



USOAP

CMA

Audit

Of

I.R.
IRAN

Civil Aviation Authority IR of IRAN

SEIG/5 - QATAR (OCT.2023)

MAHDI ADINEH- ALTERNATIVE TO NCMC



Audit 2018

To

Audit 2022





Iran aviation structure

CAAIRI organizational structure

Civil aviation regulations framework

USOAP-CMA Audit of IRAN(2018)

Current status

Challenges

Suggestions

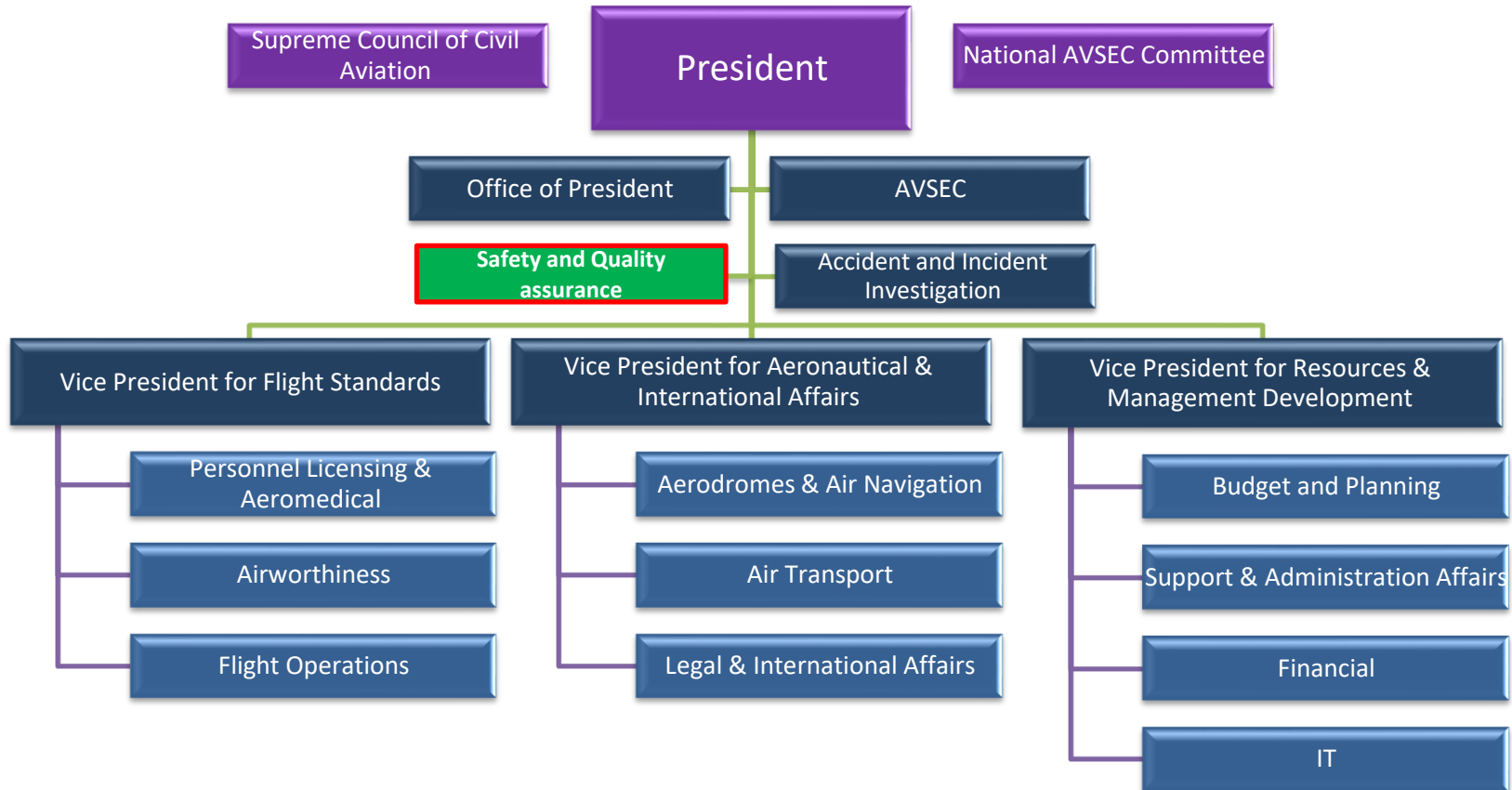
Best practices



Iran Aviation Structure

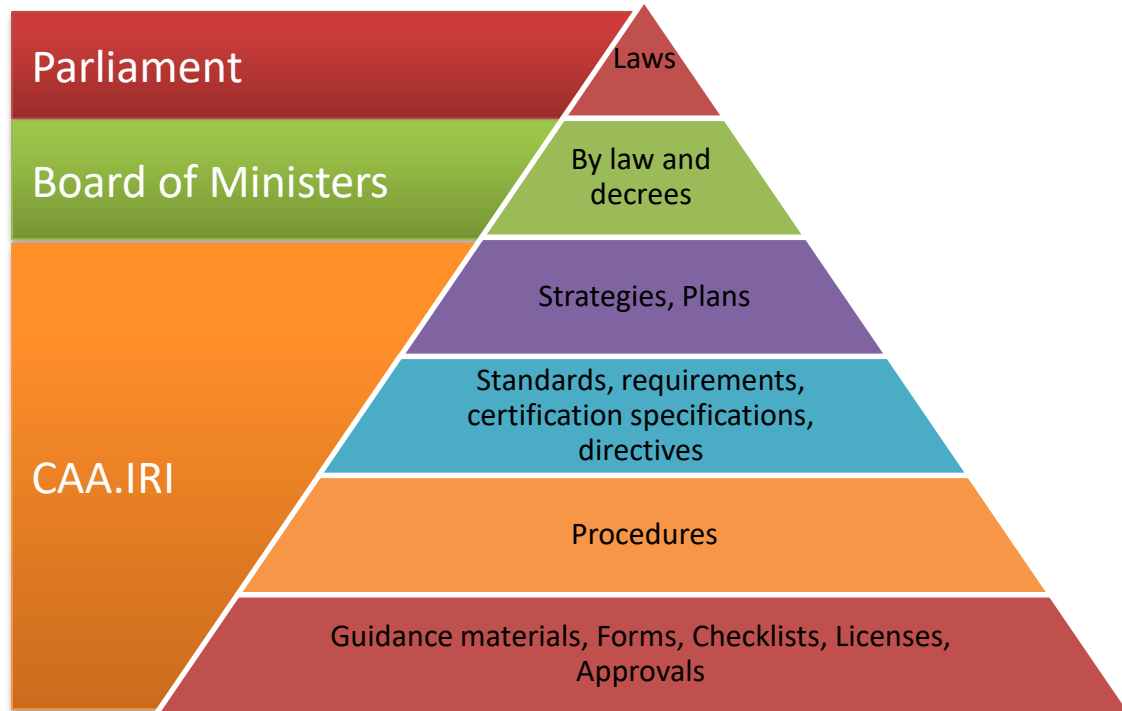




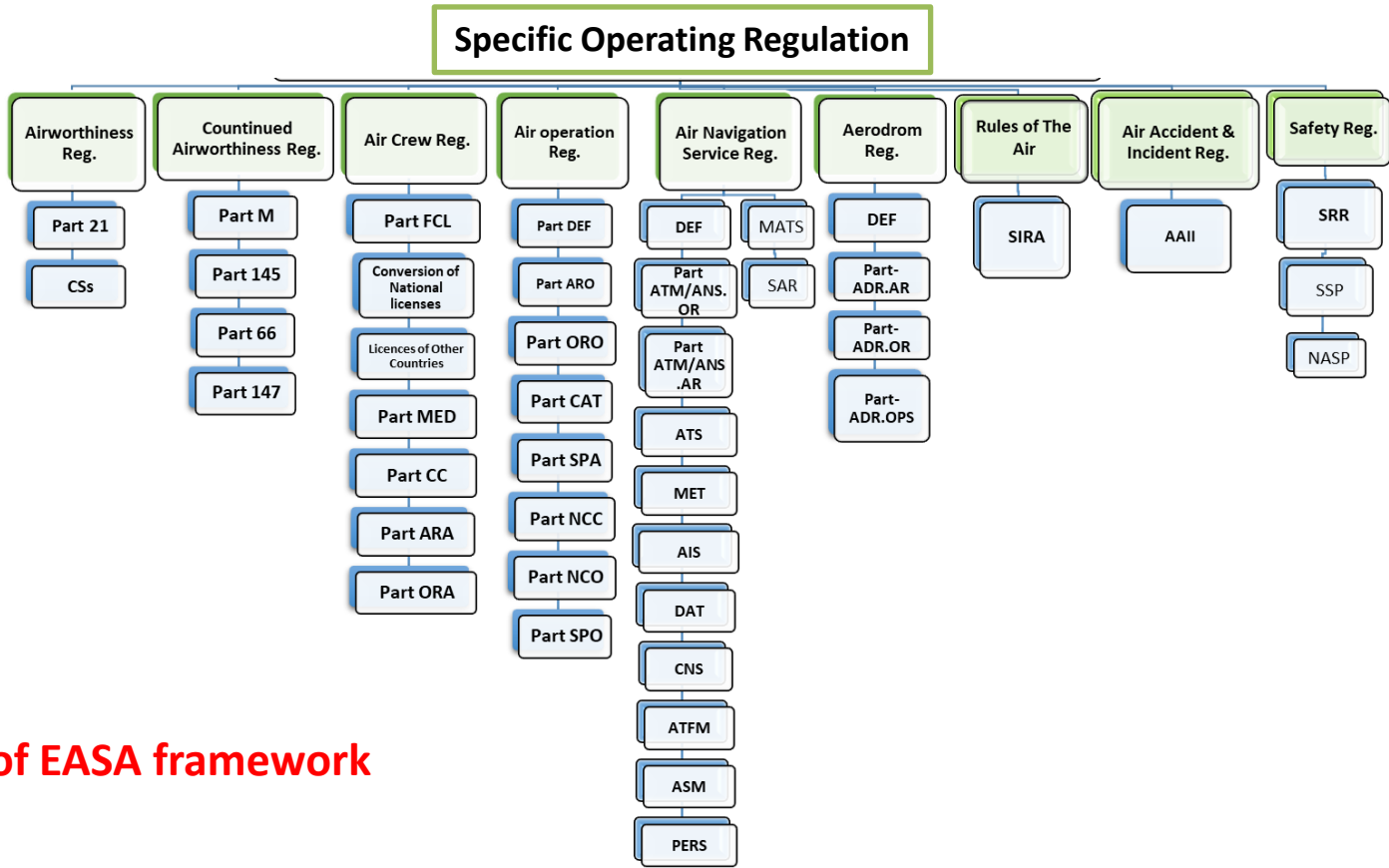




- CAD 4000
- Development, Amendment, Cancellation, Publication and Notifications of Controlled CAAIRI DOCs.
- CAD 4500
 - Identify and notifying the differences between national regulation and ICAO



