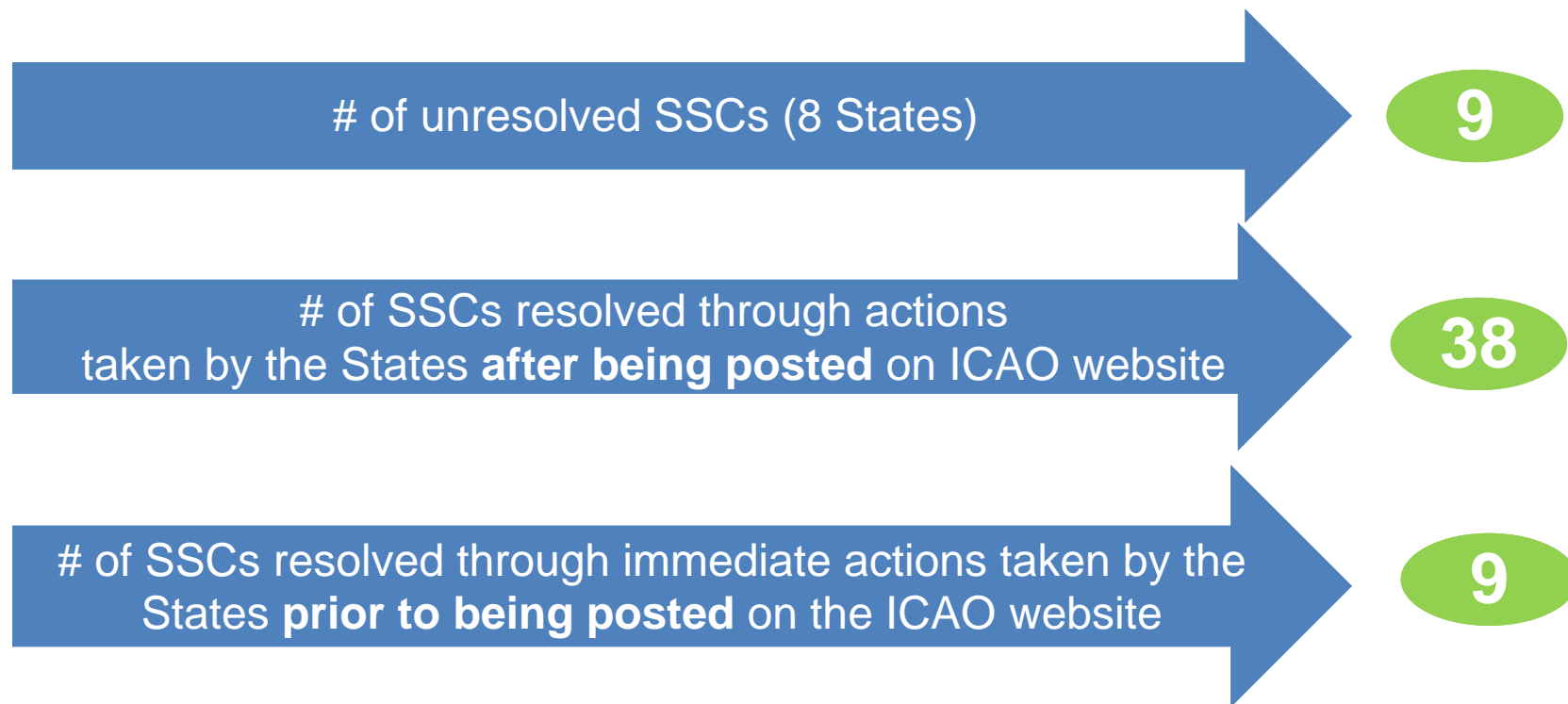


Definition of an SSC

“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.”

