NO COUNTRY LEFT BEHIND (NCLB) NACC STRATEGY

Victor Hernandez
RO ATM/SAR

ASBU Implementation Workshop for the NAM/CAR Regions
Mexico City, Mexico, 22 – 26 August 2016

Outline

✈ The NACC NCLB Strategy

✈ Implementation of NACC NCLB Strategy

✈ Implementation status, projects and challenges

NACC NCLB Strategy

ICAO

http://www.icao.int/about-icao/NCLB/Pages/default.aspx

The ICAO No Country Left Behind (NCLB) Strategy

Initiated on February 2015 in response to the ICAO NCLB Campaign

Assist States in implementing ICAO Standards and Recommended Practices (SARPs)

Also promote ICAO's efforts to resolve Significant Safety Concerns (SSCs)

Allow States to benefit from the socio-economic contributions of safe and reliable air transport
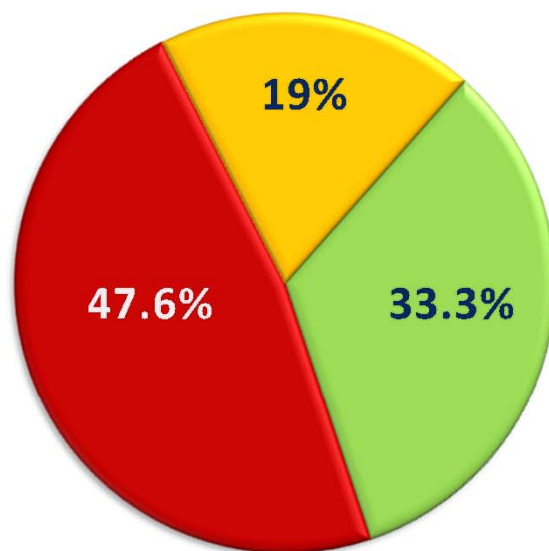
Performance management

- Commitment of high level management

- Systemic assistance programme to NAM/CAR States

- Effective implementation of ICAO SARPS

- Strategic planning, objectives, priorities

- Data analysis, Risk Management

- Results oriented

- Development and implementation of tailored Projects / Corrective action plan based on States needs

- Participation of all stakeholders

- Project Management

- Continuous monitoring

- ISO 9001:2015

NACC Regional Effective Implementation (EI) % Status

19% of the States have an EI% between 70% and 80%

47.6% of the States have an EI% below 70%

19%

47.6%

33.3%

33.3% of the States have an EI% over 80%

4 Phases of the NACC NCLB Strategy

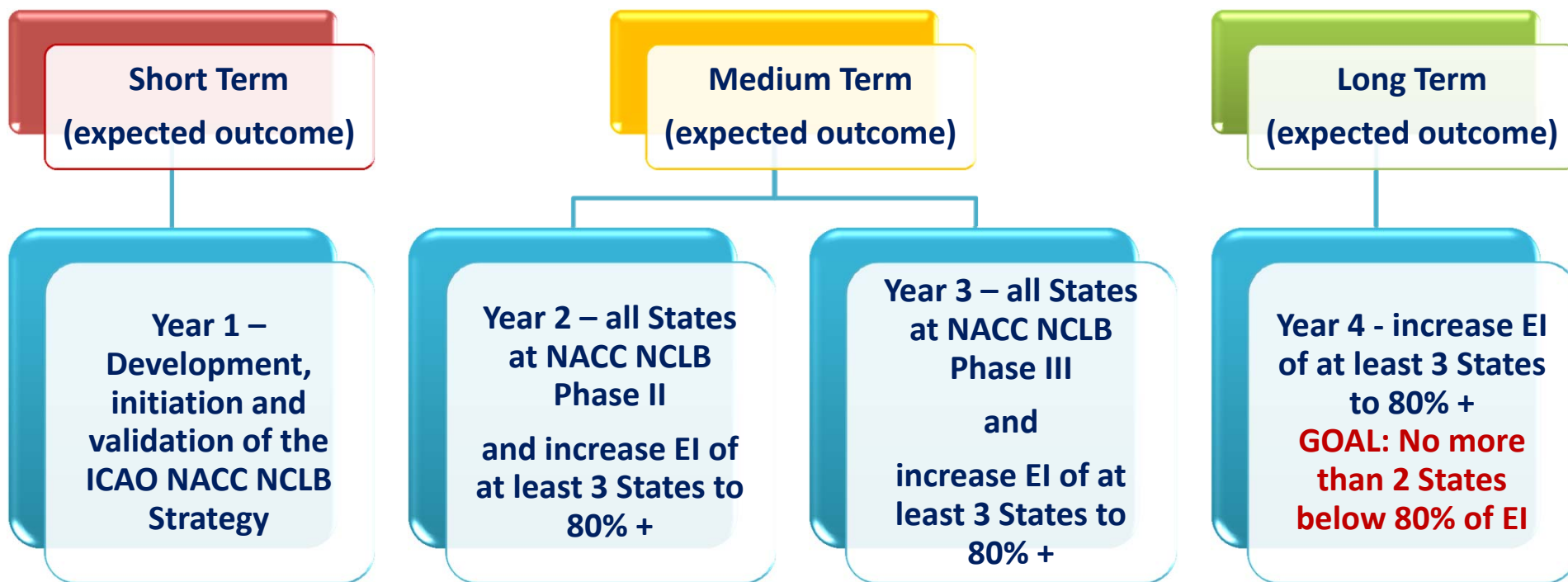| I	II	III	IV
Senior Management commitment	**_Intelligence gathering and analysis_**	**_Implementation_**	**_Measuring & Monitoring_**
Establish of Assistance Methodology	**Sending Data - USOAP-CMA, GANDD, PoS, RPBANIP, etc.**	**NCLB Multidisciplinary TEAM visit – in situ Verification of PQ resolutions**	**Monthly Teleconference NACC & CAA Tech teams**
Evolution of Internal and External organizational culture	**Teleconferences NACC Office & CAA Tech Teams**	**Develop joint NACC-CAA Action / implementation Plan**	**Quarterly Video Brief to RD & DG/Minister**
RD Accountability To Foster Political Will	**Actualization of States closed/open PQs etc.**	**Strategic coordination of priorities between RD and DG (on-going)**	**Biannual Implementation Progress Review**
Completed/On-going	**100 % of States**	**30 % of States**	**20 % of States**

