Regional Aviation Safety Group – Pan America (RASG-PA) Update

ICAO Accident / Incident Investigation Workshop

Ciudad de Mexico, Mexico, 20 – 24 July 2015

Eduardo Chacin

ICAO

RASG-PA Mission

Improve safety and efficiency in the Pan American Region

RASG-PA Vision

Involve all the stakeholders in a coordinated effort

RASG-PA Introduction

- First in the World (2008)

- Multi-regional

- States/Territories, Intl' Organizations & Industry

- Adopted in other ICAO Regions

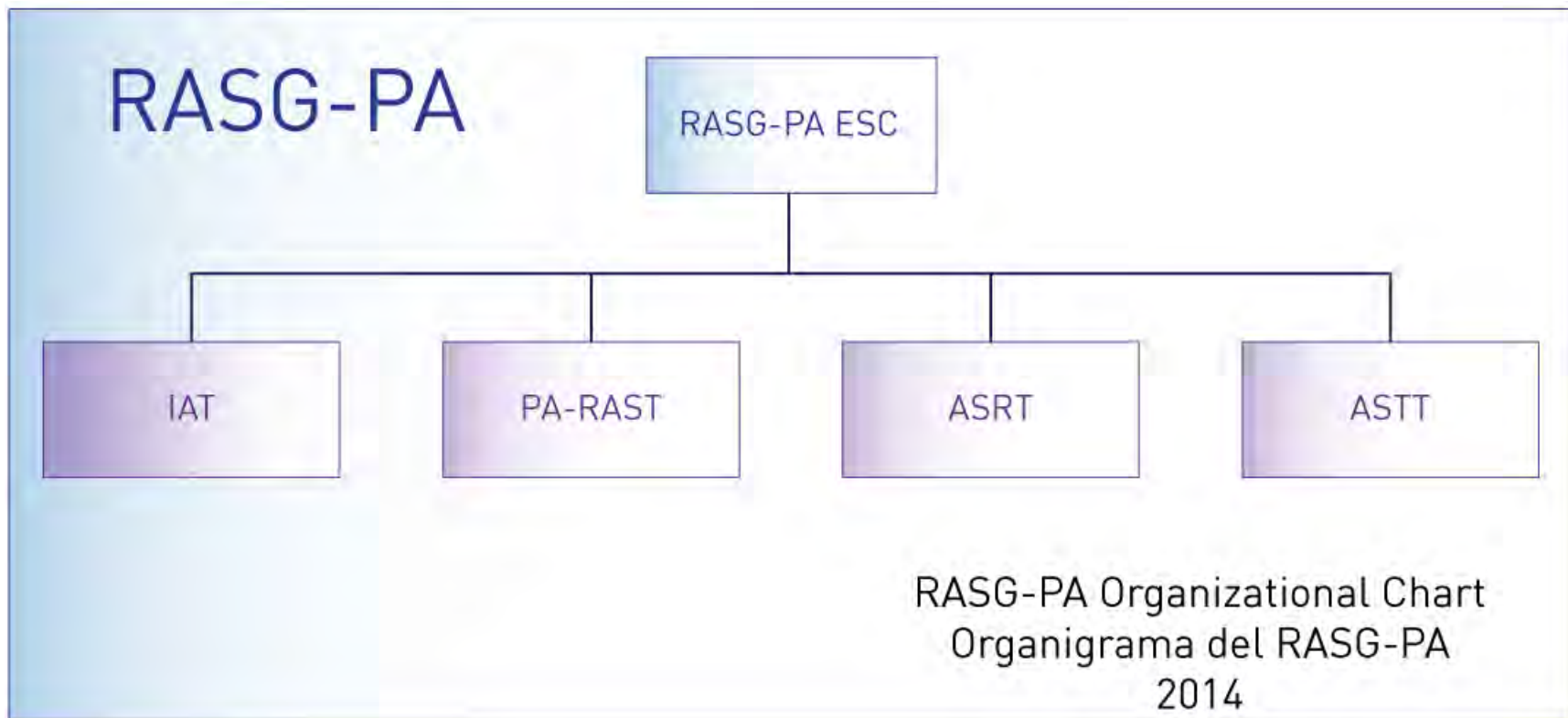- Aligned with GASP

- Data-driven Results Oriented

RASG-PA Membership
34 NAM/CAR/SAM States, 19 Territories and…

RASG-PA Organizational Chart

RASG-PA Organizational Chart
Organigrama del RASG-PA
2014

ESC: Executive Steering Committee; IAT: Information Analysis Team; PA-RAST: Pan America-Regional Aviation Safety Team; ASRT: Annual Safety Report Team; ASTT: Aviation Safety Training Team