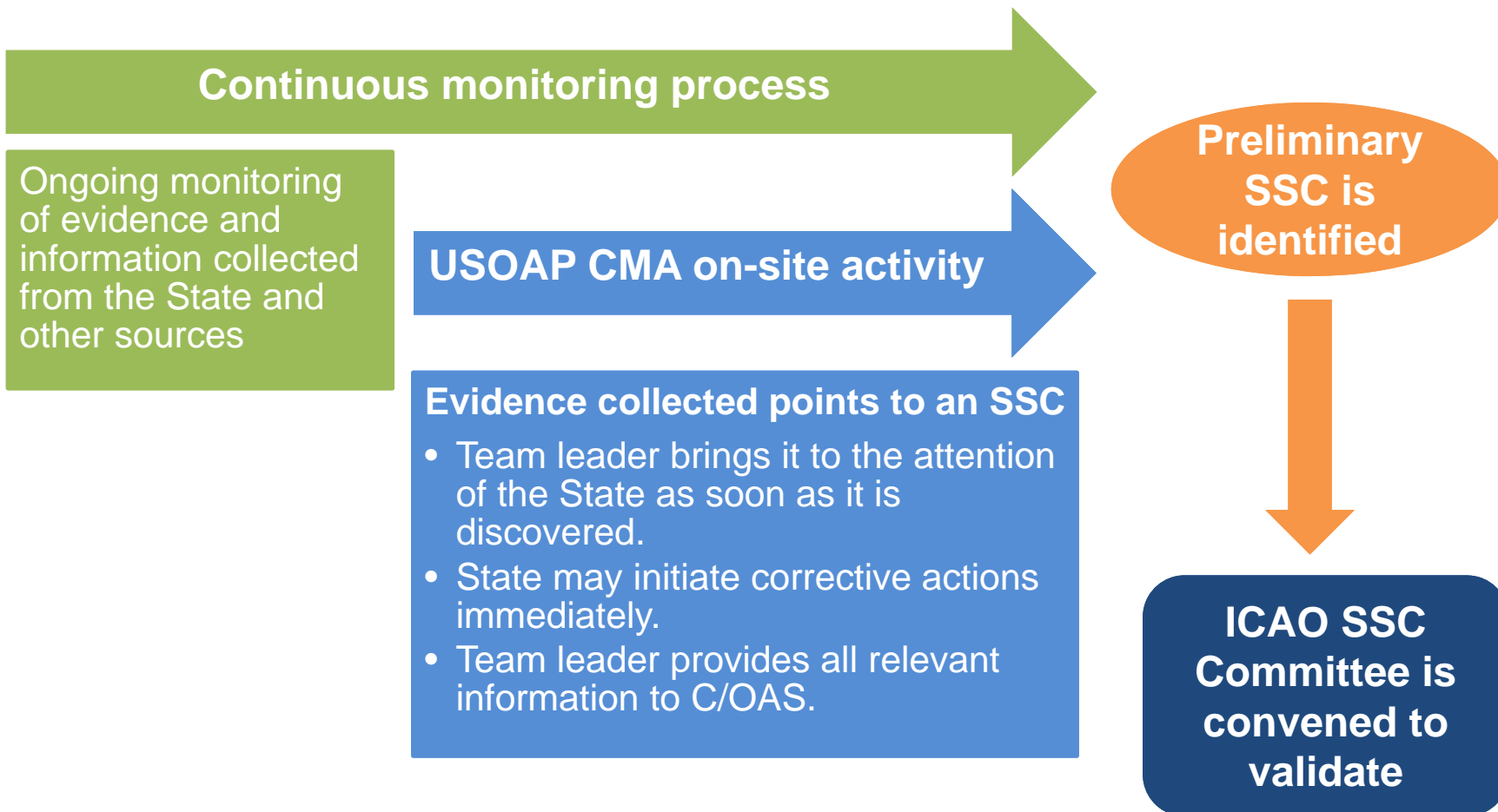
Reference: EB 2010/7 dated 19 February 2010