Continuous Monitoring process and challenges achievements

NCLB Goals and Outcomes

Short Term
(expected outcome)

Medium Term
(expected outcome)

Long Term
(expected outcome)

Year 1 – Development, initiation and validation of the ICAO NACC NCLB Strategy

Year 2 – all States at NACC NCLB Phase II

and increase EI of at least 3 States to 80% +

Year 3 – all States at NACC NCLB Phase III

and

increase EI of at least 3 States to 80% +

Year 4 - increase EI of at least 3 States to 80% +
GOAL: No more than 2 States below 80% of EI
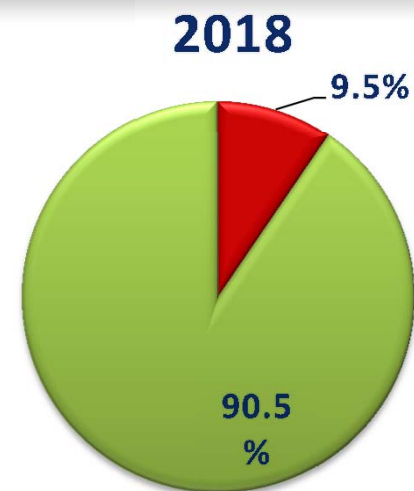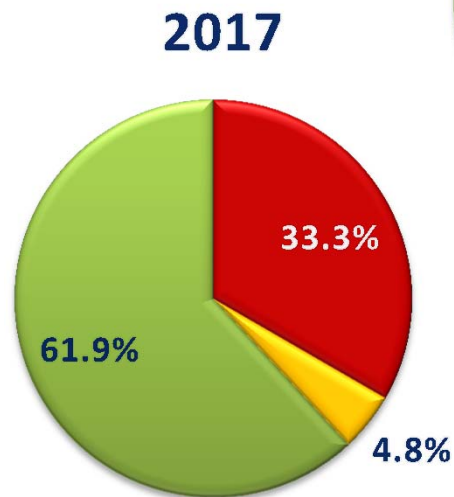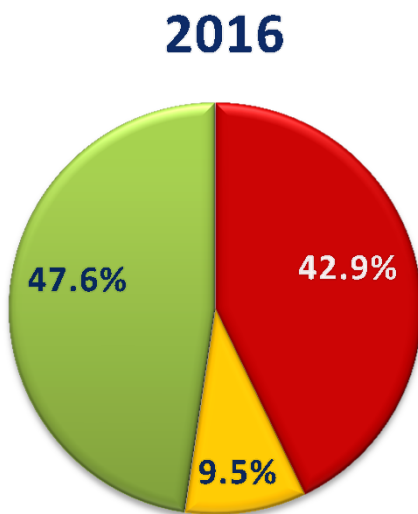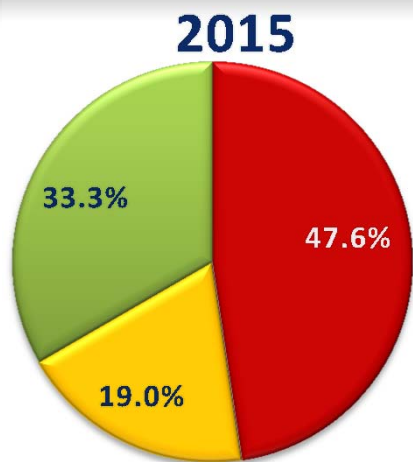
Tracking achievements and challenges