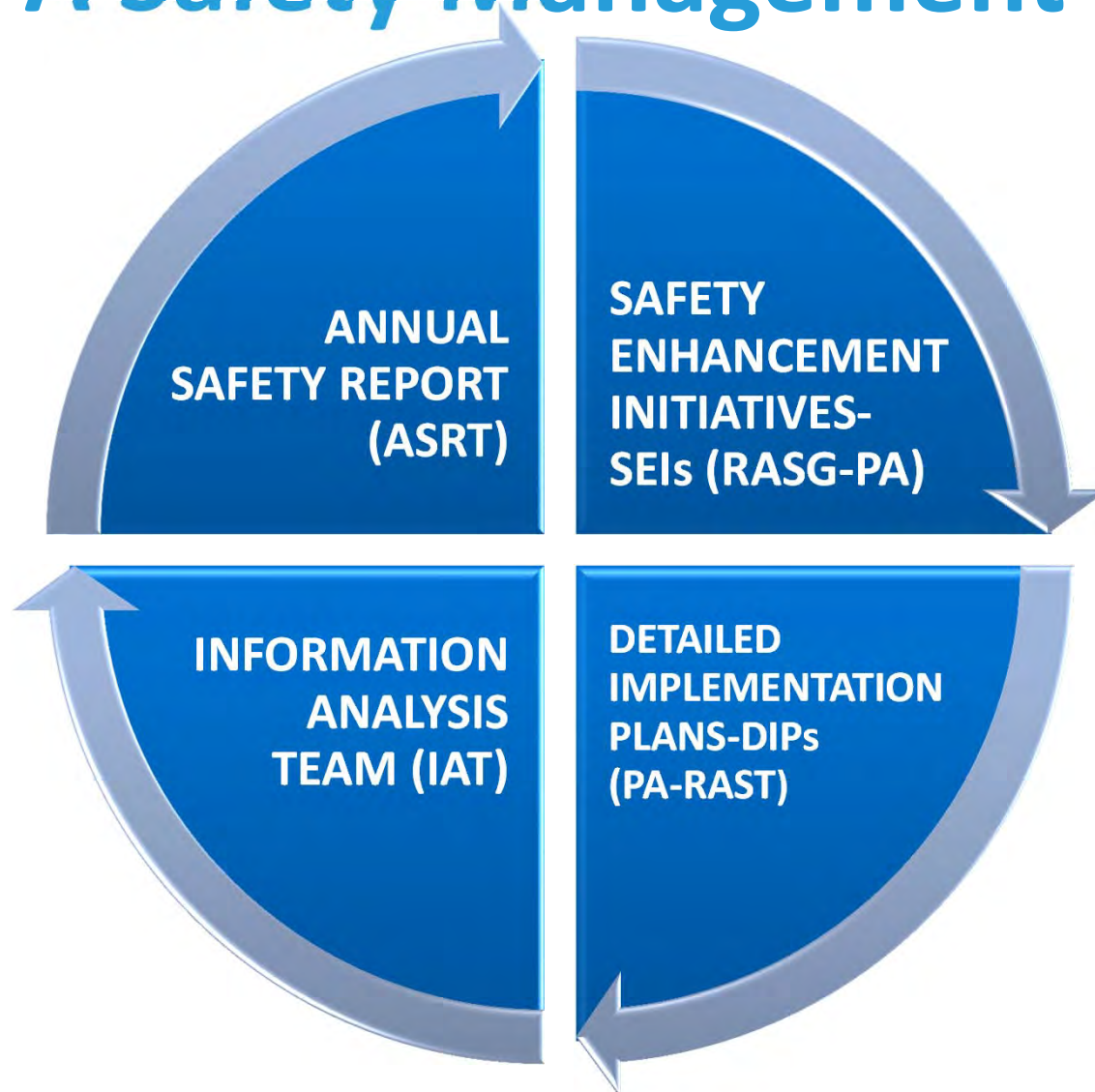
RASG-PA Fatality Risk Reduction Goal

Using 2010 as a baseline, is to reduce fatality risk for Part 121 or equivalent operations by 50% by the year 2020 in Latin America and the Caribbean

RASG-PA Safety Management Process

RASG-PA uses different types of safety data/information

REACTIVE: safety analysis based upon past occurrences (accidents and incidents) in the Pan American Region

PROACTIVE: includes analysis of States' existing conditions (ICAO SARPs implementation, traffic variations) and service providers (IATA Operational Safety Audits, ramp inspections)

PREDICTIVE: based upon analysis of Flight Operations Quality Assurance (FOQA) de-identified data, oriented towards identifying potential future hazards for initiating corresponding mitigation actions
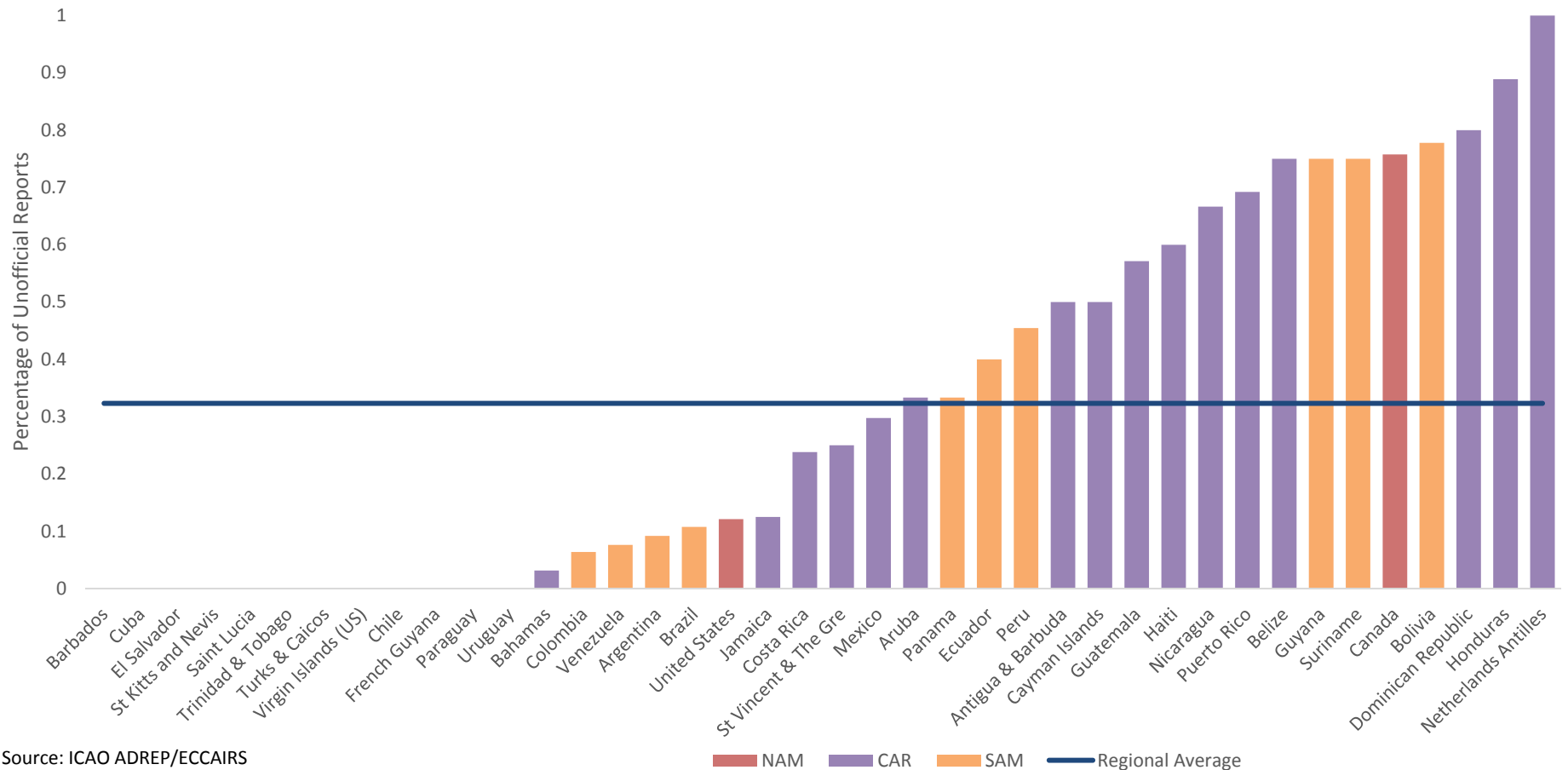
RASG-PA produces safety intelligence from different sources

