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

ICAO CAR/SAM Electronic Aeronautical Charts of Performance Based Navigation (PBN), Terminal Procedures and Aerodrome Mapping Seminar

Mexico City, Mexico, 24 to 27 August 2015

Eduardo Chacin RO/FS
ICAO

RASG-PA Mission

Improve safety and efficiency in the Pan American Region

RASG-PA Vision

Involve all the stakeholders in a coordinated effort

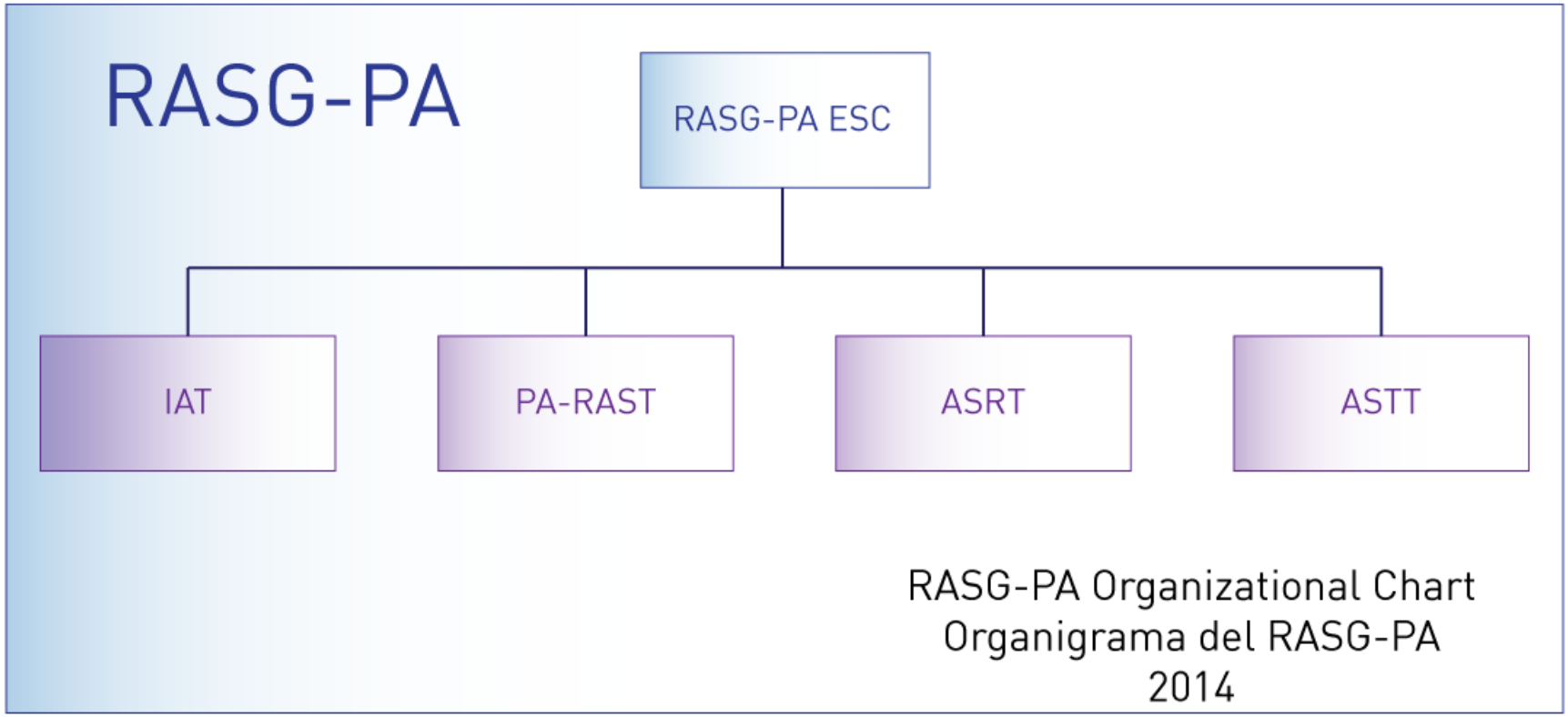
RASG-PA Introduction

- 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



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

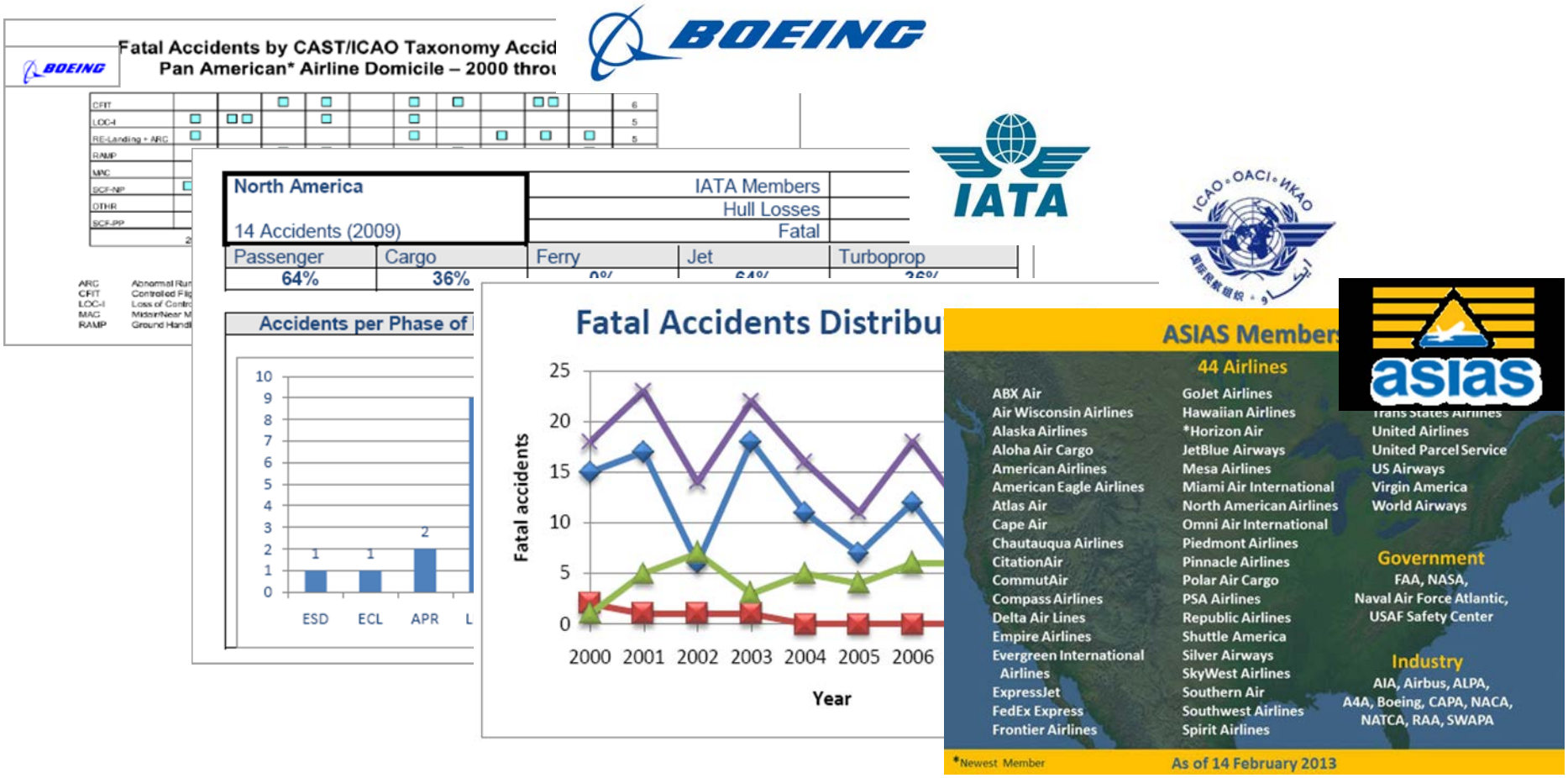
RASG-PA uses different types of safety data/information