Civil aviation regulations framework



Adaption of EASA framework



Iranian Service providers are mandated to follow these Specific Operating Regulations:

- **CAOIRI AirOPS (ORO.GEN.160)**
 - Related to CAO.IRI Flight Operation Dep.
- **CAOIRI Part-21 (21.A.3B)**
- **CAOIRI Part-M (M.A.202 Occurrence reporting)**
- **CAOIRI Part-145 (145.A.60) ;**
 - Related to CAO.IRI Airworthiness Dep.
- **CAOIRI Part-ADR (OR.C.030 Occurrence reporting)**
- **CAOIRI SRR (New Safety Reporting Regulation from 2019)**
- **CAD 6313; MOR**





ICAO Audit Report 2018

Audit 2018 :LEG,ORG,PEL,OPS,AIR
Audit 2022 :LEG,ORG,AIG,ANS,AGA

Audit 2018 + Audit 2022 = Full Audit





According to the schedule announced by ICAO, Iran's 2022 audit program was implemented from **8 to 18 September 2018** in the following **five areas** based on ICAO audit indicators (CEs) and **ICAO questions 2017**.

1. Primary aviation legislation and specific operating regulations (**LEG**)
2. Civil aviation organization (**ORG**)
3. Personnel licensing and training (**PEL**)
4. Aircraft operations (**OPS**)
5. Airworthiness of aircraft (**AIR**)

Area's **AIG,ANS** and **AGA** postpone to Audit 2022

	Area	Number of 2020 PQs
1	LEG	23
2	ORG	13
6	PEL	99
7	OPS	146
8	AIR	210
TOTAL NUMBER		491



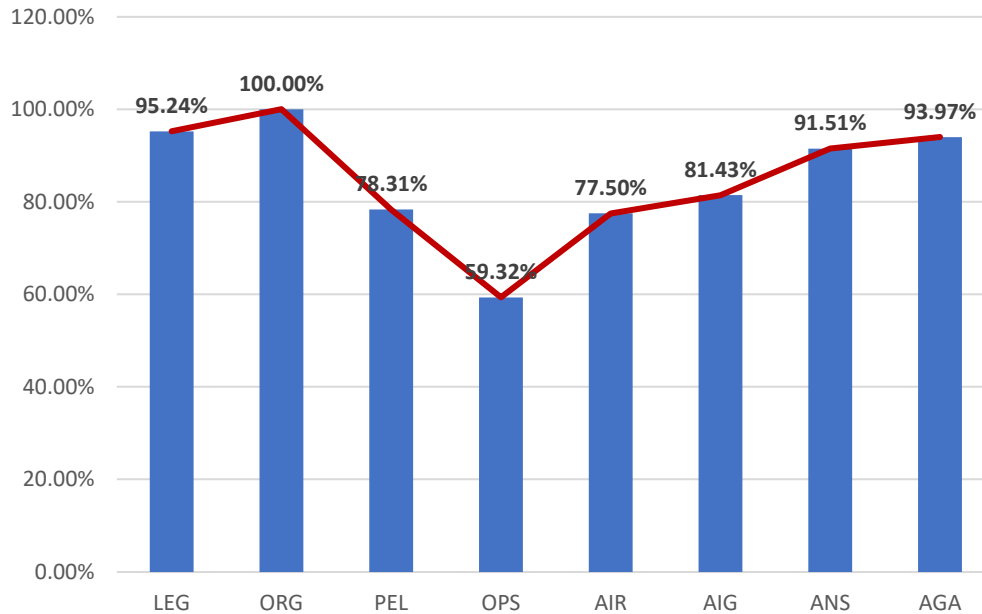


AREA	Not satisfactory	Satisfactory	Not applicable	Undetermined	PQ-Total	EI	Audit
ANS	9	97	0	16	122	%91.51	2010
AGA	7	109	12	15	143	%93.97	
AIG	13	57	1	13	84	%81.43	
AIR	27	93	59	7	186	%77.50	2018
OPS	48	70	7	0	125	%59.32	
PEL	18	65	6	0	89	%78.31	
ORG	0	9	3	1	13	%100	
LEG	1	20	2	0	23	%95.24	
Audit 2018	123	520	90	52	785	%80.87	

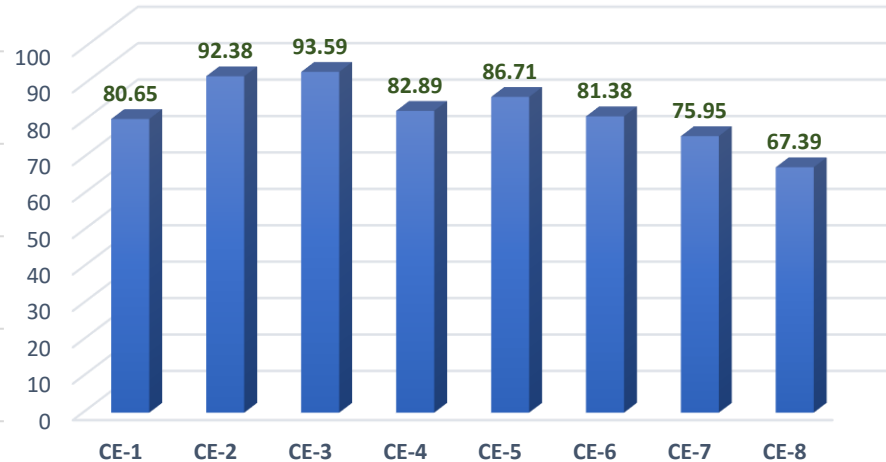




Area's



Critical Element (CE)