Status of SSCs

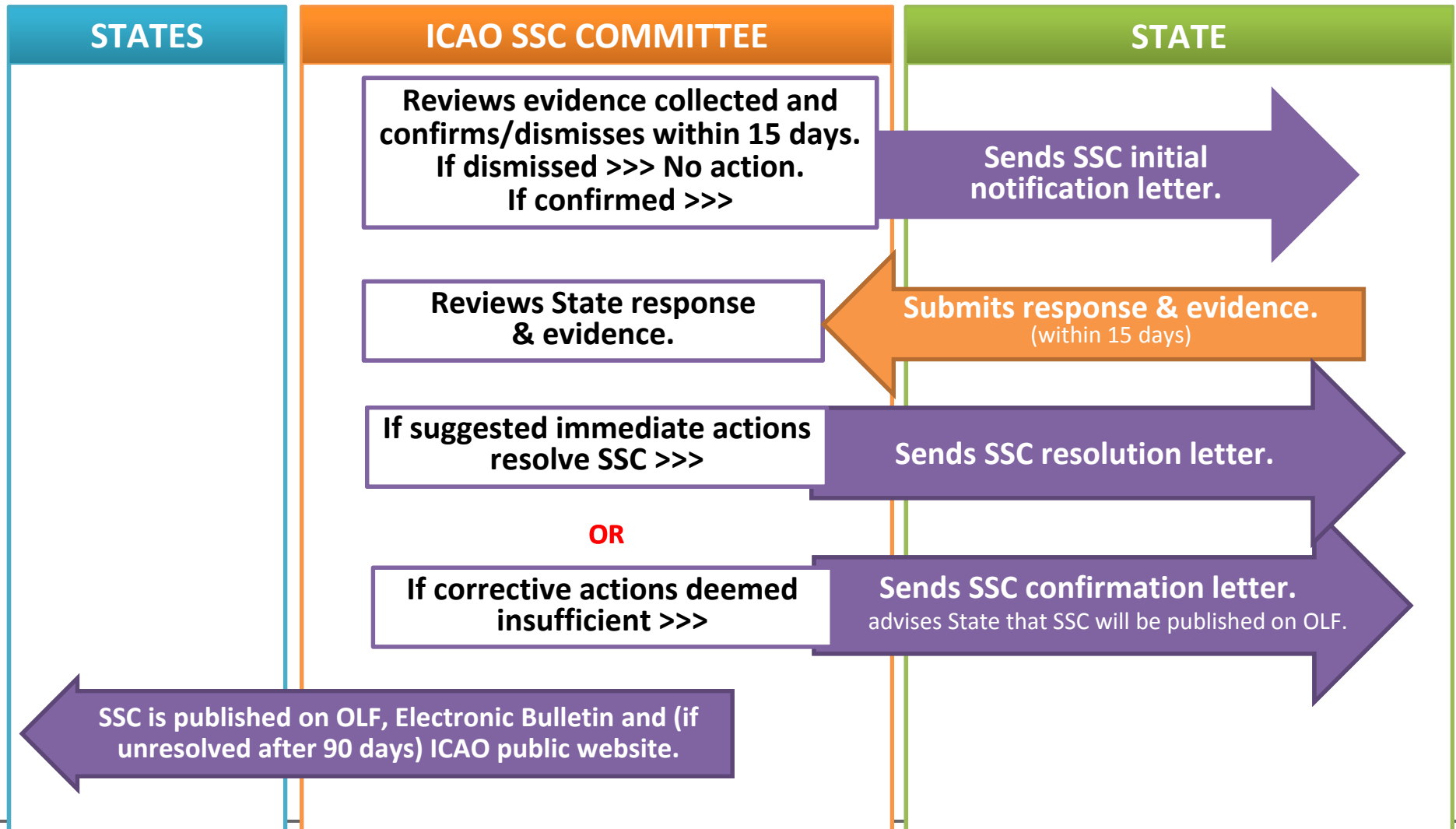


Note.— Numbers were last modified on 31 May 2016.

