



ICAO AFI/APAC/MID INTER-REGIONAL SEARCH AND RESCUE WORKSHOP

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Outline

- 1) USOAP CMA
- 2) Critical Elements
- 3) Protocol Questions (PQs)
- 4) States' Obligations under USOAP CMA
- 5) SAR EIs



ICAO Universal Safety Oversight Audit Programme (USOAP)

Continuous Monitoring Approach (CMA)



Continuous Monitoring
(Online Framework — OLF)



Planning and
Scheduling



On-site Activities



Off-site Activities



Reports, Analyses
and Working Papers



Training and
Workshops



ICAO carries out audits and other monitoring activities to determine the safety oversight capabilities of its Member States 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 status of the Member States' implementation of:
 - Safety-related ICAO Standards and Recommended Practices (SARPs);
 - Associated procedures; and
 - Guidance material.

**1.
Legislation
and
Regulations**

*Chicago Convention
& Annex 2*

**2.
Organization &
Safety Oversight
Functions**
SAAQ

**6.
Accident &
Incident
Investigation**
*Annexes 13
& 19*

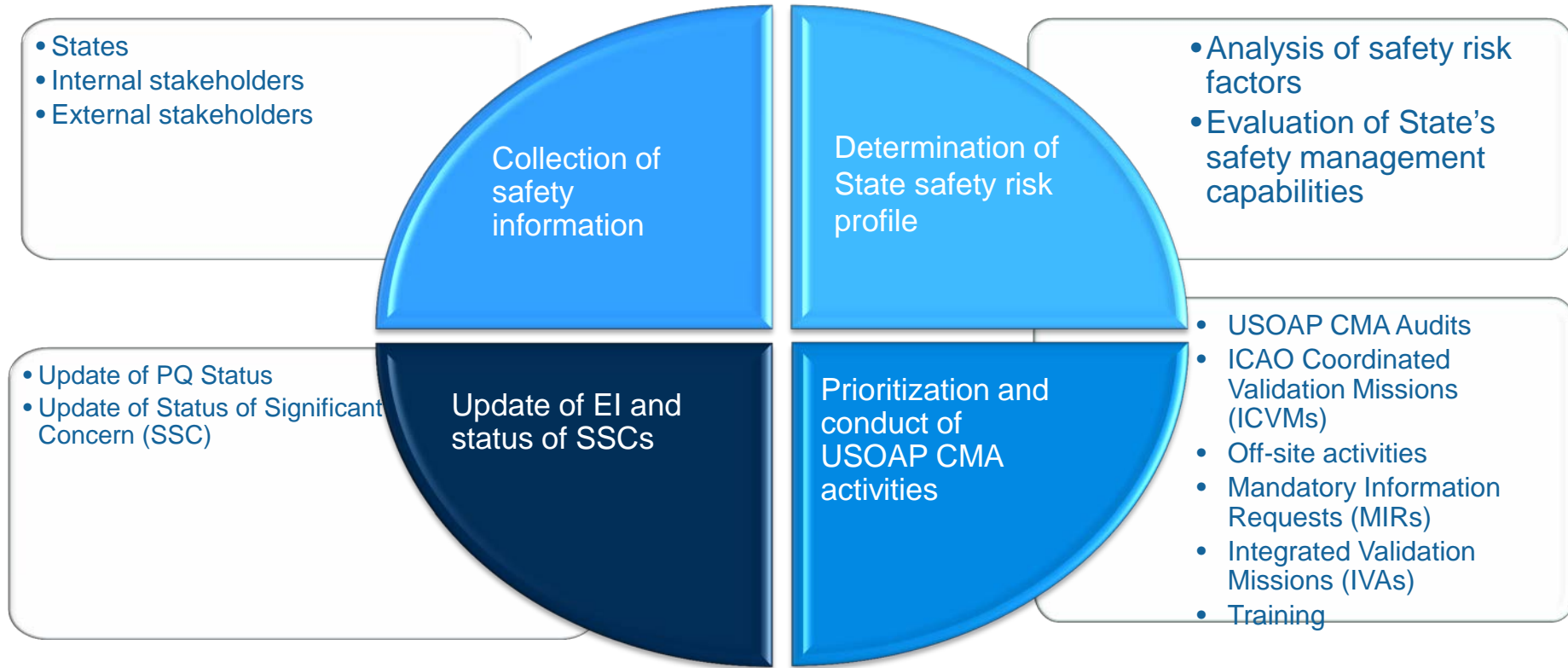
**3. Personnel
Licensing**
Annexes 1 & 19