EI:80.87%





Not Satisfactory PQs by Audit Area and Critical Element (CE)

	LEG	ORG	AIG	PEL	OPS	AIR	ANS	AGA
CE-1	1		5					
CE-2				2	1	4		1
CE-3				1	2	1	1	
CE-4			2	5	3	3		
CE-5			5		7	3	3	1
CE-6				3	22	10	6	5
CE-7				4	10	3	1	1
CE-8			2	4	5	4		





The results of the audit in 2018 are based on the PQs 2017

Area:	ORG	LEG	PEL	AIR	OPS	ANS	AGA	AIG	CAA
EI:	%100	%95.24	%79.35	%96.24	%63.77	%93.41	%94.20	%84.44	%83.65



The results of the audit in 2018 are based on the PQs 2022

Area:	ORG	LEG	PEL	AIR	OPS	ANS	AGA	AIG	CAA
EI:	%100	%95.24	%78.31	%77.5	%63.77	%91.51	%93.97	%81.43	%80.87

EI(83.65%) -----> EI(80.87%)



ICAO Audit Report 2022

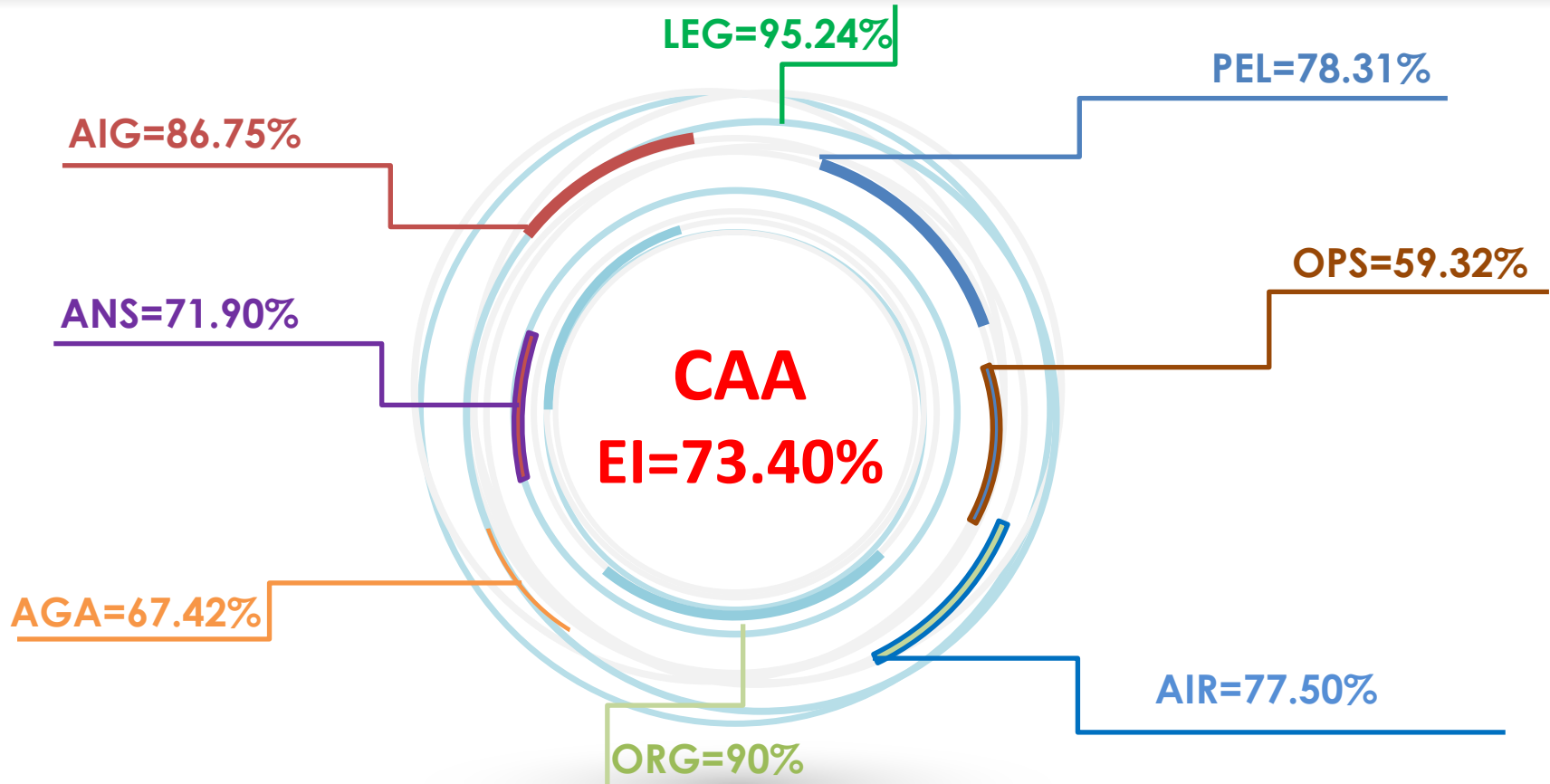




According to the schedule announced by ICAO, Iran's 2022 audit program was implemented from **29 August to 10 September 2022** in the following **five areas** based on ICAO audit indicators (CEs) and ICAO **questions 2020**.