RASG-PA publishes
Annual Safety Reports

Measuring results

Percentage of Unofficial Reports per State by Region 2005-2014
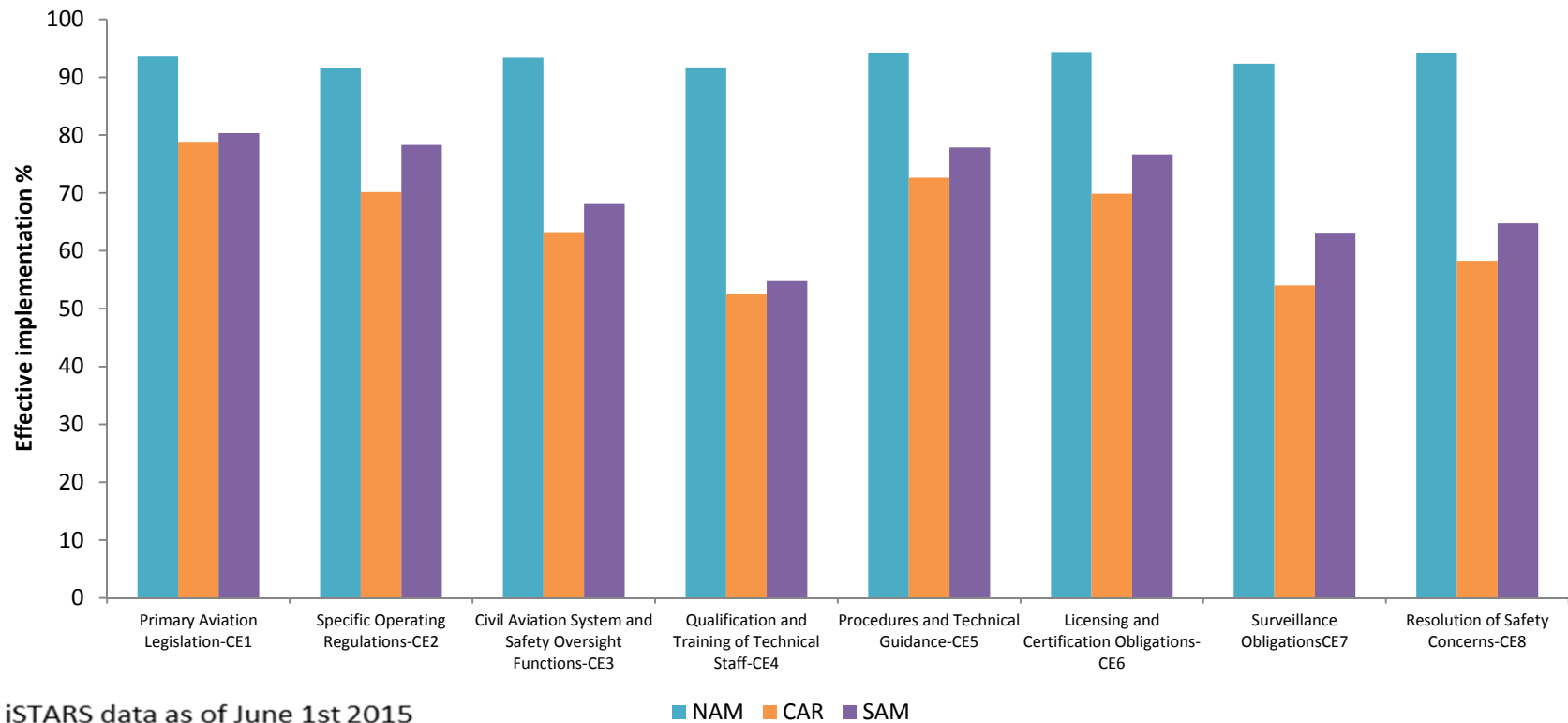
Source: ICAO ADREP/ECCAIRS