**4. Aircraft
Operations**
*Annexes 2, 6, 18, 19
& PANS-OPS*

**5. Airworthiness
of Aircraft**
*Annexes
6, 7, 8, 16 & 19*

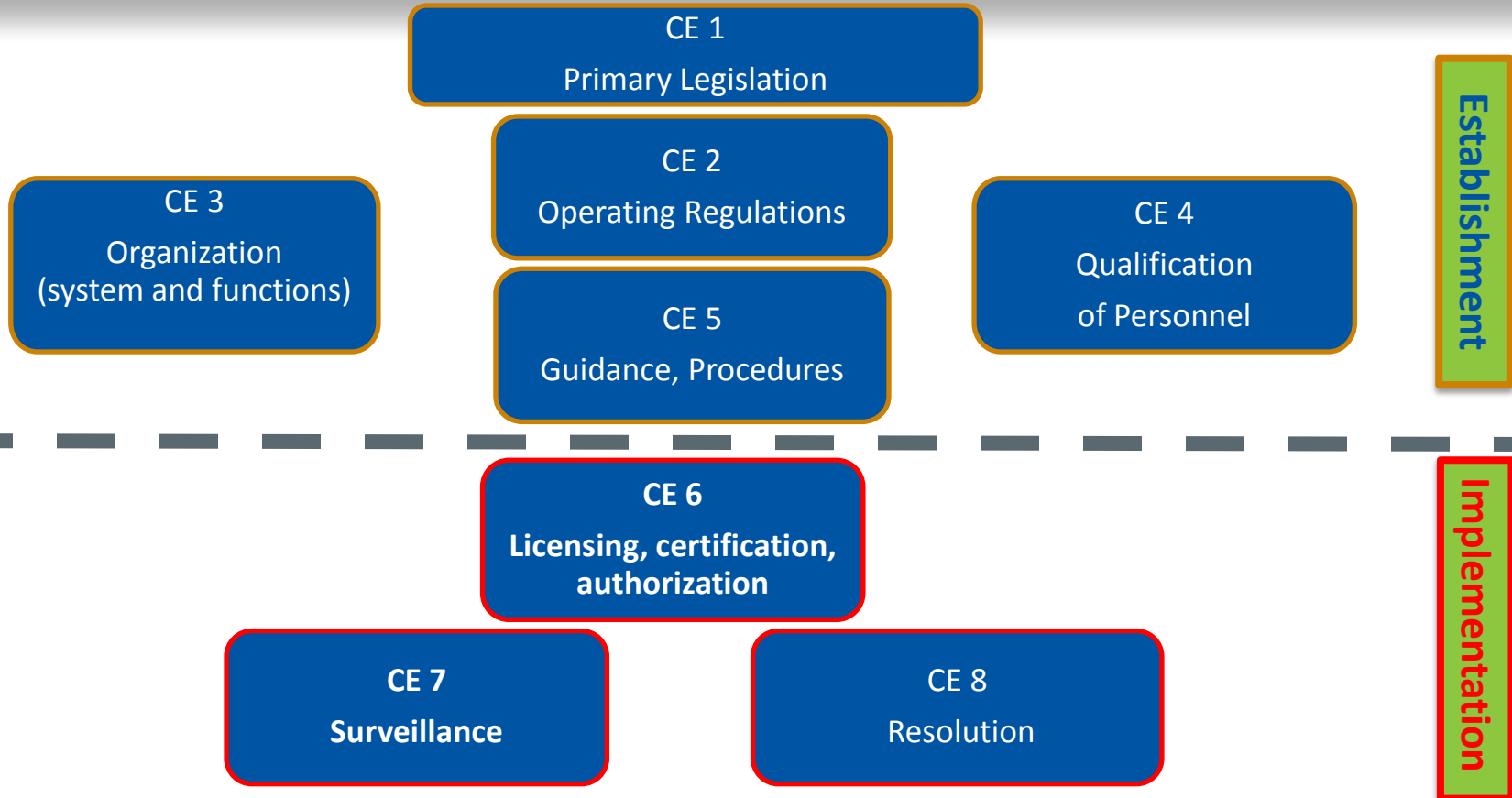
**7. Air
Navigation
Services**
*Annexes 2, 3, 4, 5
10, 11, 12, 15, 19 &
PANS-ATM*