1. Primary aviation legislation and specific operating regulations(**LEG**)
2. Civil aviation organization(**ORG**)
3. Aircraft accident and incident investigation(**AIG**)
4. Air navigation services(**ANS**)
5. Aerodromes and ground aids(**AGA**)

	Area	Number of 2020 PQs
1	LEG	23
2	ORG	13
6	AIG	84
7	ANS	122
8	AGA	143
TOTAL NUMBER		385

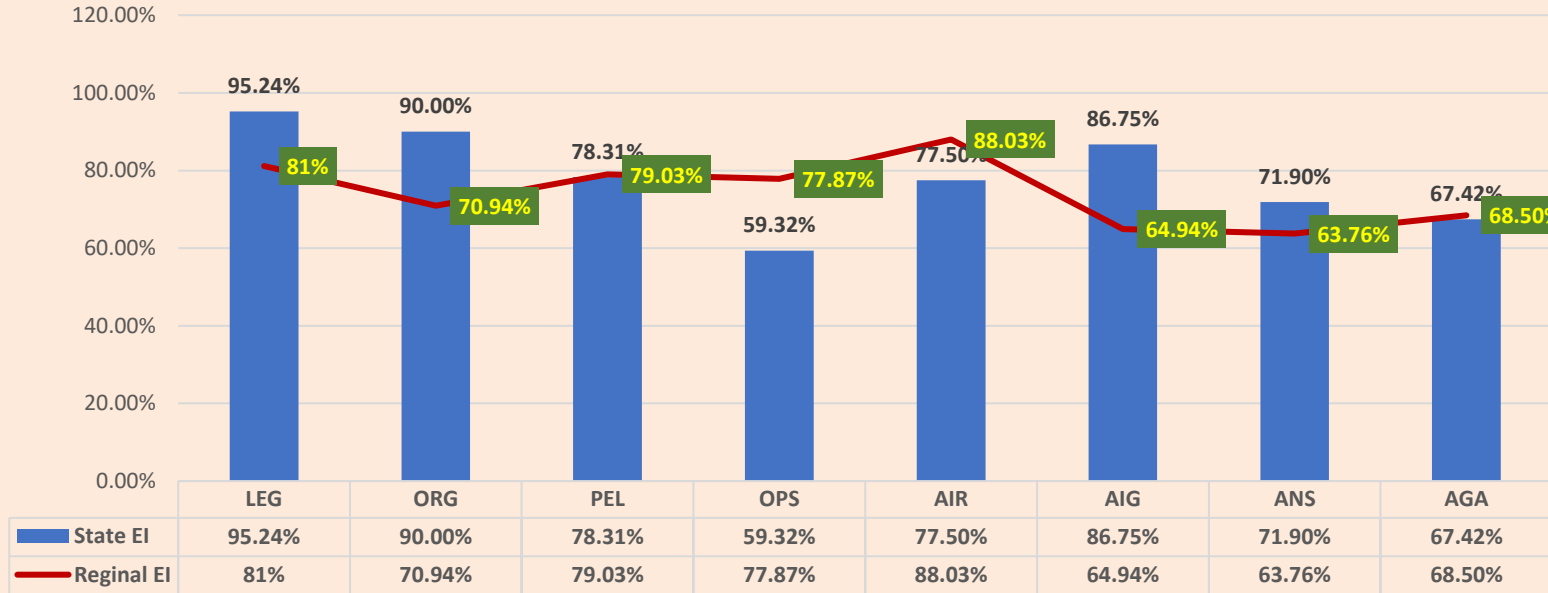




AREA	Not satisfactory	Satisfactory	Not applicable	Undetermined	PQ-Total	EI	Audit
ANS	34	87	1	0	122	%71.90	2022
AGA	43	89	11	0	143	%67.42	
AIG	11	72	1	0	84	%86.75	
AIR	27	93	59	7	186	%77.50	2018
OPS	48	70	7	1	126	%59.32	
PEL	18	65	6	4	93	%78.31	
ORG	1	9	3	0	13	%90.00	2022
LEG	1	20	2	0	23	%95.24	
Audit 2022	183	505	90	12	790	%73.40	

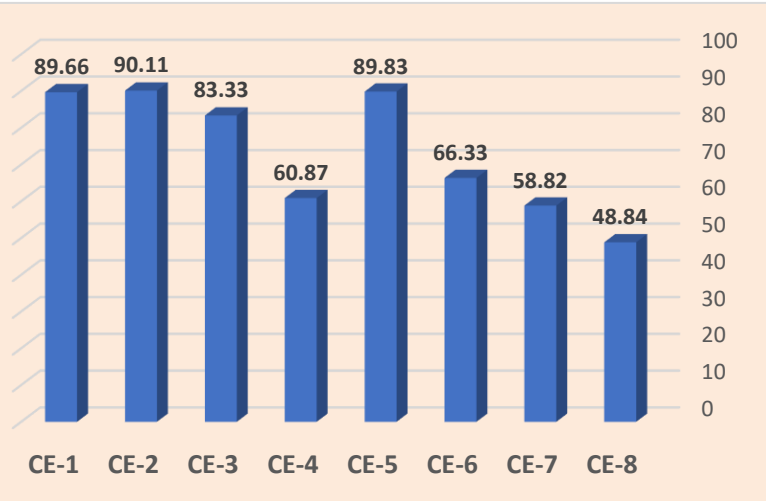


EI by AREA MID vs IRAN





Not Satisfactory PQs by Audit Area and Critical Element (CE)