USOAP – Universal Safety Oversight Audit Programme Results
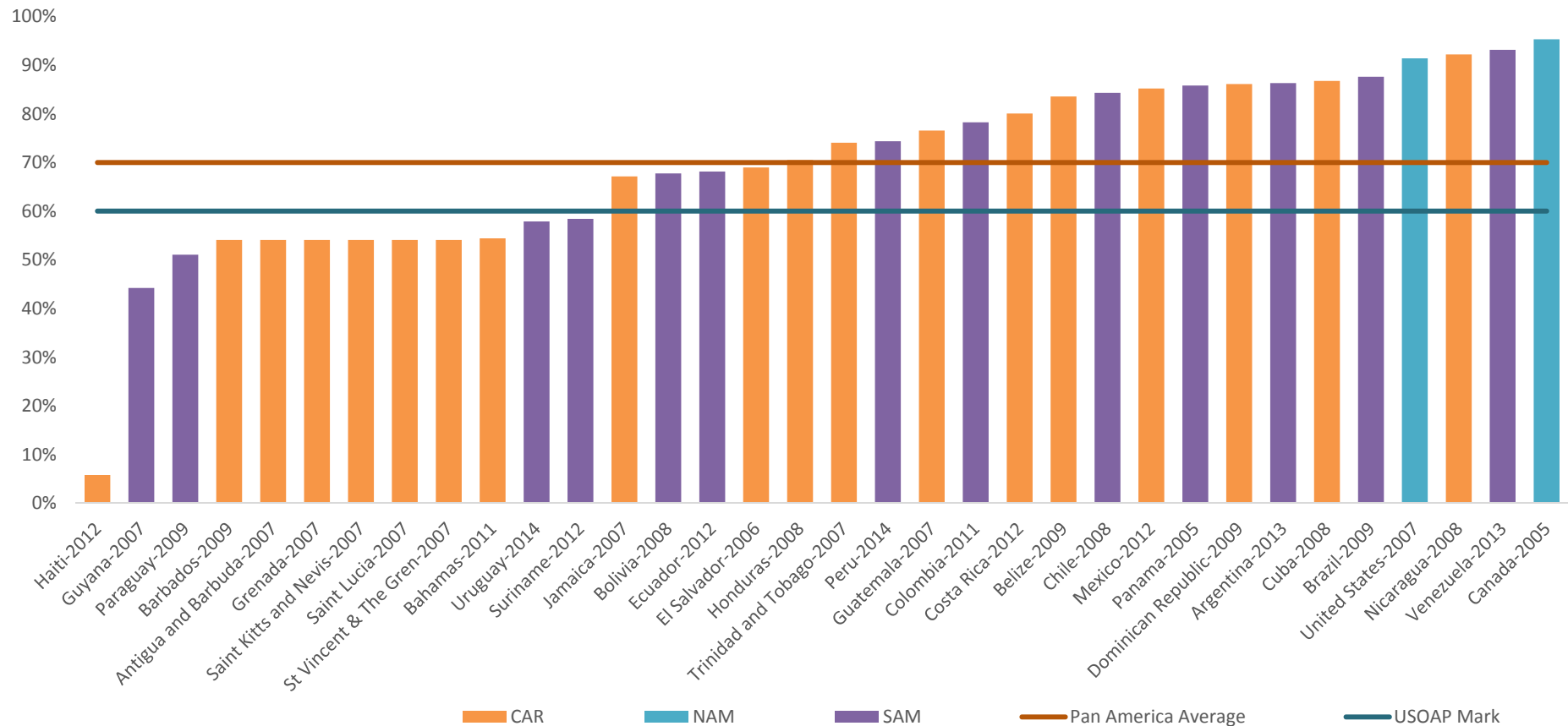
iSTARS data as of June 1st 2015