STATE	PHASE I	PHASE II	PHASE III	PHASE IV	REMARKS
Bahamas	X	X			TEAM Jun 2016 / CSA 4Q 2017
Barbados	X	X			
Belize	X	X			Off-site Validation 4Q 2016
Canada	X	X			
Costa Rica	X	X			TEAM 2016 pending
Cuba	X	X			
Dominican Republic	X	X			
El Salvador	X	X	X	X	Off-site Validation 3Q 2016
Guatemala	X	X	X		TEAM May 2016
Haiti	X	X	X		TEAM Sep 2015 completed
Honduras	X	X	X	X	TEAM 2015 completed / CSA 4Q 2016
Jamaica	X	X	X	X	ICVM June 2016
Mexico	X	X	X	X	Off-site Validation 4Q 2016
Nicaragua	X	X			
Trinidad and Tobago	X	X	X		TEAM 2016 completed / ICVM 4Q 2017
United States	X	X			
Eastern Caribbean Civil Aviation Authority / ECCAA (OECS; Antigua and Barbuda, Grenada, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines)	X	X			

Hand-holding assisting States

- Follow-up to USOAP and USAP audits
- Implementation projects / corrective action plans
- State's Civil Aviation Authorities capacity building
- SARPS, regulations and procedures
- Training
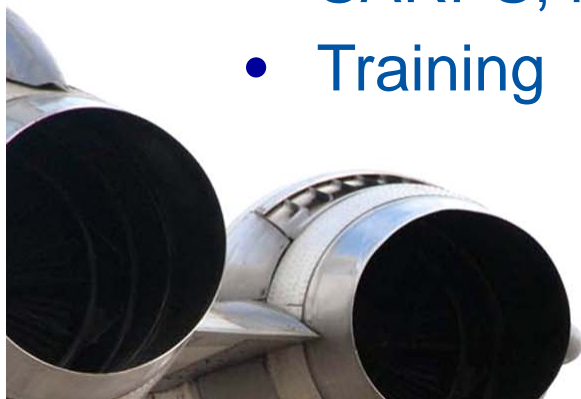
Projects & Stakeholders

- **SAFETY OVERSIGHT PROJECT**

- **ANS PROJECT**

- **AGA PROJECT**

- **AVSEC PROJECT**

States

ANSPs, ASPs & OTHERs

Financial institutions

Projects

ICAO (ROs, ANB, ATB, LEB)

MARB, AUDITs

Regional Organizations

NAM/CAR RPBANIP

(Working Draft)

NAM/CAR Regional Performance-based Air Navigation Implementation Plan (RPBANIP)

V3.0 — July 2013

International Civil Aviation Organization

- ✈ Air navigation Implementation guidelines
- ✈ Operational improvements (RPOs)
- ✈ ASBU (technologies)
- ✈ Develop under NCLB Strategy:
  - ✈ Air Navigation Project(s)
  - ✈ AGA Project

Regional Performance Objectives (RPO)