8. Aerodromes
*Annexes 14
& 19*



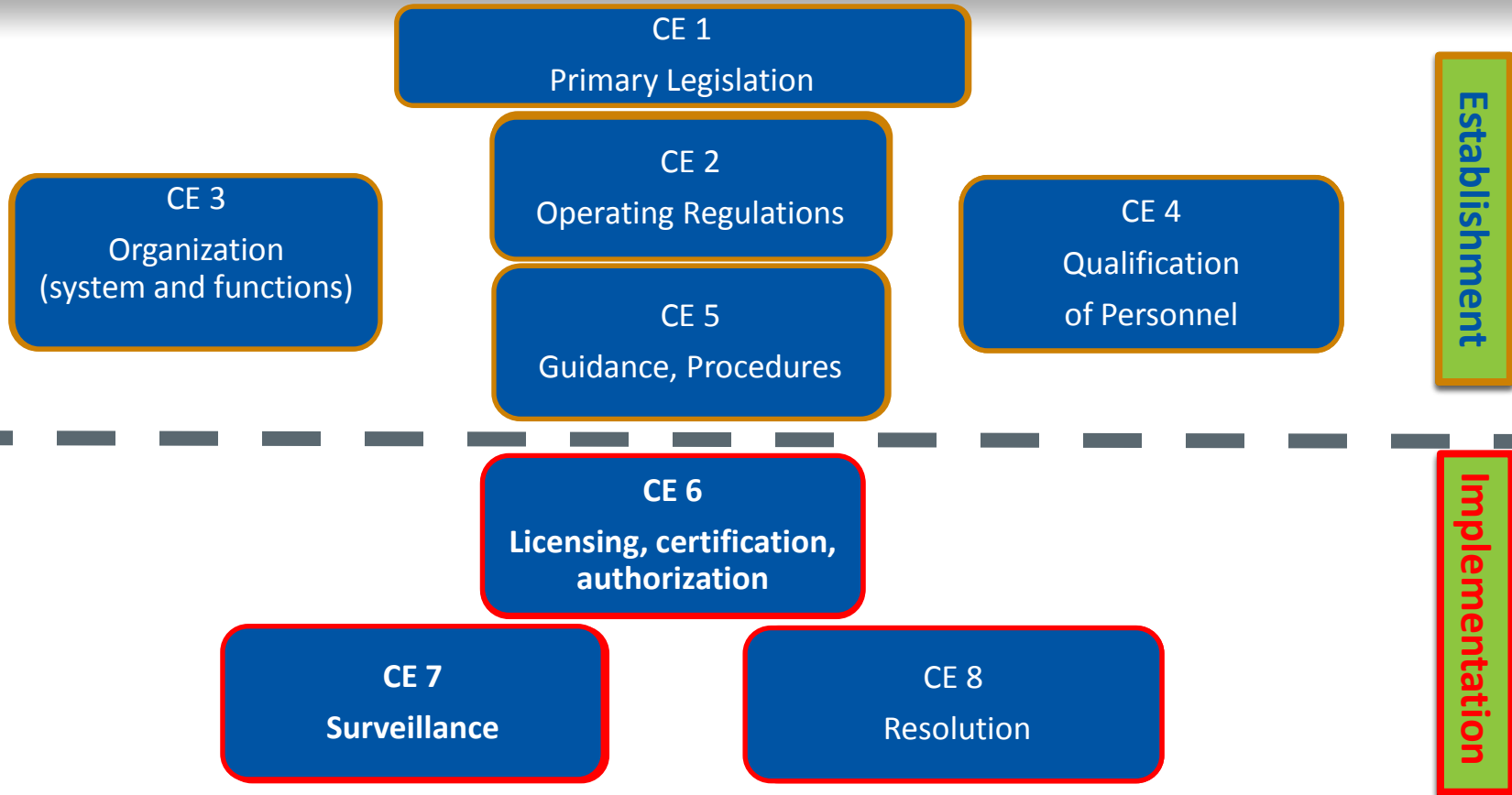


Critical Elements (CEs) of an Effective Safety Oversight System





Critical Elements (CEs) of an Effective 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.

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.

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.

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.

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.

Procedures Criteria:

- Procedures shall provided explicit and up-to-date indications to ensure the effective and efficient implementation of the organization's functions and policies
- Procedures shall clearly define the following 5 criteria:
Who do **What**, **When**, **How** and in coordination with **Whom**

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.

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.

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.



The definitions of the eight CEs of a State safety oversight system are found in Annex 19 — *Safety Management*, Appendix 1

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

Note. — The English version of the third edition of Doc 9734, Part A is available on the ICAO-NET and the CMA Library on the OLF.



- 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 will or remains N/S.**
- N/S PQ generates a finding and since 2014, each finding is PQ-specific.



- 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 ANB;
 - c) ICAO ROs;
 - d) USOAP mission team members; and
 - e) external stakeholders.

2017 Edition of the PQs

- With the roll-out of Amendment 1 to Annex 19, a 2017 edition of the PQs has been developed on the basis of the 2016 edition and excludes aspects related specifically to the State Safety Programme (SSP).
- This 2017 edition of the PQs is posted in the “CMA Library” on the OLF.
(See *EB 2018/4*, 19 January 2018.)
- The 2017 edition has been applicable for all USOAP CMA activities **since 1 June 2018**.

CMA Library





PQ No.	Protocol Question	Guidance for Review of Evidence	ICAO References	CE
7.205	Are job descriptions for PANS-OPS inspectors clearly defined?	Review job descriptions for the PANS-OPS inspectors.	GM Doc 9734, Part A, C3	CE-3
7.241	Does the State ensure that PANS-OPS service provider has developed job description for its PANS-OPS technical staff?	1) Review mechanism established to ensure effective implementation. 2) Review documented terms of reference and confirm consistent application.	GM Doc 9734 Part A, C3	CE-6
3.111	Has the State established appropriate minimum qualifications and experience requirements for its personnel licensing staff?	Review qualification and experience requirements for recruitment and assignment of personnel licensing staff of the CAA depending on their responsibilities in the personnel licensing issuance process and oversight system.	GM Doc 9734 Part A, C3 Doc 9379 Part I, C2	CE-4
3.155	Are personnel licensing staff provided with comprehensive guidance material and procedures that are sufficiently detailed to enable them to carry out their functions and responsibilities effectively?	1) Review the PEL Procedures Manual, if available, or the list of procedures available. 2) Review a) management process, and b) distribution process of the documents used to ensure that all staff use comprehensive and up-to-date documents.	GM Doc 9734 Part A, C3 Doc 9379 Part II, C1	CE-5



Main Activities under USOAP CMA

CMA audit: On-site, to conduct a systematic and objective assessment of a State's safety oversight system. Can be a full scope or limited scope audit.