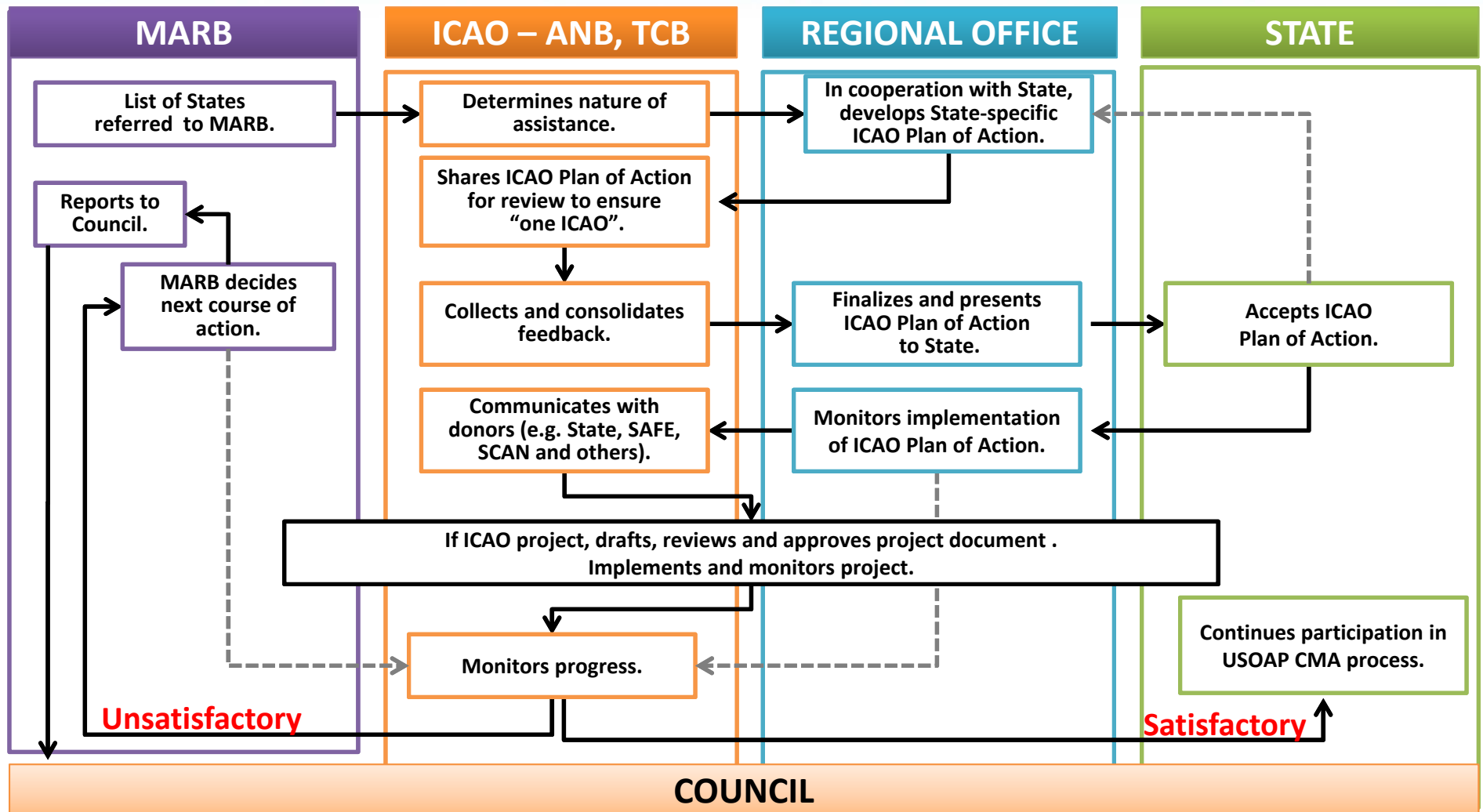
SSC Mechanism: Identification



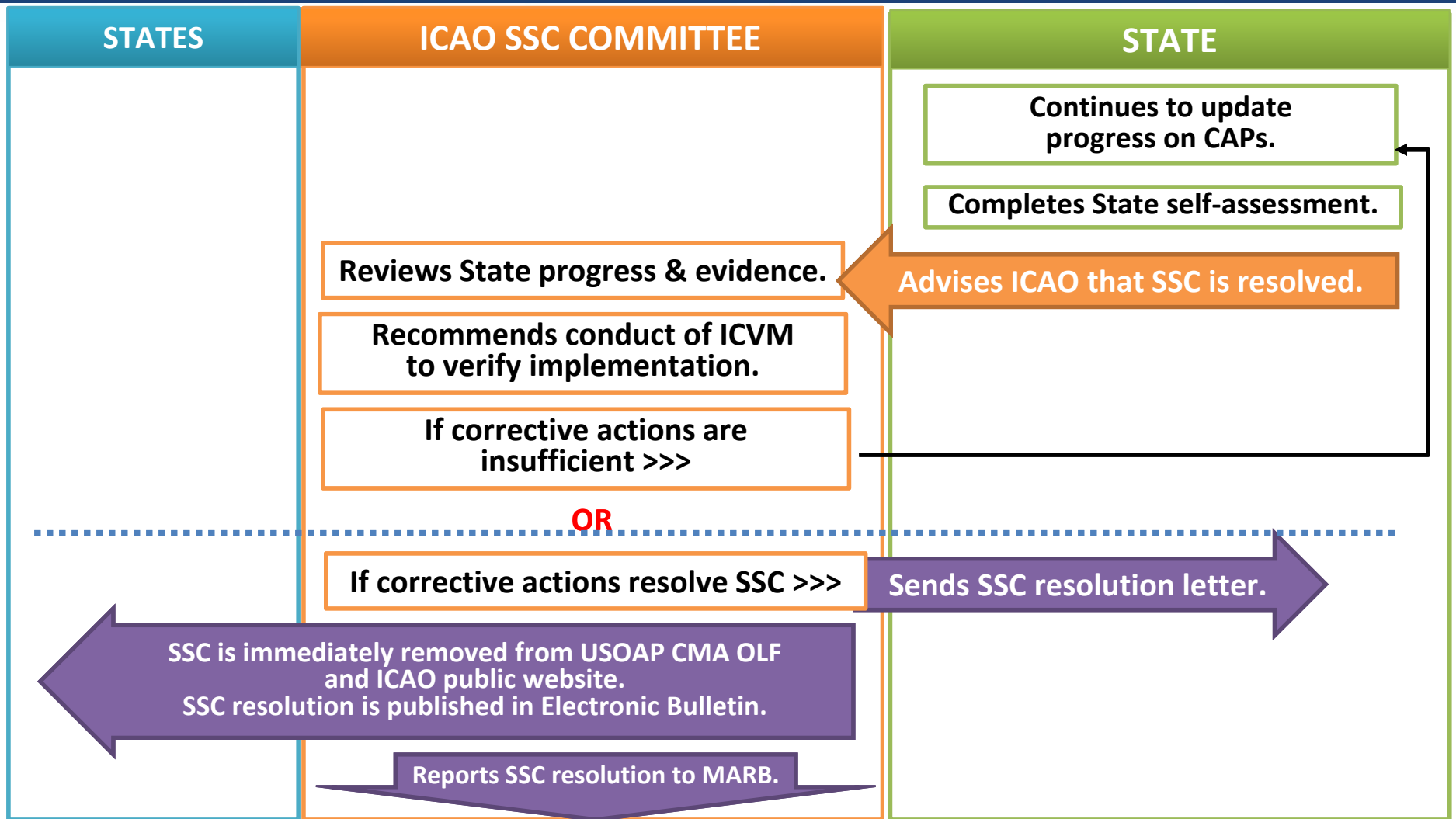
SSC Mechanism: Notification



SSC Mechanism: ICAO Plan of Action



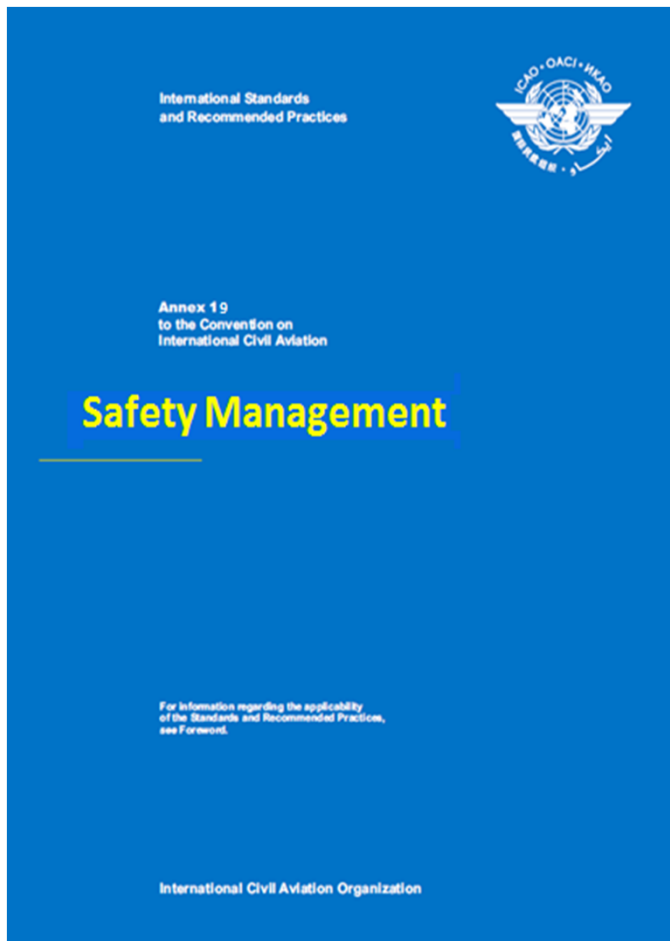
SSC Mechanism: Resolution





Annex 19 — *Safety Management*

Annex 19



- Adopted by the Council on 25 February 2013;
- Became effective on 15 July 2013; and
- Became applicable on 14 November 2013.