1. PERFORMANCE BASED NAVIGATION (PBN)

2. FLEXIBLE USE AIRSPACE (FUA)

3. IMPROVE DEMAND AND CAPACITY BALANCING (DCB)

4. IMPROVE SITUATIONAL AWARENESS

5. ENHANCE CAPACITY AND EFFICIENCY OF AERODROME OPERATIONS IN THE CAR REGION

6. OPTIMIZATION AND MODERNIZATION OF COMMUNICATION INFRASTRUCTURE

7. IMPLEMENTATION OF AERONAUTICAL INFORMATION MANAGEMENT (AIM)

8. IMPROVE AVAILABILITY OF METEOROLOGICAL INFORMATION

9. IMPROVE SEARCH AND RESCUE (SAR) SERVICES

1. IMPLEMENTATION OF PERFORMANCE BASED NAVIGATION (PBN)				
Benefits				
Environment	• Reductions in fuel consumption			
Efficiency	• Ability of aircraft to conduct flight more closely to preferred trajectories • Increase in airspace capacity • Facilitate the utilization of advanced technologies (e.g., FMS based arrivals) and ATC decision support tools (e.g., metering and sequencing)			
Strategy				
ATM Component	**TASK DESCRIPTION**	**START-END**	**RESPONSIBLE**	**STATUS**
AOM	a) Implement Collaborative Decision-Making (CDM) process in coordination with stakeholders	2013- 2016	States, Territories, Int. Orgs	Valid
	b) Implement PBN airspace concept for oceanic, continental and terminal areas in accordance with the ICAO PBN Manual	2013- 2016	States, Territories, Int. Orgs	Valid
	c) Update Letters of Agreement between ATC units	2013- 2016	States, Territories, Int. Orgs	Valid
	d) Publish regulations and procedures for PBN operational approval	2013- 2016	States, Territories, Int. Orgs	Valid
	e) Evaluate and implement PBN requirements for ATC automated systems, as required	2013- 2016	States, Territories, Int. Org	Valid
	f) Analyze and enhance air communication, navigation (ground navaids GNSS) and surveillance infrastructure in accordance with PBN requirements	2013- 2018	States, Territories, Int. Orgs	Valid
	g) Develop and implement PBN training programme for pilots, ATCOs, operators and regulators, as well as implementation of GNSS technologies	2013- 2018	States, Territories, Int. Orgs	Valid
	h) Optimize the ATS route structure through implementation of RNAV routes between major city pairs with navigation specification RNAV-5 /2 for en-route operations	2013- 2016	States, Territories, Int. Orgs	Valid
	i) Implement CDOs/CCOs for SIDs/STARS in terminal areas based on RNAV 1-2 and RNP 1-/2 navigation specification, as required	2013- 2016	States, Territories, Int. Org	Valid
	j) Design and implement PBN APV in accordance with Assembly Resolution A37-11	2013- 2016	States, Territories, Int. Orgs	Valid
	k) Conduct PBN safety assessment based ATC simulations (fast time and/or real time), live trials, etc., as required	2013- 2016	States, Territories, Int. Orgs	Valid
	l) Develop performance measurement programme	2013- 2016	States, Territories, Int. Orgs	Valid
	m) Develop post-implementation PBN Safety Assessment Programme	2013- 2016	States, Territories, Int. Orgs	Valid
	n) Monitor implementation progress	2013- 2018	States, Territories, Int. Orgs	Valid
GPIs	GPI/5: Performance-Based Navigation; GPI/7: Dynamic And Flexible ATS Route Management; GPI/8: Collaborative Airspace Design And Management; GPI/10: Terminal Area Design and Management; GPI/11: RNP and RNAV SIDS and STARS; and GPI/12: FMS-Based Arrival Procedures			

RPO and ASBU Block 0 relationship

ASBU / RPO	PIA1 Airport Operations					PIA2 SWIM			PIA3 Global Collaborative ATM							PIA4 Trajectory-based Operations		
	B015 RSEQ	B0 65 APTA	B070 WAKE	B075 SURF	B0 80 ACDM	B025 FICE	B030 DAIM	B0105 AMET	B010 FRTO	B035 NOPS	B084 ASUR	B085 ASEP	B086 OPFL	B0101 ACAS	B102 SNET	B005 CDO	B020 CCO	B040 TBO
PBN Implementation		X							X							X	X	
FUA									X									
DCB	X			X	X					X								
ATM Situational Awareness	X			X							X				X			X
Improve SAR																		
Improve Cap/Efficiency Aerodrome Operations				X	X													
COM				X	X													X
AIM							X											
MET								X										

Implementation of NACC NCLB Strategy

PORT OF SPAIN DECLARATION

✈ Approved at the Fifth North American, Central American and Caribbean Directors of Civil Aviation Meeting(NACC/DCA/5) held in Port of Spain, Trinidad and Tobago, April 2014

✈ Harmonizes the regional air transport system through:

  ✈ Regional Safety Targets

  ✈ Regional Air Navigation Targets

NAM/CAR Safety Indicators

INDICATOR	VALUE
State Safety Oversight - Group Average Average USOAP Overall EI(%)	**68.9%**
State Safety Oversight - State Levels Percentage of States with USOAP Overall EI above 60%	**61.9%**
Significant Safety Concerns (SSCs) Number of SSCs	**1**
Accident Rate Number of accidents per mil. departures over preceding 5 years	**3.11**
IOSA - Airlines Number of IOSA certified airlines in the region	**58**
IOSA - State Levels Percentage of States with IOSA certified airlines	**52.38%**
EU Safety List Number of States with restrictions	**0**
FAA IASA Number of States rated as Category 2	**1**

Source: iSTARS

Regional Safety Targets

1   Safety Oversight
- 80% Effective Implementation (EI) regional average by December 2016
- No State in the Region to have EI of ICAO USOAP Critical Element 3 (CAA Staff) and Critical Element 4 (Inspector Competency) below 70% by December 2016

2   Accidents
- Using 2010 as the baseline, reduce fatality risk for accidents in the CAR Region for Part 121 or like commercial air transport operations by 50% by the year 2020

3   Runway Excursions
- Reduce runway excursions by 20% relative to the 2007-2012 regional average by December 2016

4   Aerodrome Certification
- 48% of international aerodromes in the CAR Region to be certified by December 2016

5   State Safety Programme (SSP)/ Safety Management System (SMS) Implementation
- 60% of States to have SSP - Phase 1 implemented, service provider SMS safety performance indicators accepted, and an initial Acceptable Level of Safety Performance (ALoSP) established by December 2016
- 60% of service providers to have Phase 1 of their SMS implemented with a minimum of Reactive Phase functional risk management procedures by December 2016

| Regional Air Navigation Targets |
|---|
| **1**   **Approach - Performance-Based Navigation (PBN)**
• **80% of instrument approach runways to have Approach Procedures with Vertical Guidance (APV) with Barometric Vertical Navigation (Baro VNAV) implemented by service providers and users by December 2016** |
| **2**   **Air Traffic Flow Management (ATFM)**
• **100% of Flight Information Regions (FIRs) within which all Area Control Centres (ACCs) to have ATFM measures available by December 2018** |
| **3**   **Aeronautical Information Management Transition (AIM)**
• **100% of Aeronautical Information Services (AIS) to implement AIM Roadmap - Phase I required elements by December 2016** |
| **4**   **Ground-Ground Digital Coordination/Transfer**
• **50% of FIRs within which all applicable ACCs to have implemented at least one interface to use Air Traffic Services Inter-Facility Data Communication (AIDC)/On-Line Data Interchange (OLDI) with neighbouring ACCs by December 2016** |
| **5**   **Environmental Benefit**
• **Reduce regional CO_2 emissions by 40,000 tons per year through PBN implementation by December 2016** |

Expectations for 2016-2020:

RLA/09/801
Implementation Projects

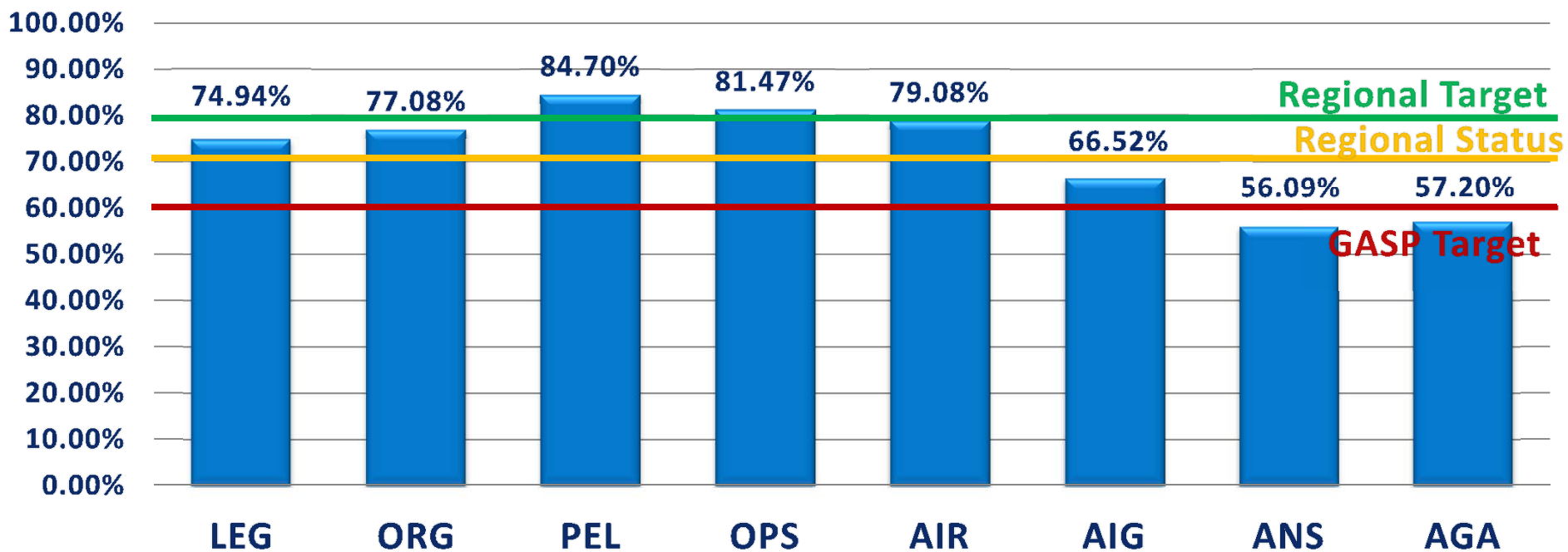**"MCAAP"**
– Multi-Regional Civil Aviation Assistance Programme