ICVM: On-site, to collect and assess evidence of a State's effective correction of previously identified findings (**in one or more audit areas**). Collected evidence is reviewed and validated at ICAO HQ.

Off-site validation activity: to assess a State's effective corrective actions addressing previously identified findings related to PQs *not* requiring an on-site activity.





A More Recent Type of Validation Activity...

- Off-site validation report resulting from on-site reviews.
- A USOAP CMA limited scope on-site activity, integrated within a scheduled mission in a State by ICAO or its safety partners. During an **Integrated Validation Activity (IVA)**, SMEs sample, collect and assess evidence provided by the State for identified PQs demonstrating effective implementation of corrective actions to address findings previously identified by ICAO. ICAO validates the collected evidences and information.
- Safety partner: Organization which may provide technical support to USOAP CMA activities on the basis of a formal agreement with ICAO (e.g. EASA).



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

On-site vs Off-site Validation Activity

- CAPs associated with CE 1 to 5 (collectively known as “Establishment” CEs), not addressing implementation aspect, are eligible for Off-site validation activity (mainly related to documentation).
- CAPs associated with CEs 6, 7 and 8 (collectively known as the “Implementation” CEs) require On-site validation activity.



Criteria Used to Select a State for a *Validation Activity*

- 1) 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 the **OLF**; and
- 2) Information submitted by State through PQ **Self-assessment**.

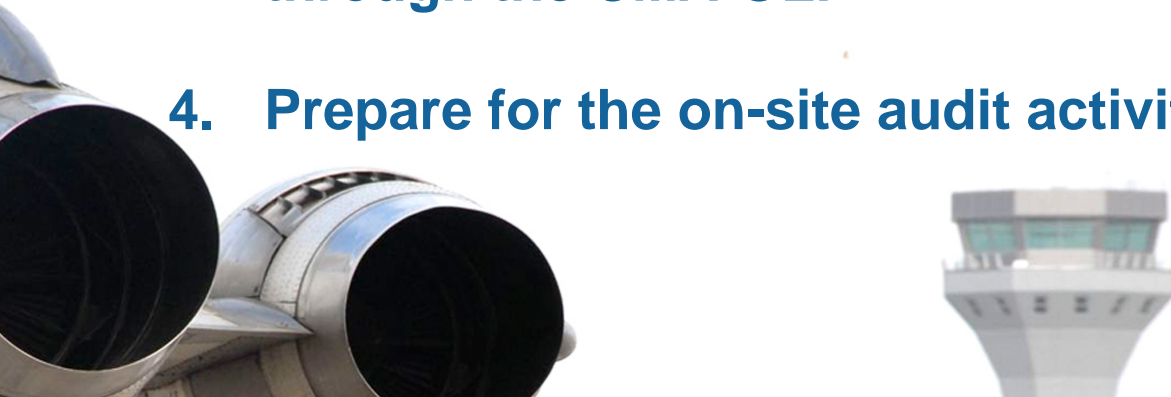
Six Criteria for a Good CAP ("RCDSRC")

- 1) **Relevant:** CAP addresses the *issues* and *requirements* related to the finding and corresponding PQ and CE.
- 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*.

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

- 1. Continuously update their SAAQ and CCs/EFOD;**
- 2. Continuously update their PQ status (self-assessment) and CAPs providing all related evidence; and**
- 3. Reply promptly to MIRs sent by ICAO.**

- 1. Update SAAQ**
- 2. Update CCs/EFOD**
- 3. Compete self-assessment and provide all relevant evidences through the CMA-OLF**
- 4. Prepare for the on-site audit activities**





1. Respond to the Audit Draft Report
2. Provide initial CAPs for the identified findings by the Audit
3. Implement and Continuously update their CAPs and PQ status (self-assessment), provide all related evidence; and
4. Continuously update their SAAQ and CCs/EFOD;