Annex 19, Chapter 3

State Safety Management Responsibilities



3.1 State safety programme (SSP)

3.1.1 Each State shall establish an SSP for the management of safety in the State, in order to achieve an acceptable level of safety performance in civil aviation. The SSP shall include the following components:

- a) State safety policy and objectives;
- b) State safety risk management;
- c) State safety assurance; and
- d) State safety promotion.

3.1.2 The acceptable level of safety performance to be achieved shall be established by the State.

Annex 19, Chapter 3

State Safety Management Responsibilities



- The sources of the Annex 19 provisions are found in Attachment D to State Letter AN 8/3-13/30, which is posted on the ICAO Safety Management website:
<http://www.icao.int/safety/SafetyManagement/Pages/SARPs.aspx>.
- Additionally, the four components of the SSP framework have been elevated to the status of Standards in order to match the status of the SMS framework.

SMM (Doc 9859, 3rd Edition)



- The *Safety Management Manual* (SMM), 3rd edition and English version, was posted on ICAO-NET on 8 May 2013.
- Substantial enhancements have been introduced, including:
 - Organization risk profile assessment
 - SMS-QMS integration
 - Hazard identification and risk mitigation
 - Hazard prioritization procedure
 - Safety Performance Indicator (SPI) and Acceptable Level of Safety Performance (ALoSP) development
 - SMS audit checklist
 - Risk-based surveillance/inspection
 - Phased SSP and SMS implementation
 - Mandatory and voluntary reporting systems

2014 – 2016

Global Aviation Safety Plan (GASP)



- GASP recognizes the importance of the establishment and maintenance of fundamental safety oversight systems as a prerequisite to the full implementation of an SSP.
- States with mature safety oversight systems have the foundations in place to implement provisions associated with SSP.



2014 – 2016

Global Aviation Safety Plan (GASP)



- GASP calls on those States with mature safety oversight systems to progress toward full implementation of an SSP.
- In the near term, States that have achieved effective implementation (EI) levels of over 60% are to fully implement SSP by 2017, with SSP fully implemented in all Member States by 2022.
- Safety oversight remains the foundation upon which the SSP is built.

SSP Roll-Out under USOAP CMA: *Initial Timelines*



- An Electronic Bulletin (EB 2014/61) was published on 22 October 2014 to inform Member States of the USOAP audit of the implementation of the ICAO safety management (SM) provisions.
- The EB indicated that the audit of the new SM-related PQs would commence in States with an EI of over 60% in January 2016.
- States with an EI of over 60% would have one year, until the end of 2015, to complete their self-assessments of the new SM-related PQs.
- The applicability and relevance of the PQs would be reviewed and, if necessary, amended annually.

Updating the PQs



- The USOAP CMA Protocol Questions (PQs) were updated to address the safety management (SM) provisions.
- New SM-related PQs have been added in each relevant audit area and are posted on the USOAP CMA Online Framework (OLF): <http://www.icao.int/usoap/>.
- States are still asked to submit their up-to-date SSP Gap Analysis on iSTARS.