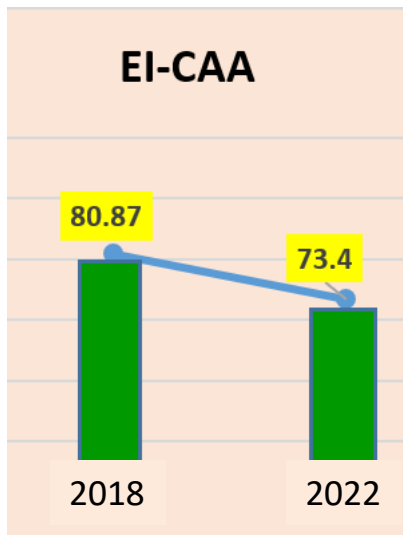
Critical Element	LEG	ORG	PEL	OPS	AIR	AIG	ANS	AGA
CE-1	1					1		1
CE-2			2	1	4	1	1	
CE-3		1	1	2	1	3	1	1
CE-4			4	3	2	2	6	1
CE-5				7	3	2		
CE-6			3	19	10		3	32
CE-7			4	11	3		16	8
CE-8			4	5	4	2	7	

EI:73.40%





Row.	Audit Date	Audit areas	EI
1	08-18 Sep 2018	LEG , ORG, PEL, OPS, AIR	%80.87
2	29 August to 10 September 2022	LEG , ORG, AIG, ANS, AGA	%73.40





Challenges





1) Independent accident investigation authority

Currently the AIG department is part of CAA and as authority responsible for the conduct of accident and incident investigations in Iran.

For the establish of an independent accident investigation authority need to separation of **organizational chart**, separation of **employment relationship**, separation of **financial and human resources**.

This issue requires the coordination of the ministry and the government **as well CAA does not have the necessary authority to final approve.**

ID	Question	EI (%)	Satisfactory	Unsatisfactory
6.003	Does the State's primary legislation provide for the establishment of an independent accident investigation authority and contain all necessary provisions to ensure the independence of said authority?	48.96	94	98





2) Lack of human resources in the areas **AGA, ANS, PEL, OPS** and **AIG**

Iran Aviation, Facts & Figures

23 AOC Holders

15 AOCs(Airplane)

8 AOCs (Helicopter)

5 SPOs, 8 NCOs, 1 NCC

5 ATOs (Flight Operation)

4 MTOs(Maintenance Training Org.)

320 Active Aircrafts

~190 Large Active

~130 Light & Helicopter Active

Airports

Commercial Air Transport

11 International Airports (2 certified)

29 Secondary International Airports

29 Domestic Airports

Non-commercial Air Transport

12 Airports

114 Registered Heliports

28 million passengers per year (before Covid-19: 50 million)



3- Certification of International Aerodromes



3) Difference between the salaries of airline personnel and CAA

The salary received by Airline employees is at least twice the salary of inspectors or auditors of the CAA.

That is a problem to attraction and retention of qualified technical personnel. (CE-4)





4) Assistance to aircraft accident victims and their families(PQ 6.383-AIG)

Annex 6

EASA:OPS: AMC1 ORO.GEN.200(a)(1);(2);(3);(5) Management system (No mention about family assistance plans)

Annex 14

EASA: ADR: ADR.OPS.B.005 Aerodrome emergency planning (No mention about family assistance plans).





6.383	<p>Has the State established a comprehensive system for providing assistance to aircraft accident victims and their families?</p>	<p>Verify that:</p> <ol style="list-style-type: none"> 1) the primary aviation legislation, specific operating regulations and/or policies establish family assistance plans that address the scope, responsibilities, roles and coordination necessary to provide assistance to aircraft accident victims and their families. 2) the State has ensured that air operators and aerodrome operators have established family assistance plans. 3) the family assistance plans are periodically reviewed by the State and service providers. 4) the State has ensured that air operators have arrangements with aerodromes in which they operate to implement the family assistance plans. 5) an agency is designated to coordinate the timely and appropriate delivery of assistance. <p>Note to the auditor: This PQ is linked to PQs 6.371 and 6.381.</p>	<p>STD A9 8.41 to 8.42 & 8.44 to 8.45 RP A9 8.43 & 8.46 GM Doc 9973 Doc 9998</p>





Suggestions





1. System and Mechanism

As you know, at the start of the audit protocol questions , the definition of procedure and process is clearly stated.

From ICAO's point of view, what is the definition of a system and a mechanism, and what are their characteristics?

Various views have been raised by managers during internal audits.