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

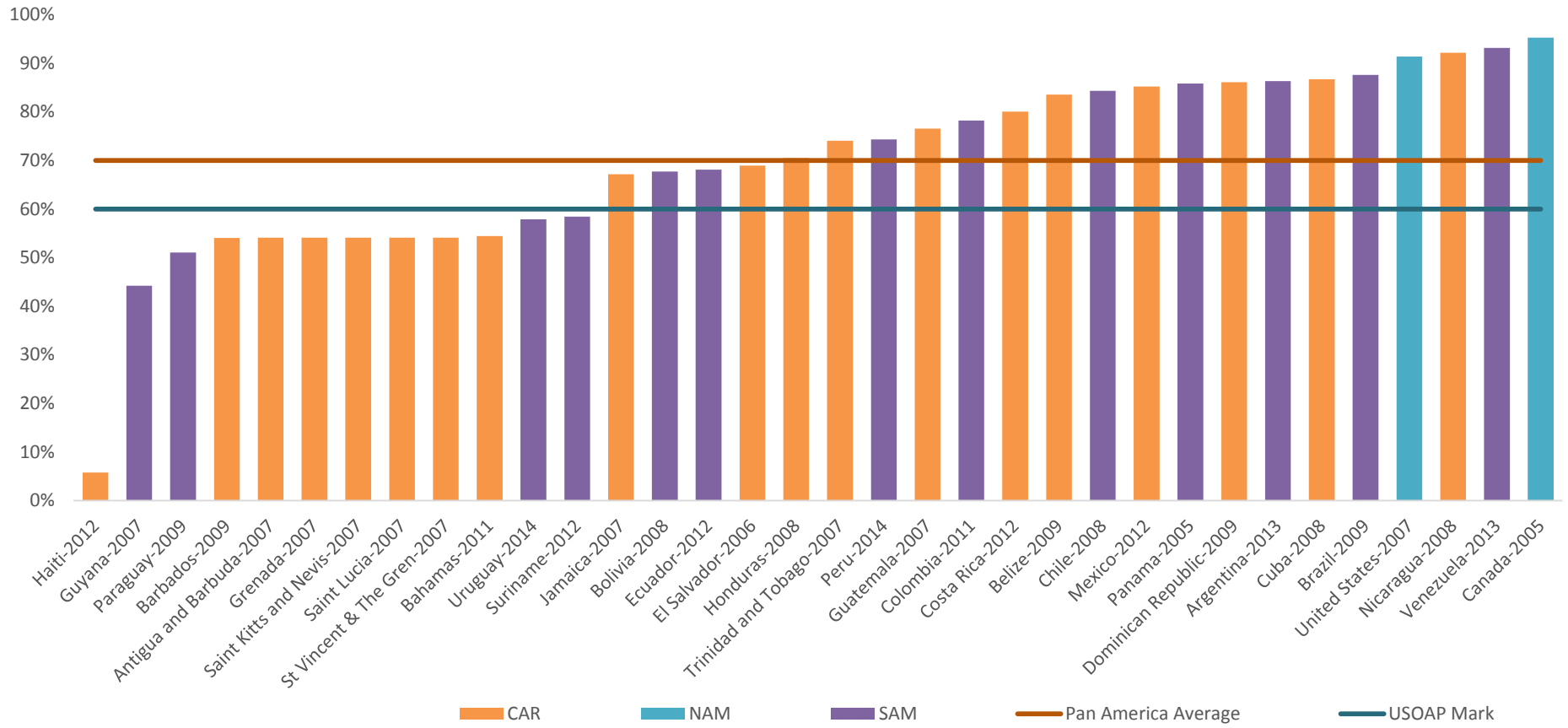
RASG-PA produces safety intelligence from different sources