ICAO Regional Offices are keen to always support as required

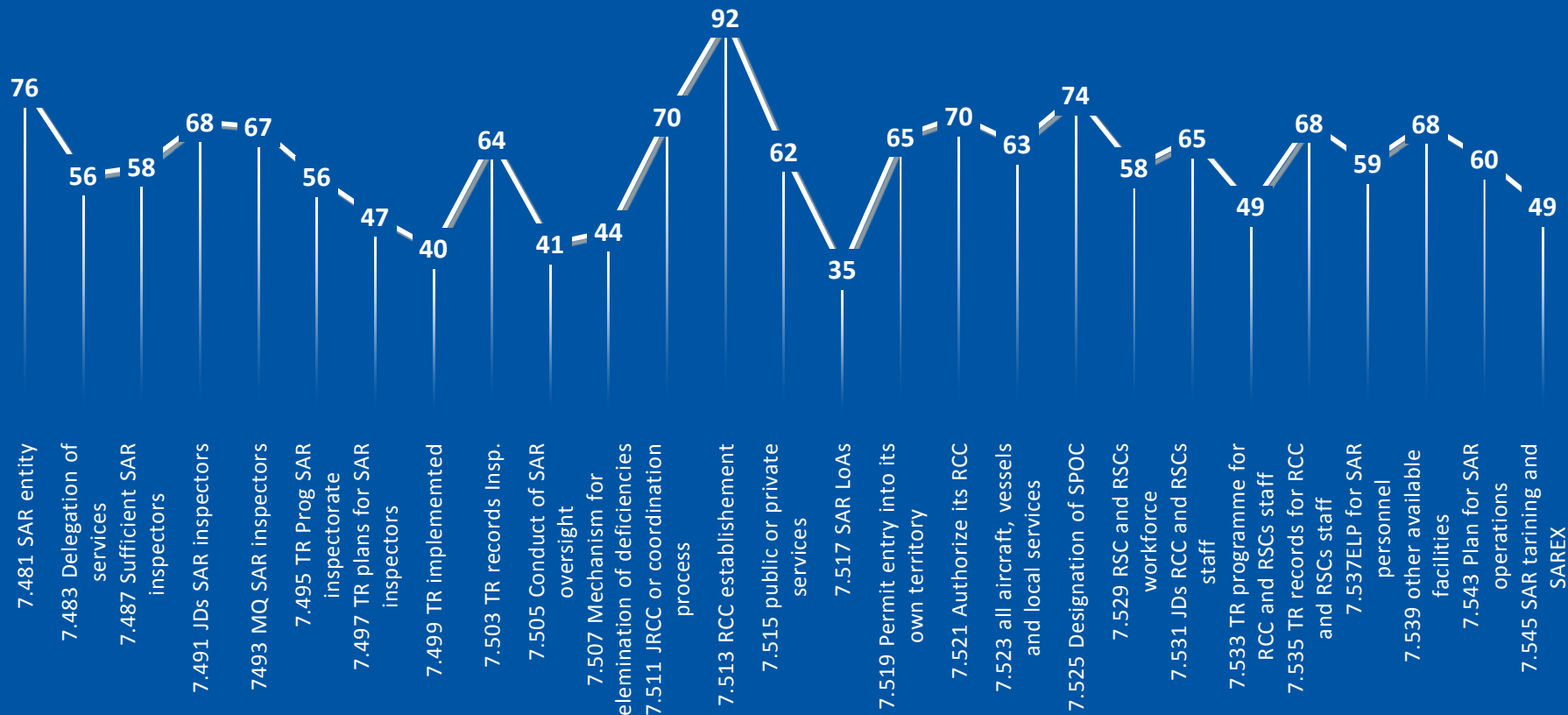
“An SSC occurs when the audited State allows the holder of an authorization or approval to exercise the privileges attached to it, although the minimum requirements established by the State and by the Standards set forth in the Annexes to the Chicago Convention are not met, resulting in an immediate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

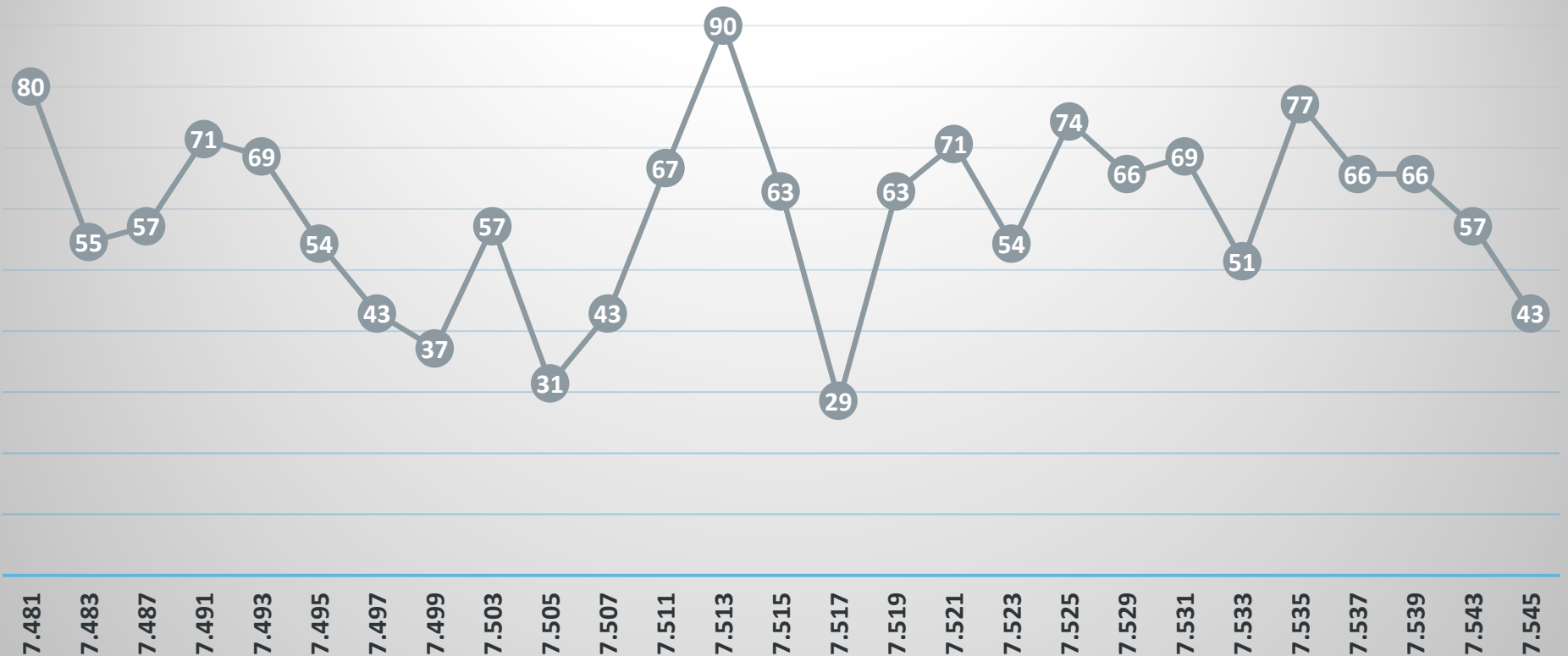
Reference: *EB 2010/7* dated 19 February 2010