Therefore, **it is advisable to provide a clear definition of the system and mechanism at audit the protocol questions.**



Suggestions



8.257	Has the State established and implemented a mechanism to ensure that aerodrome operators maintain good friction characteristics and low rolling resistance on runways?	<ol style="list-style-type: none"> 1) Evaluate mechanism to ensure effective implementation. 2) Review method used for timely removal of contaminants, such as rubber deposit, standing water, snow, sand, etc. 3) Review recorded friction results to confirm that frequency of measurements and method used are appropriate to the level of activity of the runway. 	STD A14 Vol. I, 10.2.3 to 10.2.7 & 10.3.1 GM Doc 9137 Part 2		CE-7
6.383	Has the State established a comprehensive system for providing assistance to aircraft accident victims and their families?	Verify that: <ol style="list-style-type: none"> 1) the primary aviation legislation, specific operating regulations and/or policies establish family assistance plans that address the scope, responsibilities, roles and coordination necessary to provide assistance to aircraft accident victims and their families. 	STD A9 8.41 to 8.42 & 8.44 to 8.45 RP A9 8.43 & 8.46 GM Doc 9973 Doc 9998		
3.256	Has the State established a system to re-establish or reinstate the privileges of expired licences and ratings?	<ol style="list-style-type: none"> 1) Review documented requirements (e.g. number of hours of mandatory re-training, examinations, etc.) to reinstate the privileges of expired licences and ratings. 2) Review documented process and procedures to reinstate the privileges of expired licences and ratings <p>Note to auditor: The implementation of a system to re-establish or reinstate the privileges of expired licences and ratings is addressed in PEL PQ 3.257 (CE-6).</p>	STD A1 1.2.5 GM Doc 9379 Part II, C4 & C7		



2. Priority Protocol Questions (PPQs)

As you are aware, according General Guidelines of ICAO audit protocol questions, a specific subset of PQs is categorized as Priority PQs, abbreviated as PPQs.





For example:

State A: Not Satisfactory =30(**PPQ**) (in the PEL area) ~ EI=68%
State B: Not Satisfactory =30 (**non- PPQ**) (in the PEL area) ~ EI=68%

$$EI = \frac{\text{Total number N/S PQ}}{\text{Total PQs} - \text{added PQs} - \text{not applicable PQs}}$$





3. Conducting periodic visits to regional States

Conducting periodic visits to regional states and providing them with consultancy services, especially in states with low average(EI) score. This will lead to:

- ❖ **Increasing cooperation and coordination between states and the regional office**
- ❖ **Increasing the activity of states towards enhancing safety levels**
- ❖ **Encouraging and supporting States towards the objectives of the regional office**
- ❖ **Accurate understanding of the issues and challenges facing the states through physical presence.**
- ❖ **Assisting in the accurate and precise targeting of the regional office's objectives**

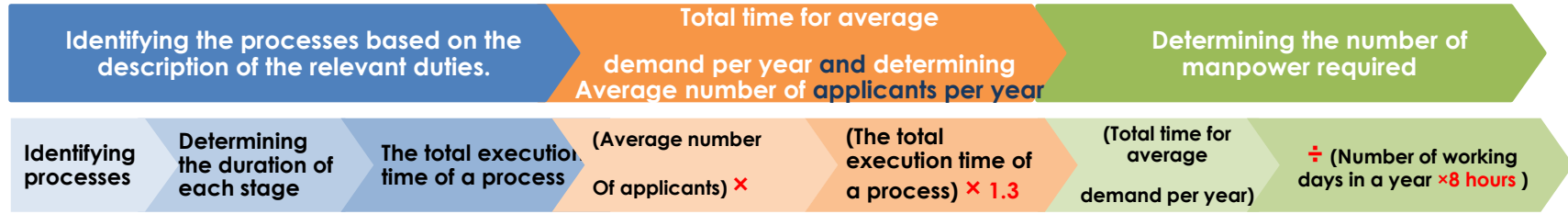




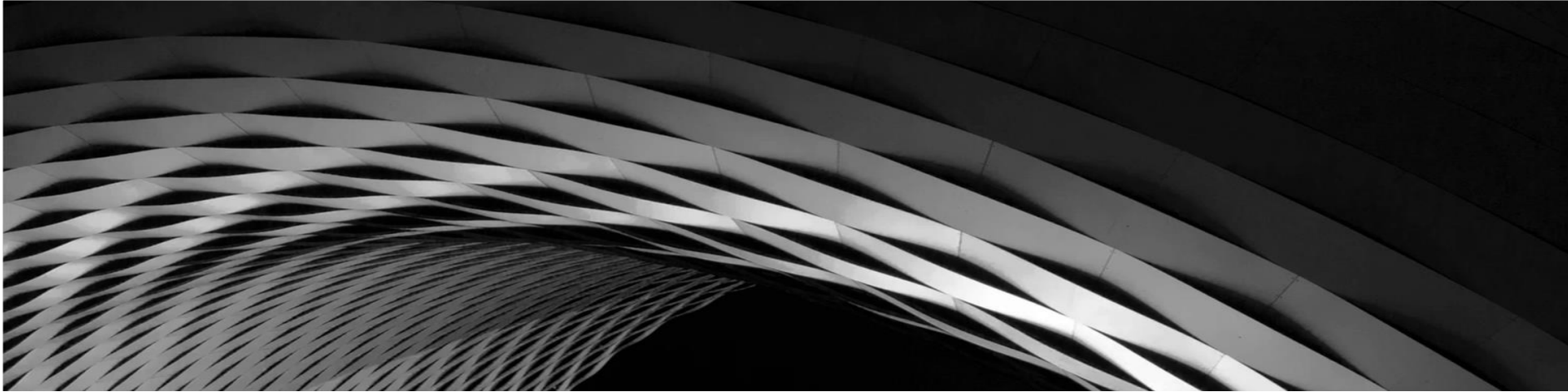
Best Practice



Manpower needs assessment Process



1.3 (Coefficient) = (Taking into account the waste of time that includes: leave, training, mission, etc.)