USOAP Results by Critical Element

iSTARS data as of June 1st 2015

NAM CAR SAM
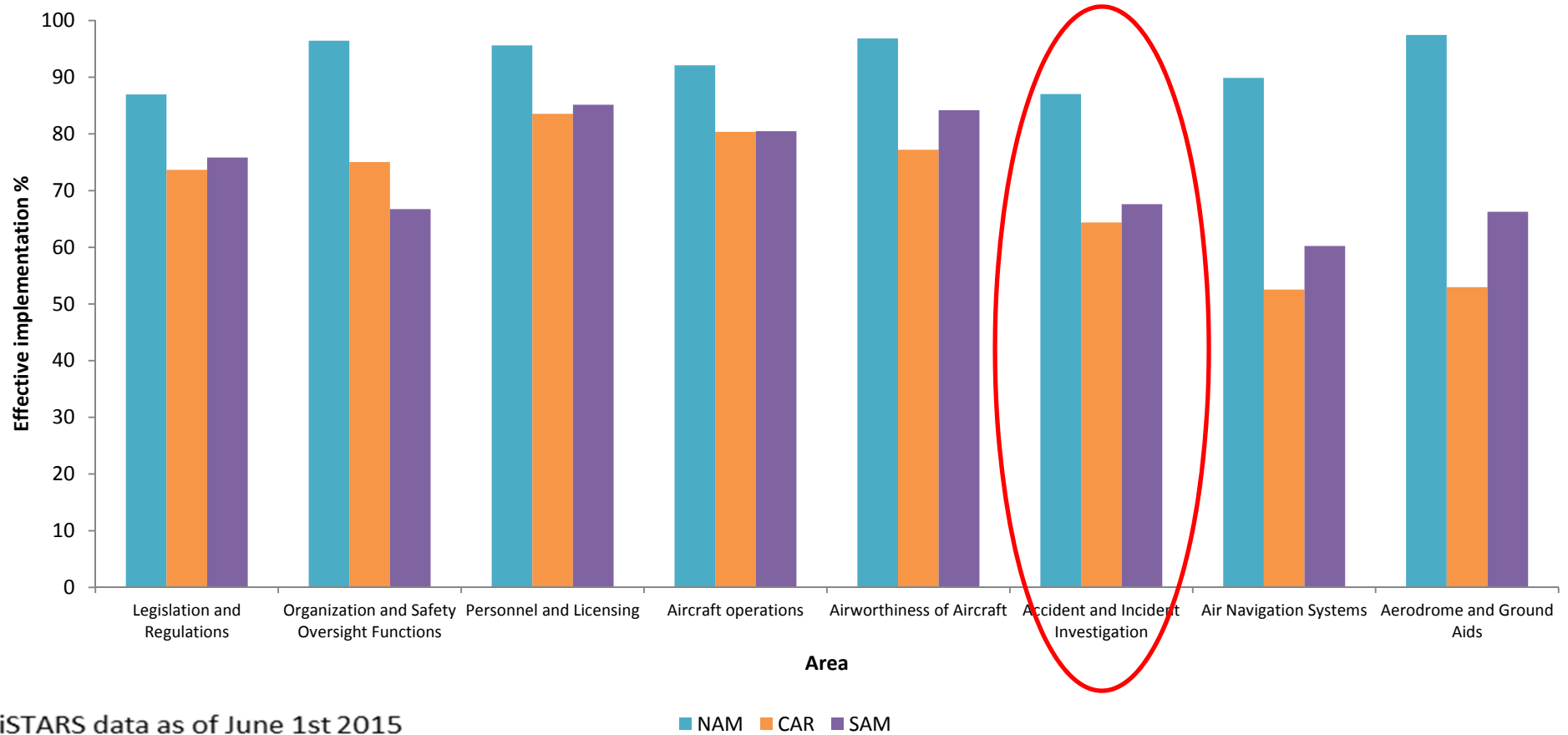
USOAP Results by Area

iSTARS data as of June 1st 2015

NAM ■ CAR ■ SAM

RASG-PA develops
Safety Enhancement Initiatives for:

Runway Excursion (RE)

Controlled Flight Into Terrain (CFIT)

Loss of Control-Inflight (LOC-I)

Mid-Air Collision (MAC) new

...and Detailed Implementation Plans (DIPs)

RASG-PA Risk Management Strategy

Reactive:
Apply the risk reduction formula to accident set to prioritize SEIs

Proactive:
Implement SEIs targeting specific high fatality risk areas

Predictive:
Verify effectiveness of SEIs using precursor trends in FOQA
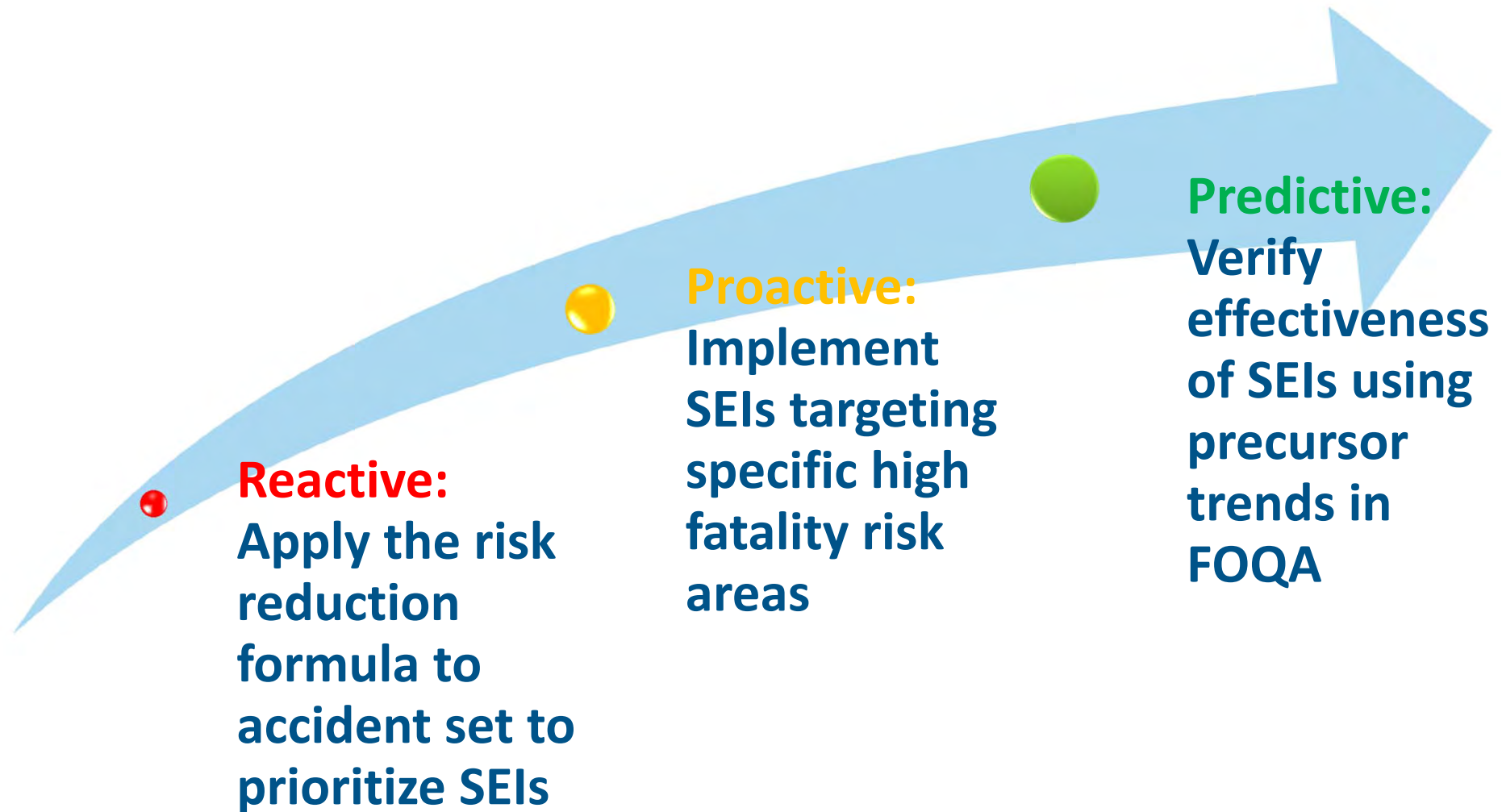
Top Contributing Factors for NAM Region Accidents 2010-2014