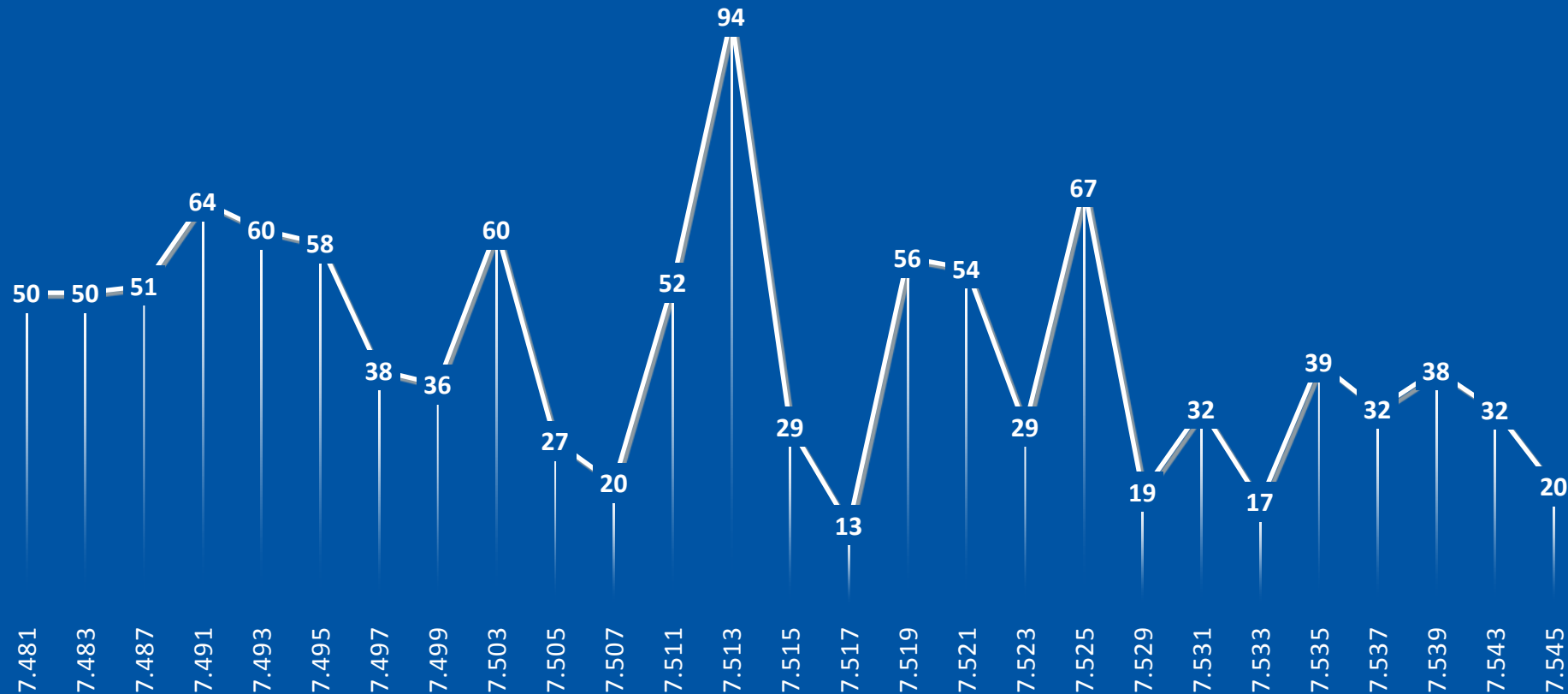
PQ	CE	Question
7.481	CE-3	Has the State established an entity which provides, on a 24-hour basis, SAR services within its territory and the areas where the State has accepted responsibility to provide SAR to ensure that assistance is rendered to persons in distress?
7.483	CE-3	If the State has not established a SAR entity to provide 24-hour services, has the State arranged with another Contracting State or group of States to provide such SAR services?
7.487	CE-3	Does the State employ a sufficient number of qualified technical staff to carry out its safety oversight tasks over the rescue coordination centre (RCC) and, as appropriate, rescue sub-centre (RSC)?
7.491	CE-3	Have job descriptions been developed for SAR inspectors?
7.493	CE-4	Has the State established appropriate minimum qualifications and experience requirements for SAR inspectors?
7.495	CE-4	Has the State developed a formal training programme detailing the type of training to be provided to its SAR inspectors?
7.497	CE-4	Does the State develop a periodic training plan detailing and prioritizing the type of SAR training to be provided to its inspectors during a specified period?
7.499	CE-4	Is the training programme appropriately implemented for SAR inspectors?
7.503	CE-4	Does the SAR inspectorate have a system for the maintenance of training records for its technical staff?