RASG-PA publishes Annual Safety Reports

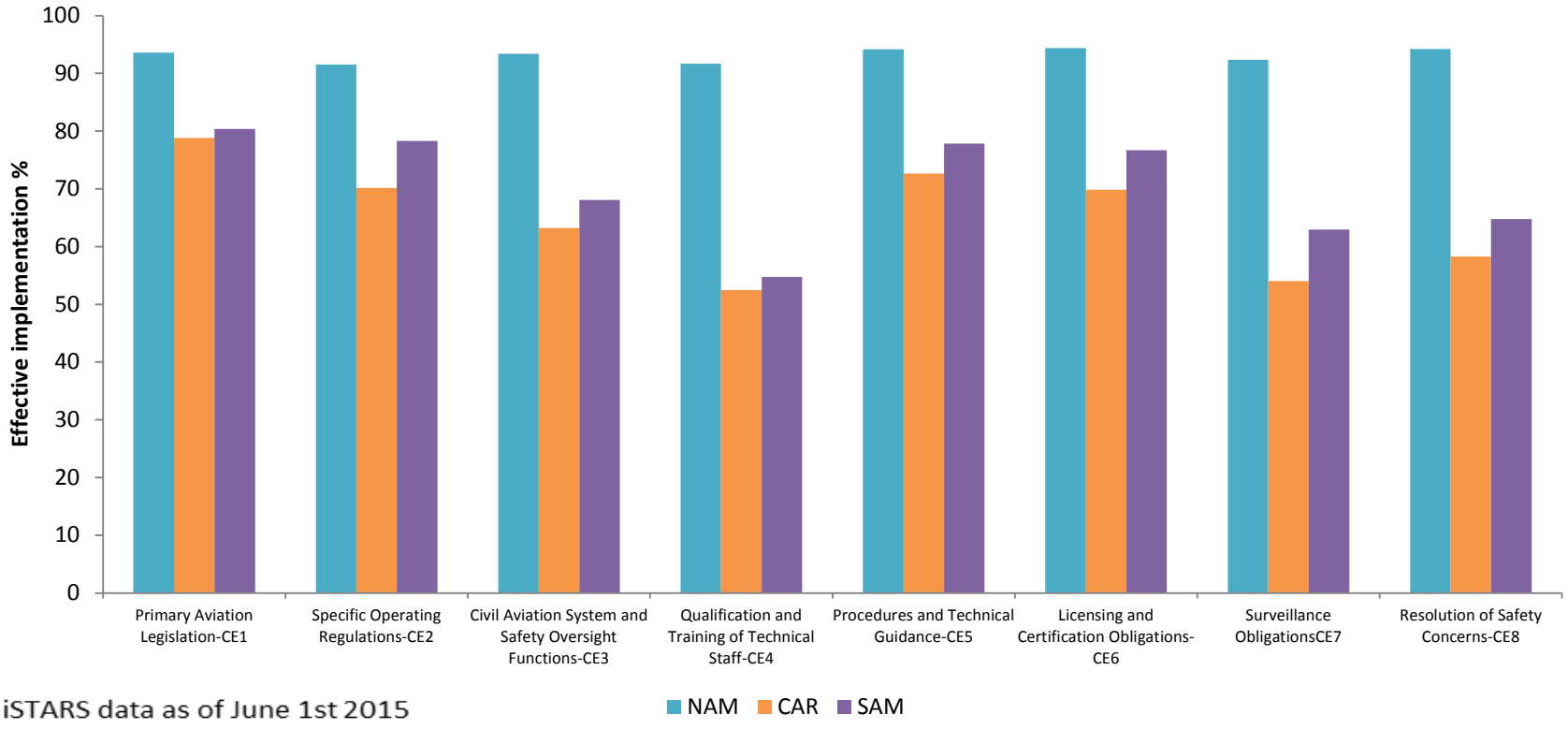
Measuring results

USOAP – Universal Safety Oversight Audit Programme Results



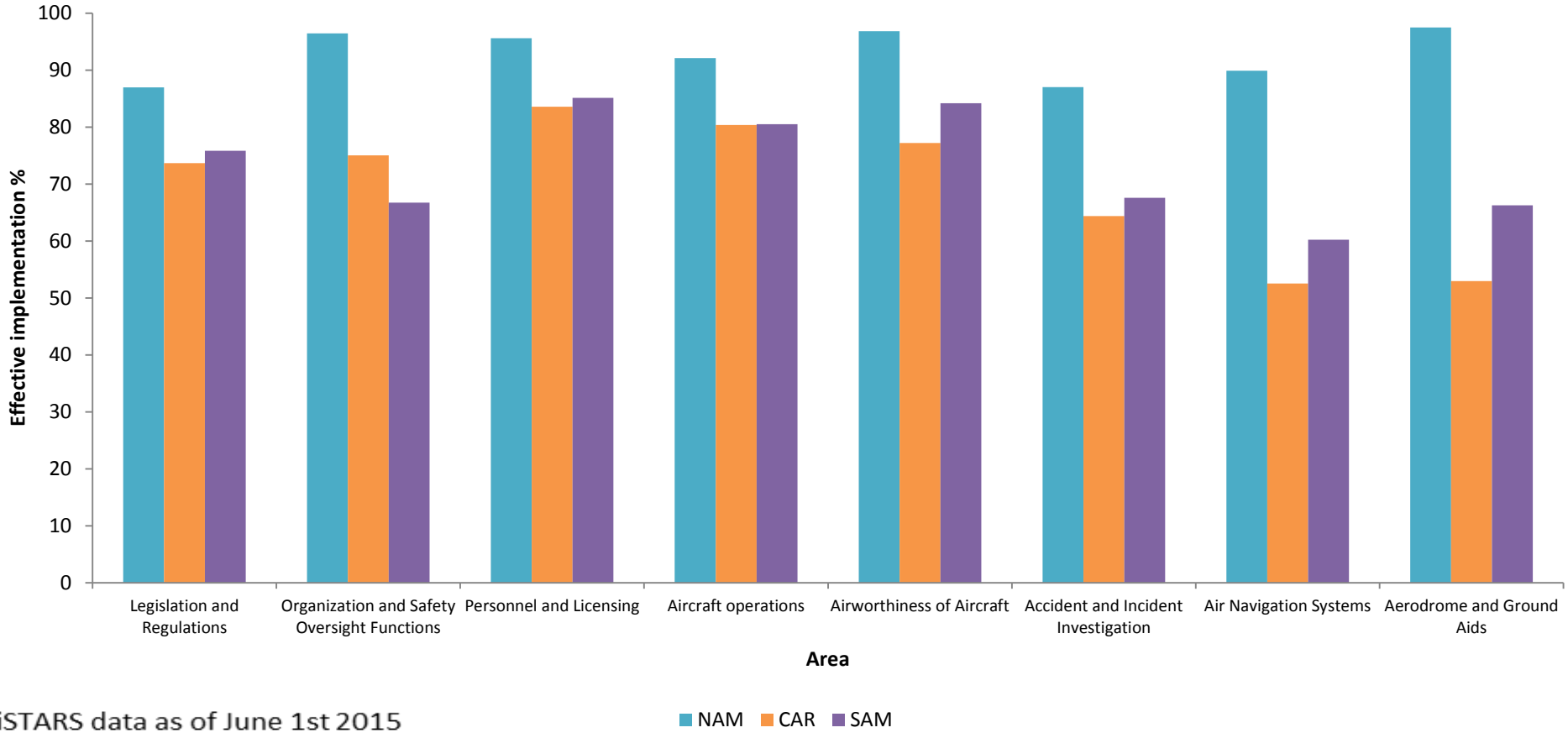
iSTARS data as of June 1st 2015

USOAP Results by Critical Element



iSTARS data as of June 1st 2015