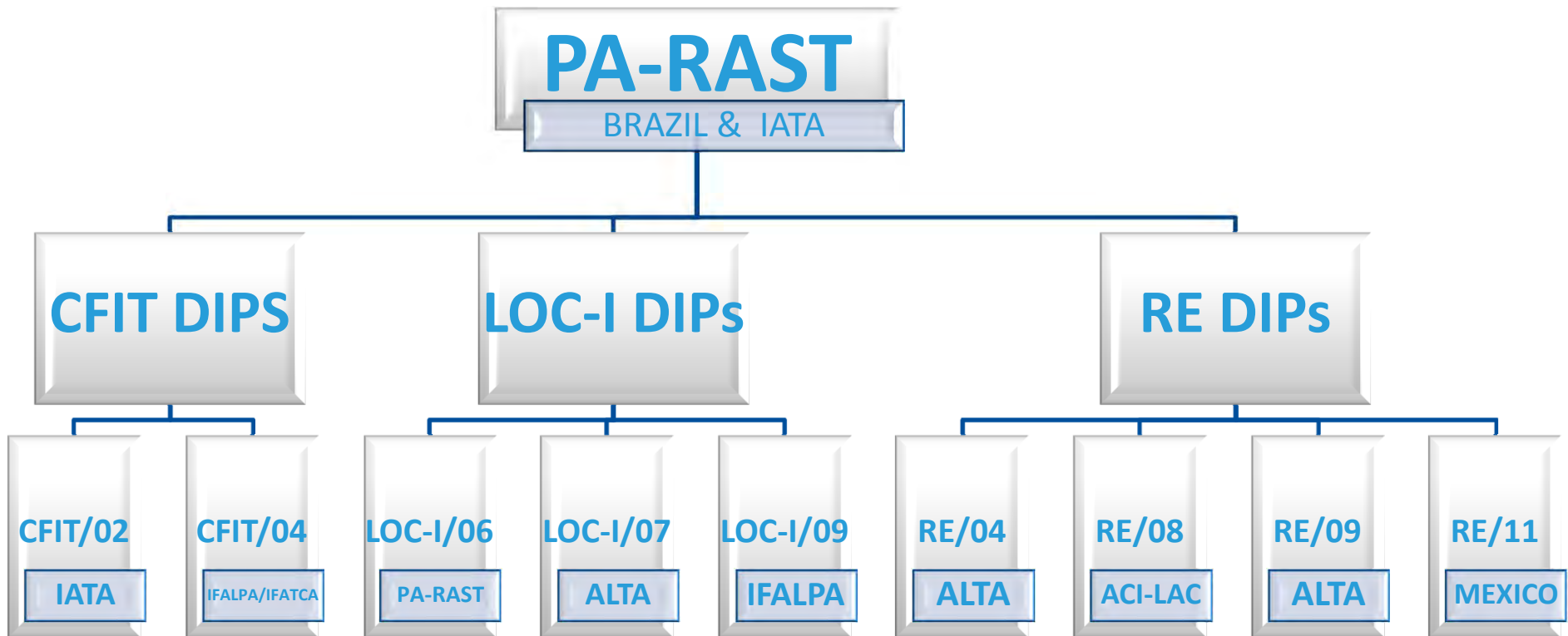| Latent conditions	11% Regulatory oversight 9% Technology and equipment 8% Maintenance Ops: SOPs and checking 8% Design 6% Flight operations: training systems	
Threats	Environmental	18% Meteorology: Wind/wind shear/gusty wind (75%), Poor visibility/IMC (50%) 11% Lack of visual reference 9% Air traffic services
	Airline	31% Aircraft malfunction: Gear/tire (60%), fire/smoke (cockpit/cabin/cargo) (15%) 11% Ground events 8% Maintenance events
Flight Crew Errors	14% Manual handling/flight controls 8% SOP adherence/SOP cross-verification: Intentional non-compliance (60%), unintentional non-compliance (40%)	
Undesired Aircraft States	12% Long/floated/bounced/firm/off-center/crabbed land 9% Vertical/lateral/speed deviation 6% Controlled flight toward terrain 5% Loss of aircraft control while on the ground	
Countermeasures	9% Monitor/cross-check 9% Overall crew performance 3% Contingency management 3 Taxiway/runway management	
Additional Classifications	18% Insufficient data for contributing factors	