PQ	CE	Question
7.505	CE-7	Does the State effectively conduct surveillance over the rescue coordination centre (RCC) and, as appropriate, rescue sub-centre (RSC)?
7.507	CE-8	Has the State established a mechanism/system with time frame for the elimination of deficiencies identified by SAR inspectors?
7.511	CE-3	Has the State established a joint rescue coordinator centre (RCC) to coordinate aeronautical and maritime SAR operations, or otherwise, when separate aeronautical and maritime RCCs serve the same area, does the State ensure that there is closest practicable coordination between the centres?
7.513	CE-3	Has the State established a RCC or, as applicable, an RSC in each search and rescue region (SRR)?
7.515	CE-3	Has the State designated, as SAR units, elements of public or private services suitably located and equipped for SAR operations?
7.517	CE-3	Does the State coordinate its SAR organization with those of neighbouring States?
7.519	CE-2	Does the State permit, subject to such conditions as may be prescribed by its own authorities, entry into its territory of SAR units of other States for the purpose of searching for the site of aircraft accidents and rescuing survivors of such accidents?
7.521	CE-3	Does the State authorize its RCCs to provide, when requested, assistance to other rescue coordination centres (RCCs), including assistance in the form of aircraft, vessels, persons or equipment?
7.523	CE-3	Has the State arranged for all aircraft, vessels and local services and facilities which do not form part of the SAR organization to cooperate fully with the latter in SAR and to extend any possible assistance to the survivors of aircraft accidents?

PQ	CE	Question
7.525	CE-3	Has the State designated an SAR point of contact for the receipt of COSPAS-SARSAT distress data?
7.529	CE-7	Has the State ensured that each rescue coordination centre (RCC) and rescue sub-centre (RSC) employ sufficient workforce skilled in coordination and operational functions?
7.531	CE-6	Does the State ensure that each rescue coordination centre (RCC) and, if appropriate, rescue sub-centre (RSC), develop written job descriptions for each of their technical staff?
7.533	CE-6	Does the State ensure that each rescue coordination centre (RCC) and, if appropriate, rescue sub-centre (RSC), establish a training programme for their staff?
7.535	CE-7	Does the State ensure that each rescue coordination centre (RCC) and, if appropriate, rescue sub-centre (RSC), maintain training records for their technical staff?
7.537	CE-6	Does the State ensure that the rescue coordination centre (RCC) and, as appropriate, rescue sub-centre (RSC), is staffed 24 hours a day by trained and qualified personnel proficient in the use of the English language?
7.539	CE-3	Has the State made arrangements for the use of SAR units and other available facilities to assist any aircraft or its occupants who are or appear to be in a state of emergency?
7.543	CE-7	Does the State ensure that each rescue coordination centre (RCC) has prepared detailed plans of operation for the conduct of SAR operations within its search and rescue region (SRR)?
7.545	CE-7	Does the State ensure that SAR personnel are regularly trained and that appropriate SAR exercises are arranged?