Duties and Functions

Issuance, Renewal, Suspension, Revocation, and Restriction of Certificates (and their Auditing):

- Aircraft Operations Training Center (ATO)
- Aircraft Maintenance Training Center (MTO)
- Air Traffic Control Training Center
- Aviation Medical Center
- Flight Simulator
- Comprehensive Applied Aviation Science Institute
- Aviation Vocational Schools
- Participation in feasibility study of establishing the above centers.

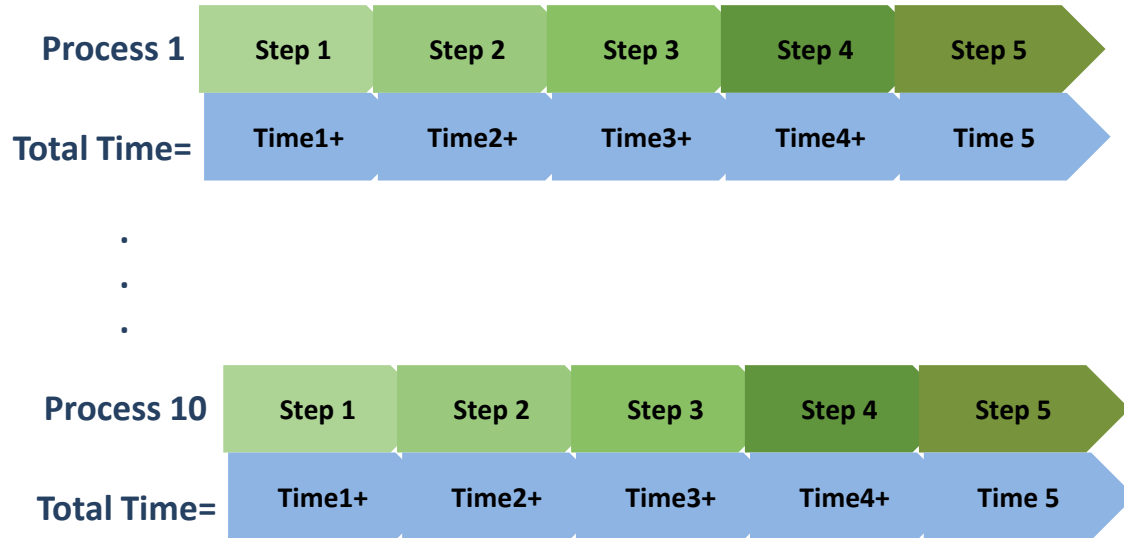
Issuance, Renewal, Suspension, Revocation, and Restriction of Certificates (or equivalent certificates) for Individuals:

- Technical (including B, 1.4B, 1.3B, 1.2B, 1.1C, 3B, 2B, 1B, A)
- Operational (including PPL, CPL, ATPL, IR, FE)
- Flight Attendant
- Flight Medical
- Crew Member Certificate (CMC)

Identifying all of processes



Determining the time (to minute) required to complete each stage of each process.



ATO issuance	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Total
	checking the documents	Conduct an audit	Preparation of audit report	Review and finalize the report	Follow up CAP an RCA	issuing	2640
Time	180	1440	360	240	360	60	



Determining the final time to complete each process

1.3 (Coefficient) = (Taking into account the waste of time that includes: leave, training, mission, etc.)

ATO issuance	Step1	step5	Step1	step2	Step 3	step4	Total
	checking the documents	Conduct an audit	Preparation of audit report	Review and finalize the report	Follow up CAP an RCA	issuing	2640
Time	180	1440	360	240	360	60	

2640 (real time) × 1.3(Coefficient)= 3696 min

Determining the average number of applicants per year

1.3 (Coefficient) = (Taking into account the waste of time that includes: leave, training, mission, etc.)

	Step1	step5	Step1	step2	Step 3	step4	Total
ATO issuance	checking the documents	Conduct an audit	Preparation of audit report	Review and finalize the report	Follow up CAP an RCA	issuing	2640
Time	180	1440	360	240	360	60	

Average number of applicants per year =25

The final time including the coefficient= 2640 (real time)× 1.3(Coefficient)= 3696 min

3696 × 25 (applicants per year) =92400 min

92400 ÷ 60 (convert to hours) = 1540

ROUNDUP(1540/1452) ≅ 2 (persons)

Subject	
Number of days in the year	365
Number of working days per year (22*12)	264
Official holidays (in a year)	22
Number of working days remaining	264-22=242
242(working Days) × 6 (working Hours)	=1452(working hours in a year)

$$3696 \times 25 \text{ (applicants per year)} = 92400 \text{ min}$$

$$3696 \times 25 \text{ (applicants per year)} = 92400 \text{ min}$$

$$92400 \div 60 \text{ (convert to hours)} = 1540$$

$$\text{ROUNDUP}(1540/1452) \cong 2 \text{ (persons)}$$

Determining the number of personnel required

Based on the results of this method, actions are taken regarding the recruitment and acquisition planning for the required human resources.





SEIG/5

Qatar

Oct 2023