USOAP Results by Area



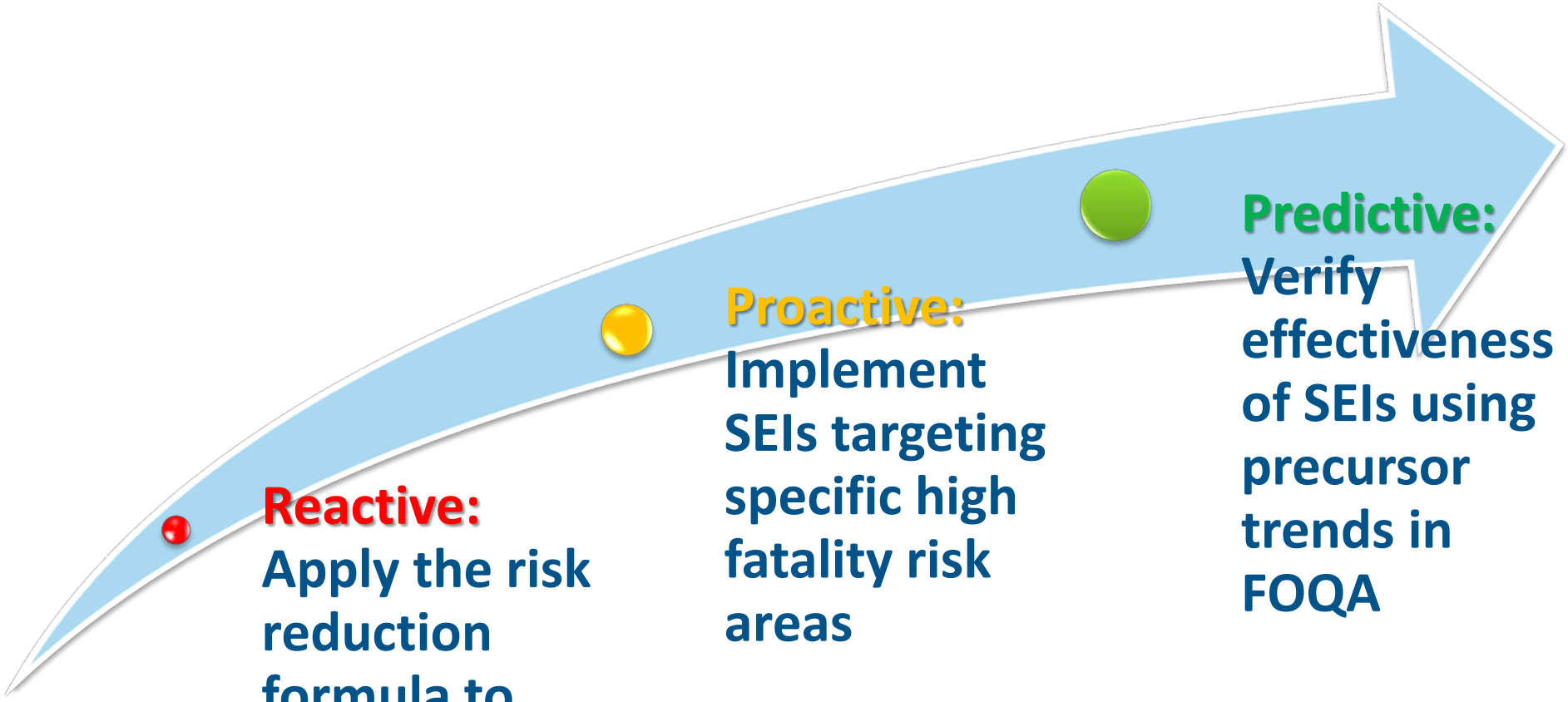
iSTARS data as of June 1st 2015

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



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

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