Source: IATA published in RASG-PA ASR 6th Edition

Top Contributing Factors for LATAM/CAR Region Accidents 2010-2014

Latent conditions	22% Safety management
	20% Regulatory oversight
	12% Flight operations: SOPs and checking
	12% Flight operations: training systems
	12% Maintenance operations: SOPs and checking

Threats	Environmental	22% Ground-based nav aid malfunction or not available
		20% Meteorology: Wind/wind shear/gusty wind (38%), Icing conditions (25%), thunderstorms (25%)
	Airline	40% Aircraft malfunction: Gear/tire (56%), brakes (12%)
		11% Maintenance events Manuals/charts/checklists (2%)

Flight Crew Errors	20% Manual handling/flight controls
	18% SOP adherence/SOP cross-verification: Intentional non-compliance (43%), unintentional non-compliance (43%)

Undesired Aircraft States	18% Vertical/lateral/speed deviation
	18% Long/floated/bounced/firm/off-center/crabbed land
	12% Unstable approach
	10% Continued landing after unstable approach
	5% Landing gear

Countermeasures	25% Overall crew performance
	18% Monitor/cross-check
	12% Leadership
	8% Captain should show leadership

Additional Classifications	17% Insufficient data for contributing factors

Source: IATA published in RASG-PA ASR 6th Edition

Pan America - Regional Aviation Safety Team


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                        PA-RAST
                     BRAZIL & IATA

      CFIT DIPS        LOC-I DIPs              RE DIPs

  CFIT/02  CFIT/04   LOC-I/06  LOC-I/07  LOC-I/09   RE/04   RE/08    RE/09   RE/11
   IATA   IFALPA/     PA-RAST    ALTA    IFALPA    ALTA   ACI-LAC   ALTA   MEXICO
          IFATCA
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All DIPs completed – New under development

RASG-PA Risk Analysis

- RASG-PA Goal: 50% fatality risk reduction (2010 – 2020)

- Fatality risk: full loss passenger load equivalent per million departures

- Baseline: 5 year average fatality risk in 2010 = 0.6

- 2020 Goal = 0.3

- Calculated risk reduction due to SEIs implemented in the period 2009-2013 = 25%

- Calculated Risk through 2014 = 0.39, actual = 0.37

Pan American
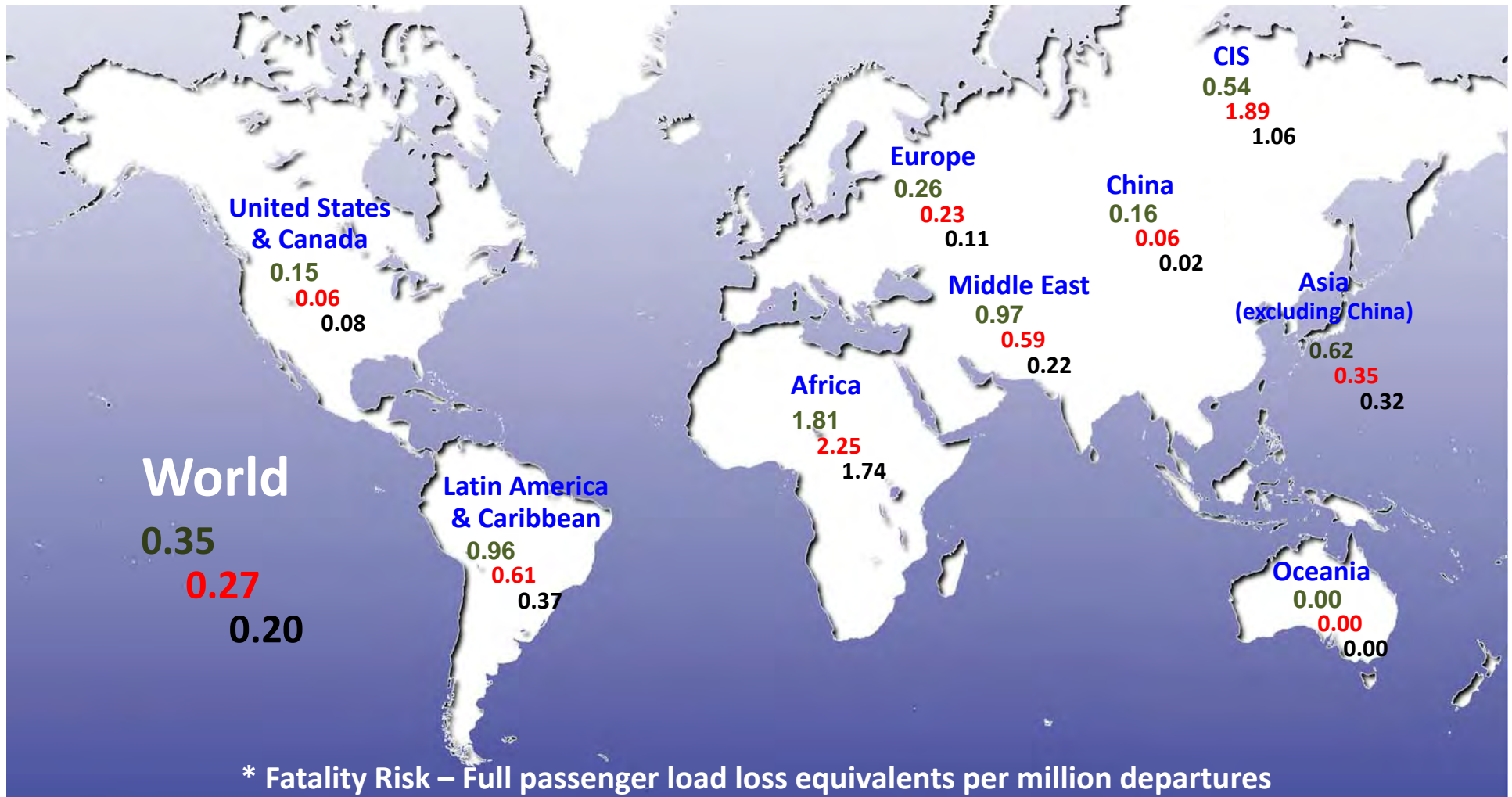# Scheduled Commercial Air Transport Accidents