NACC Regional EI View by Area
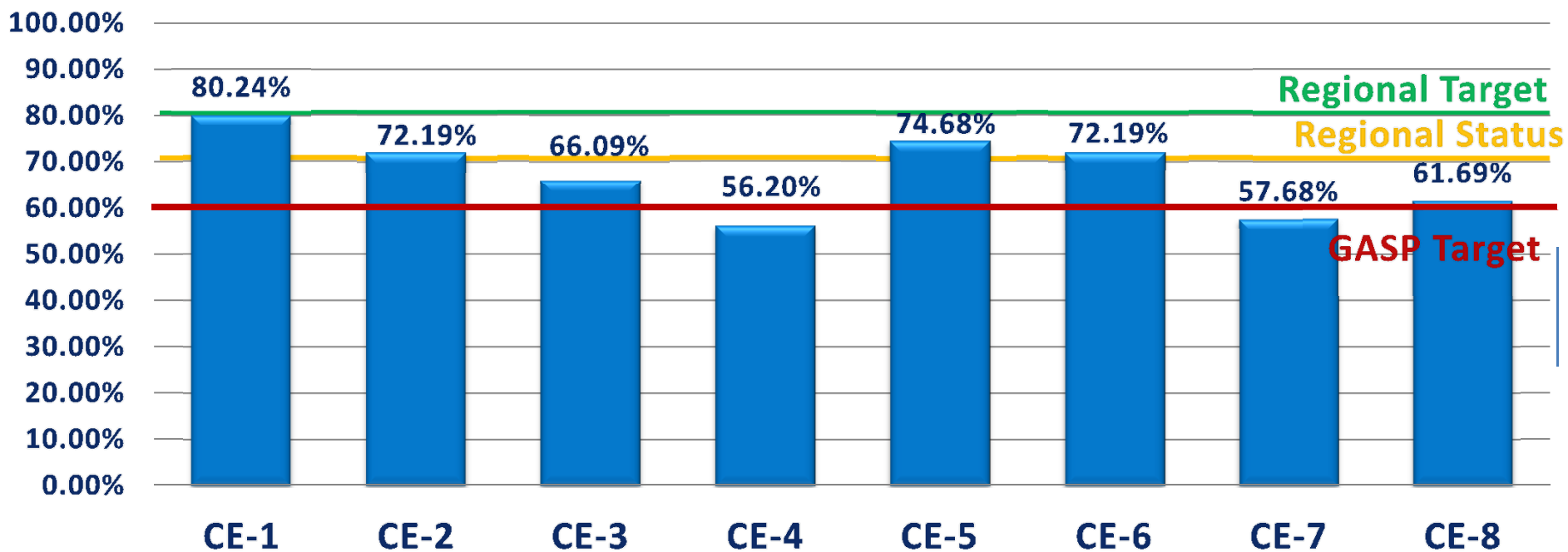
Source: ICAO SPACE iSTARS 2.0

NAM/CAR USOAP Challenge

✈ Protocol Questions (PQs) by Area and Critical Element (CE):

1. AGA / CE-6: 540 (48% of States)

2. ANS / CE-4: 387

3. AIG / CE-5: 289

✈ Number of States with open PQs by Area and CE

	LEG	ORG	PEL	OPS	AIR	AIG	ANS	AGA
CE-1	42	6		14		46	19	3
CE-2	58		36	43	140	83	100	189
CE-3		36	21	30	16	83	351	47
CE-4		6	57	56	51	52	387	65
CE-5	13	3	18	61	155	289	63	131
CE-6			59	202	113		353	540
CE-7			43	68	44		261	235
CE-8			17	24	18	128	79	98