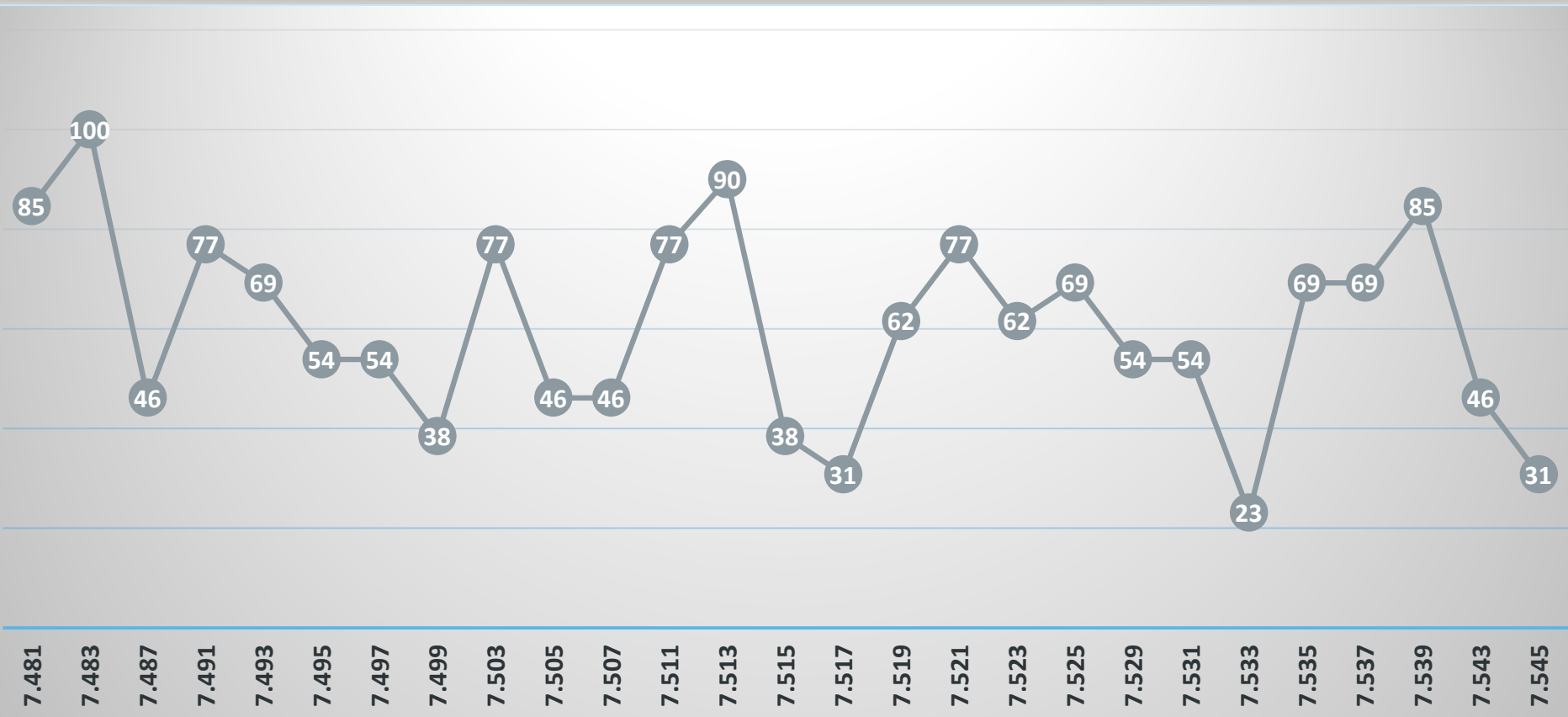






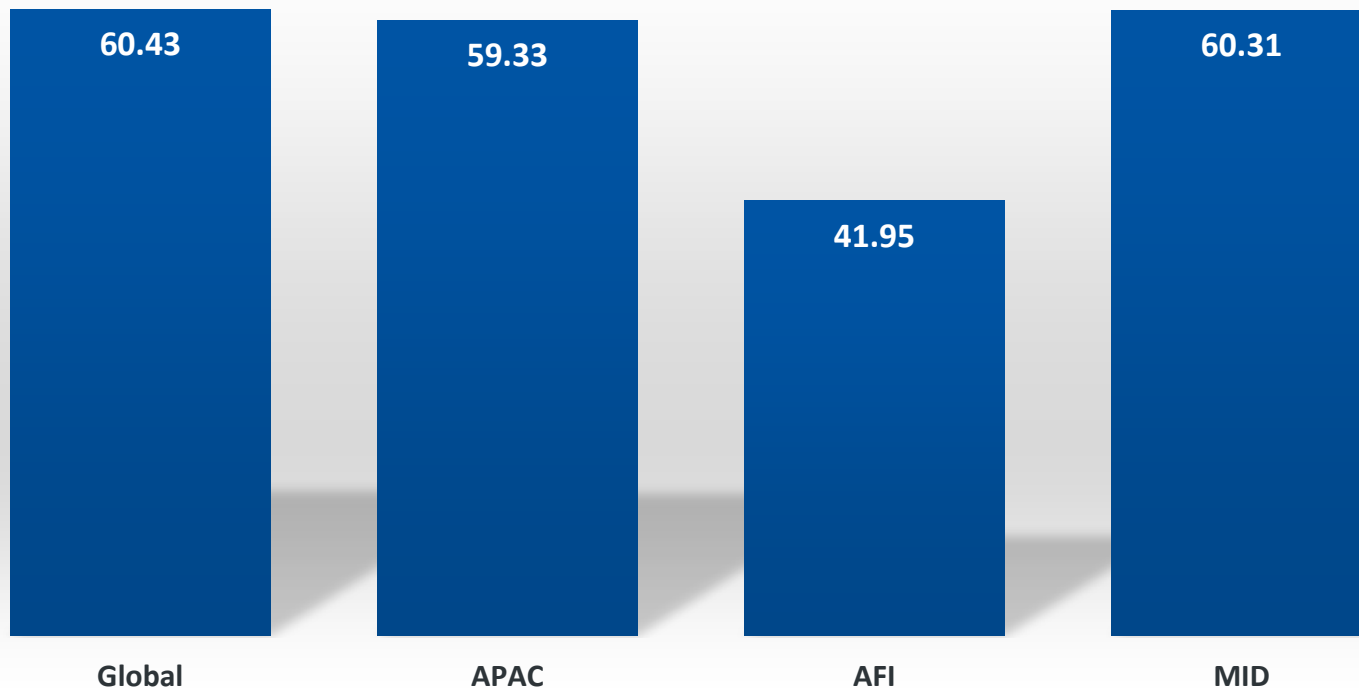


MID SAR PQs EI





Average SAR EI



Conclusion

Civil Aviation Authorities are urged to work closely with all SAR **STAKEHOLDERS** to ensure adequate **SAR provisions** are in place, which should be assured through an effective **oversight system**.



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THANK YOU