Pan American Scheduled Commercial Air Transport Accidents			
Year	Total Accidents	Fatal accidents	Total fatalities
2004-2013 avg.	39.3	3.3	81.8
2013	36	4	18
2014	35	0	0
Scheduled Commercial Air Transport Accidents – Aircraft MTOM above 5,700 kilograms Source: RASG-PA ASR 6th Edition - preliminary			

Fatality Risk* of Commercial Jet Air Travel by Region of the World (10-year rolling average)

2004
2009
2014

Western-built jet transports >60,000-pounds *onboard fatal* accidents, by *airline domicile*

CIS
0.54
1.89
1.06

Europe
0.26
0.23
0.11

China
0.16
0.06
0.02

United States & Canada
0.15
0.06
0.08

Middle East
0.97
0.59
0.22

Asia (excluding China)
0.62
0.35
0.32

Africa
1.81
2.25
1.74

World
0.35
0.27
0.20

Latin America & Caribbean
0.96
0.61
0.37

Oceania
0.00
0.00
0.00

* Fatality Risk – Full passenger load loss equivalents per million departures

Other RASG-PA Deliverables

RASG-PA created the Proposal for Amendment to Aeronautical Legislation to Protect Safety Information Sources
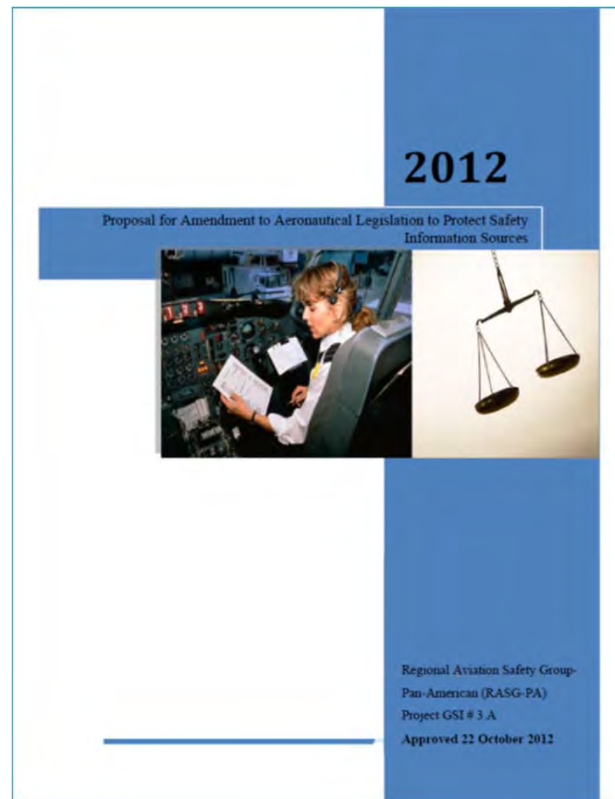
Pan American Aviation Safety Summits

1st Pan American
AVIATION SAFETY SUMMIT   Working together for a safer industry
April 19-23, 2010
Sao Paulo, Brazil
in partnership with ALTA

2nd PAN AMERICAN
AVIATION SAFETY SUMMIT 2011   Working together for a safer industry
June 15-16   Mexico City
in partnership with ALTA

3rd PAN AMERICAN
AVIATION SAFETY SUMMIT   June 19-21 | 2012
JUNE 19-21 2012
BOGOTÁ, COLOMBIA

4th PAN AMERICAN
AVIATION SAFETY SUMMIT
JUNE 25-26, 2013
SAN JOSE, COSTA RICA

5th PAN AMERICAN
AVIATION SAFETY SUMMIT   www.alta.aero   ALTA
5th PAN AMERICAN
AVIATION SAFETY SUMMIT   CURAÇAO
SEPTEMBER 9-10th, 2014

and

8th RASG-PA Annual Plenary Meeting

Medellin, Colombia, 25 June 2015

RASG-PA Projects

Completed	**Use of Std Spanish and English Phraseology in accordance with the ICAO PANS-ATM – Air Traffic Management (Doc 4444)**
	Bird Strike Reduction Programme
Created	**Regional Aviation Accidents Investigation Group (GRIAA) in Central America**
Active	**Flight Information Quality Assurance (FOQA) Programme in Central America (PASO)**
New	**Development of Metrics to Measure Institutional Strengths of the Civil Aviation Authorities**
	CAR and SAM Regions Safety Information Project

RASG-PA Plan

2015-2016

Align RASG-PA work programme with GASP

Support roll-out of GASP and Annex 19

Mitigate RE, CFIT, LOC-I and MAC

Monitor/act Regional safety issues

Coordinate with GREPECAS and RSOOs

Increase participation of stakeholders

Positioning as strategic regional safety forum

Collect info for ICAO Reg. Performance Dashboard

Challenges

Regional

Traffic growth

New air transport operators and new aircraft orders

Demand for skilled aviation personnel

Training capacity

Attractiveness of aviation

Attrition related impact

Infrastructure deficiencies

Resources

Political will

RASG-PA is one of the key contributors for the Regional Safety Enhancement

Join the Group!

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http://www.icao.int/RASGPA

Thank you!