	LEG	ORG	PEL	OPS	AIR	AIG	ANS	AGA
CE-1	16	6		13		19	10	3
CE-2	20		17	17	19	18	19	20
CE-3		14	7	10	8	18	17	17
CE-4		4	15	19	15	15	19	18
CE-5	12	3	7	14	19	21	14	19
CE-6			15	20	19		21	21
CE-7			16	18	16		21	19
CE-8			10	9	8	21	17	18

GANDD

Outstanding priority "U" Deficiencies
by field in the CAR Region

Outstanding Deficiencies
in the CAR Region

	Ene 2013	Ene 2015	Feb 2015 – Jun 2016
U	27	22	12
A	600	495	451
B	145	123	99
	772	**640**	**562**

	AGA	AIM	ATM	CNS	MET
2013	7	3	8	7	2
2015	5	3	6	5	3
2016	5	2	1	1	3
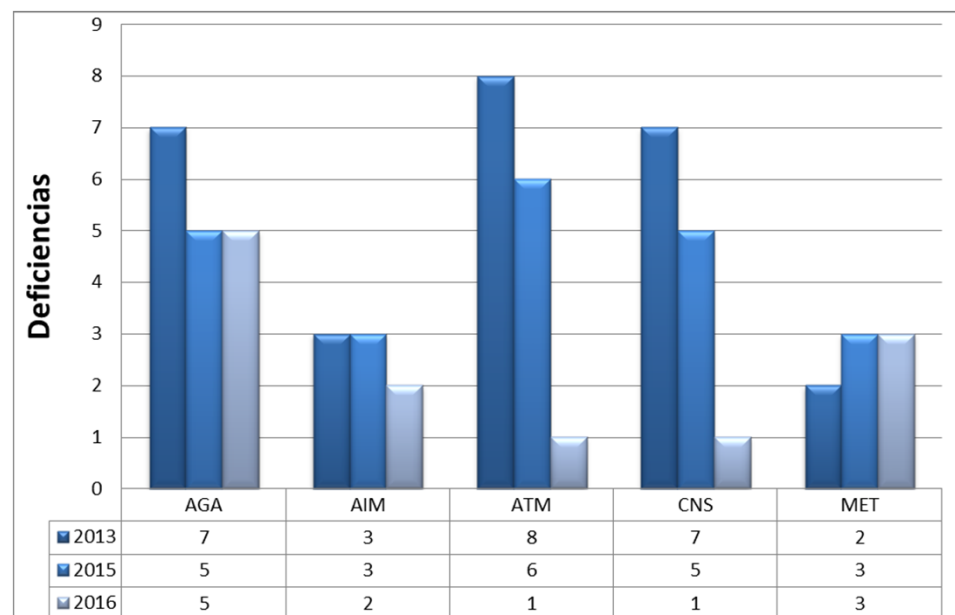
CAR Aerodrome Certification status (Target 48% by Dec 2016)