Recent Developments

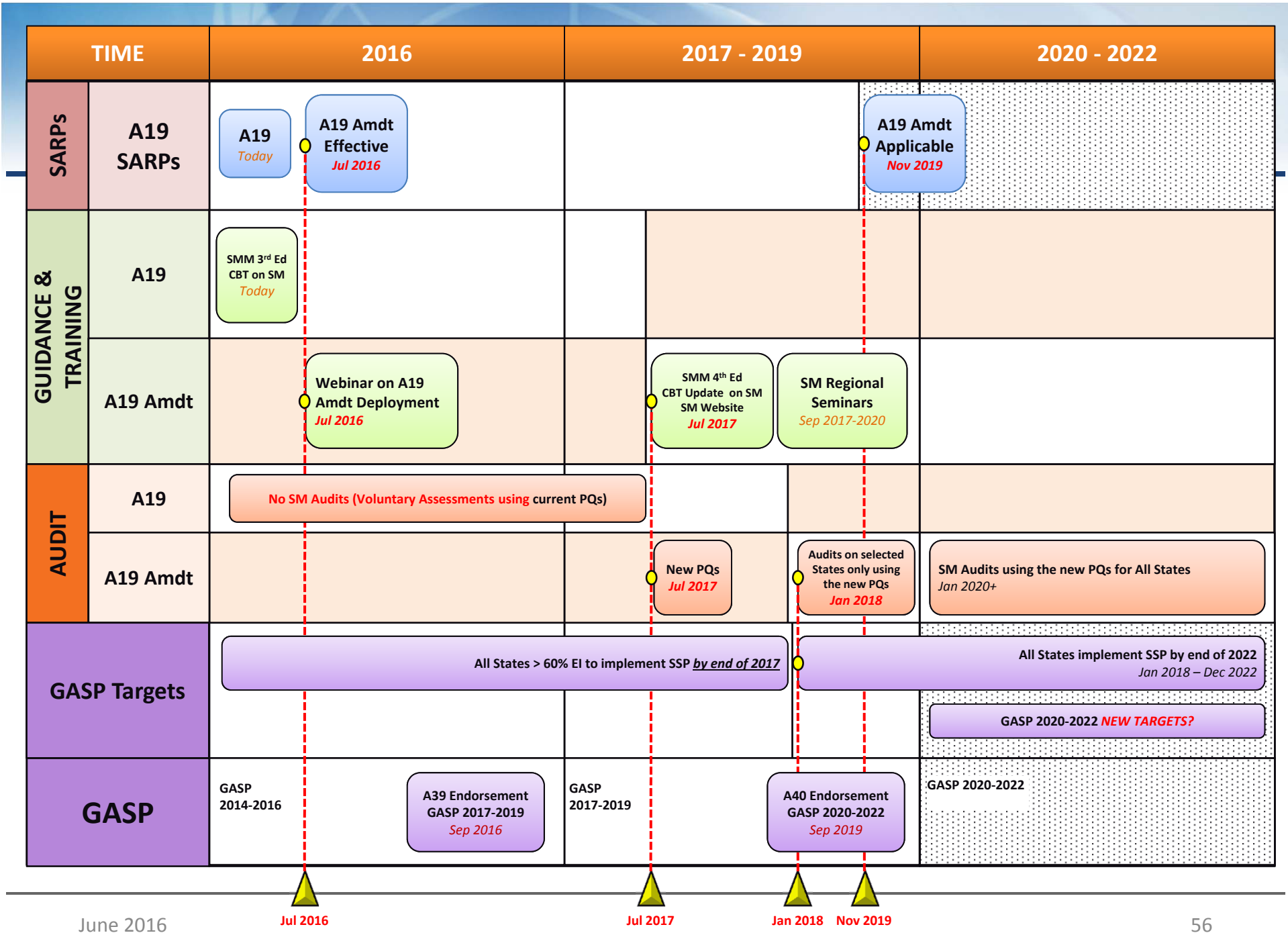


- Not all guidance material and training material necessary to support the new SM-related PQs are available to date.
- A number of States with an EI of over 60% are not ready for an audit of the new SM-related PQs in 2016.
- For these reasons, the launch of audits of the new SM-related PQs has been postponed to **January 2018**.
- ICAO will perform a few assessments of the implementation of the new SM-related PQs in selected volunteer States throughout 2016 (in conjunction with ICVMs).
- ICAO will amend the SM-related PQs in 2016 to introduce improvements as needed.

EB 2015/56:



- ICAO published EB 2015/56 to inform States of the following:
 - The launch of the USOAP CMA audits of the new SM-related PQs is postponed to **January 2018**.
 - States are required to continue to complete their self-assessment of the new SM-related PQs on the OLF.
 - ICAO will perform a few assessments of the implementation of the new SM-related PQs, in selected volunteer States, throughout 2016.



A Gradual Process



- Effective SSP implementation is a gradual process, requiring time to mature fully.
- Factors that affect the time required to establish an SSP include:
 - the complexity of the air transportation system; and
 - the maturity level of the aviation safety oversight capabilities of the State.
- Similarly, the monitoring by ICAO of States' SM implementation will be a gradual process.



USOAP CMA CBT

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.
- 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>



REPORT ON USOAP CMA ACTIVITIES & RESULTS Jan 2013-Dec 2015

USOAP CMA Report Jan13-Dec15



- Covers the period from 1 January 2013 (launch of the CMA) until 31 December 2015.
- Based on data collected through USOAP CMA, and stored in CMA OLF and ISTAR SPACE
- Contains statistical data on USOAP activities and results (EIs) globally and by “Region”(ICAO Regional Office accreditation areas)
- Also highlights areas in each audit area for which EI is still low, and which call for more efforts are global, regional and national levels
- Now available in the CMA Library Module of the USOAP CMA Online Framework at <http://www.icao.int/usoap>.

Review



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