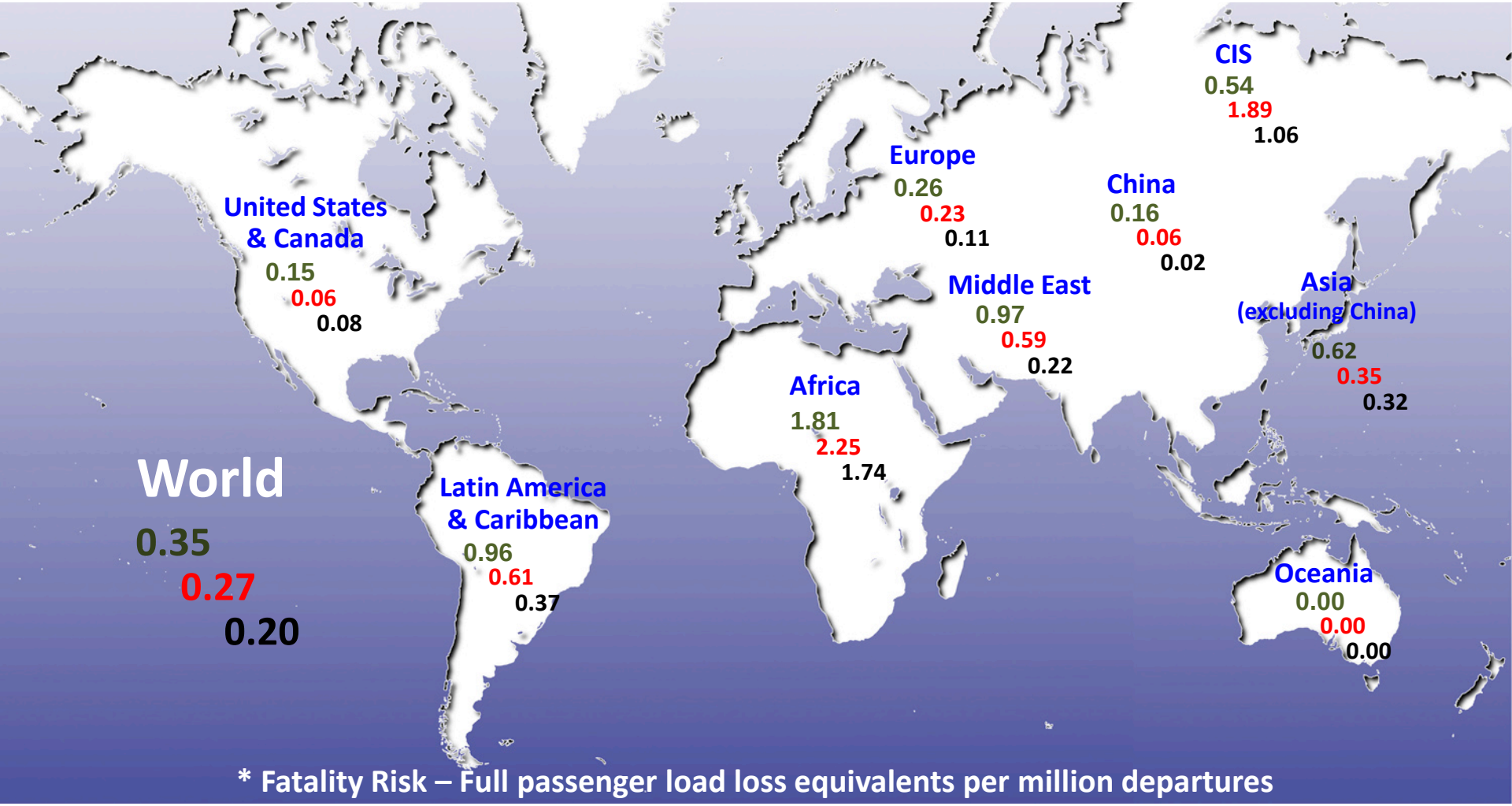
Scheduled Commercial Air Transport Accidents – Aircraft MTOM above 5,700 kilograms

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

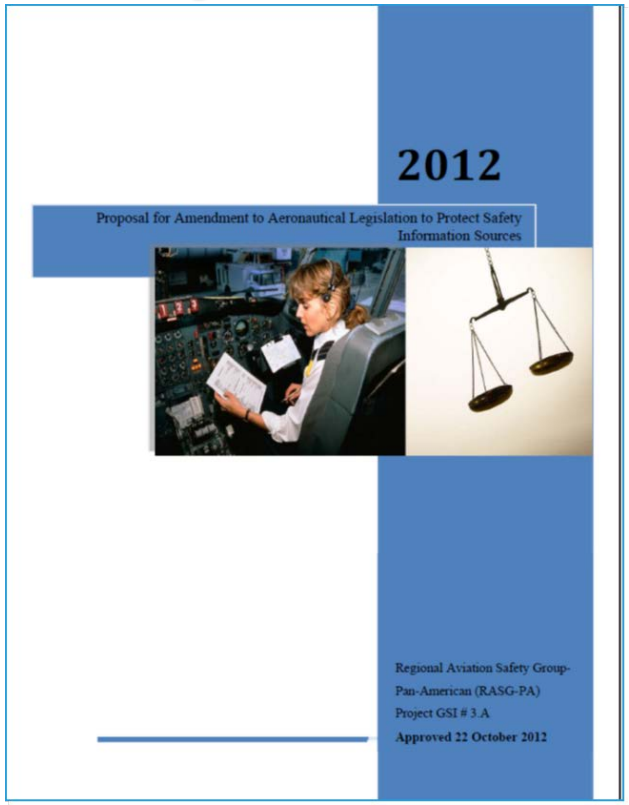
Western-built jet transports >60,000-pounds *onboard fatal* accidents, by *airline domicile*



* 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

6th PAN AMERICAN AVIATION SAFETY SUMMIT

The Region's most important Aviation Safety Conference

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!

RASG-PA

echacin@icao.int

rasg-pa@icao.int

http://www.icao.int/RASGPA

Thank you!