CAR Region	No of Aerodromes (Doc. 8733)	Certified Aerodromes	Total of Certified Aerodromes	Total of Aerodromes that may be certified (2016-2019)	Aerodromes facing major challenge for certification
Central America	13	2	1.4%	6 (4%)	5
Central Caribbean	101	32	21.7%	67 (45%)	12
Eastern Caribbean	34	19	12.9%	15 (10%)	8
Total	**149**	**53**	**36.0 %**	**88 (59%)**	**25**
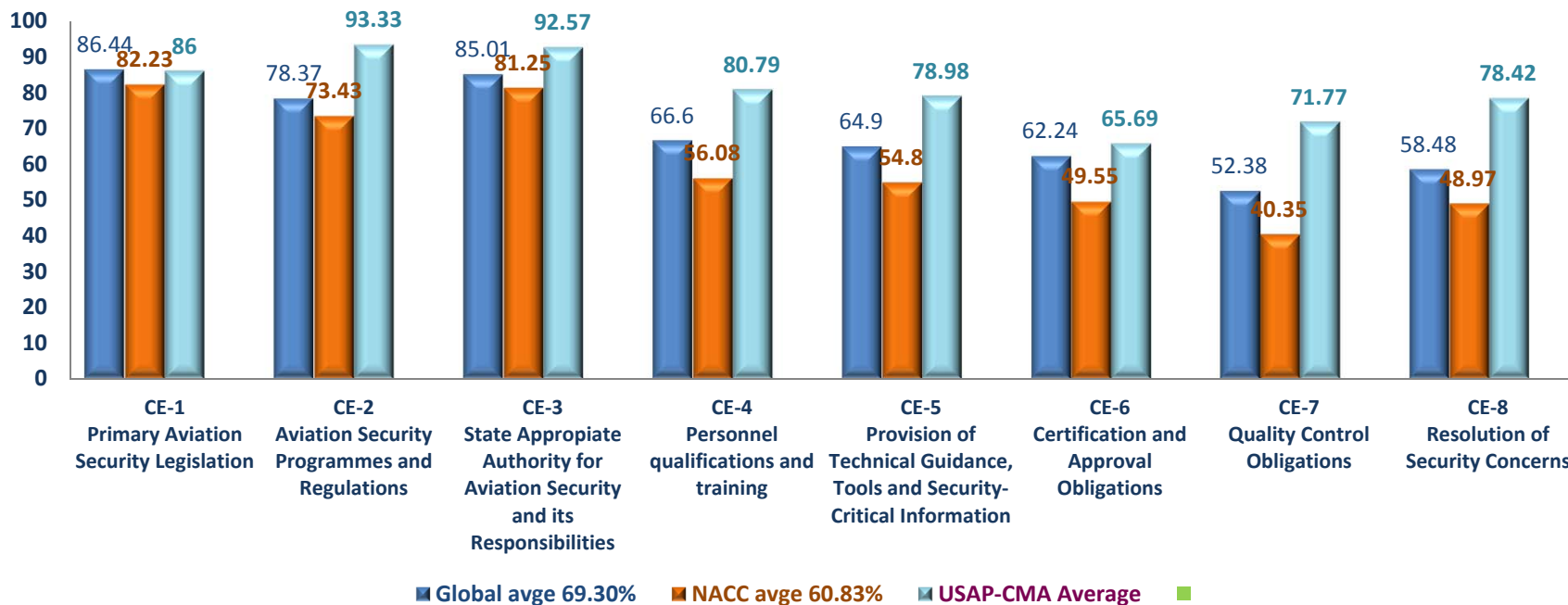
STATE "X" – PROJECT MANAGEMENT

	🛈	Task Name	Resource Names
1		⊟ NO COUNTRY LEFT BEHIND ICAO NACC STRATEGY	
2		⊟ STATE X	
3		⊟ Phase I	
4		Visit to State X - Meeting with President, Secretary of Defence and DG	ICAO RD
5		⊟ Phase II	
6		Intelligence Data Gathering	ICAO RO
7		Conduct First Intelligence Technical Data review - Teleconference	ICAO RO / CAA
8		Propose dates for Technical Assistance Mission - State Letter to State X	ICAO RO
9		Confirm visit to NACC Regional Office - Letter from State X	CAA
10		Protocol Questions update	CAA
11		⊟ Phase III	
12		⊟ NCLB Multidisciplinary Technical Assistance Mission	
13		Teleconference with State X	ICAO RO / CAA
14		Report - NCLB Multidisciplinary Technical Assistance Mission	ICAO RO
15		High Level Visit by State X to ICAO NACC Regional Office	CAA
16		Teleconference with State X	ICAO RO
17		⊟ NCLB MET Technical Assistance Mission	MET
18		Report - NCLB MET Technical Assistance Mission	MET
19		⊟ Phase IV	
20		Teleconference with State X - Progress on implementation	ICAO RO
21		Monthly Follow-up Teleconference	ICAO RO / CAA
22		Mid-Year Review - Videoconference	ICAO RO / CAA
23		Monthly Follow-up Teleconference	ICAO RO / CAA
24		Monthly Follow-up Teleconference	ICAO RO / CAA
25		Quarterly Follow-up Teleconference	ICAO RO / CAA
26		Monthly Follow-up Teleconference	ICAO RO / CAA
27		Monthly Follow-up Teleconference	ICAO RO / CAA
28		ICAO USOAP Audit	ICAO HQ

Regional Safety Opportunities
With the strength of all, eliminate the challenges of each

GREAT OPPORTUNITY AHEAD

Transition from NCLB to future MCAAP
– Jan 2017

Achieve aviation system effectiveness and benefits for each member State

- Dec 2016

Agreement for implementation of NACC NCLB Strategy

- Mid 2016

Strengthen collaboration between ICAO, States, RSOOs, and Industry
- Oct 2105