

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



February 2015

# RASG-PA Mission

Improve safety and efficiency in the Pan American Region

# RASG-PA Vision

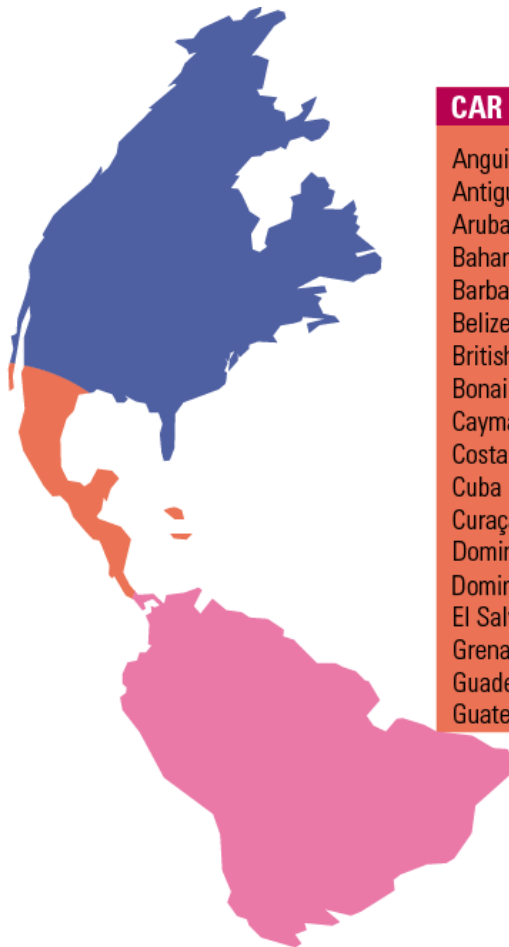
Involve all the stakeholders in a coordinated effort



# Pan American Region

- NAM REGION**
- Bermuda
  - Canada
  - Saint Pierre et Miquelon
  - United States

- SAM REGION**
- Argentina
  - Bolivia
  - Brazil
  - Chille
  - Colombia
  - Ecuador
  - French Guiana
  - Guyana
  - Paraguay
  - Peru
  - Panama
  - Suriname
  - Uruguay
  - Venezuela



- CAR REGION**
- Anguilla
  - Antigua and Barbuda
  - Aruba
  - Bahamas
  - Barbados
  - Belize
  - British Virgin Islands
  - Bonaire
  - Cayman Islands
  - Costa Rica
  - Cuba
  - Curaçao
  - Dominica
  - Dominican Republic
  - El Salvador
  - Grenada
  - Guadeloupe
  - Guatemala
  - Haiti
  - Honduras
  - Jamaica
  - Martinique
  - Mexico
  - Montserrat
  - Nicaragua
  - Puerto Rico
  - Saba
  - Saint Barthélemy
  - Saint Kitts and Nevis
  - Saint Lucia
  - Saint Vincent and the Grenadines
  - Sint Eustatius
  - Sint Maarten
  - Trinidad and Tobago
  - Turks and Caicos Islands
  - Virgin Islands

For Boeing, CAR and SAM Regions are defined as Latin America and Caribbean  
 For IATA, CAR and SAM Regions are defined as LATAM/CAR Region

# RASG-PA Introduction

First in the World (2008)

Multi-regional

States/Territories, Intl' Organizations & Industry

Adopted in other ICAO Regions

Aligned with GASP

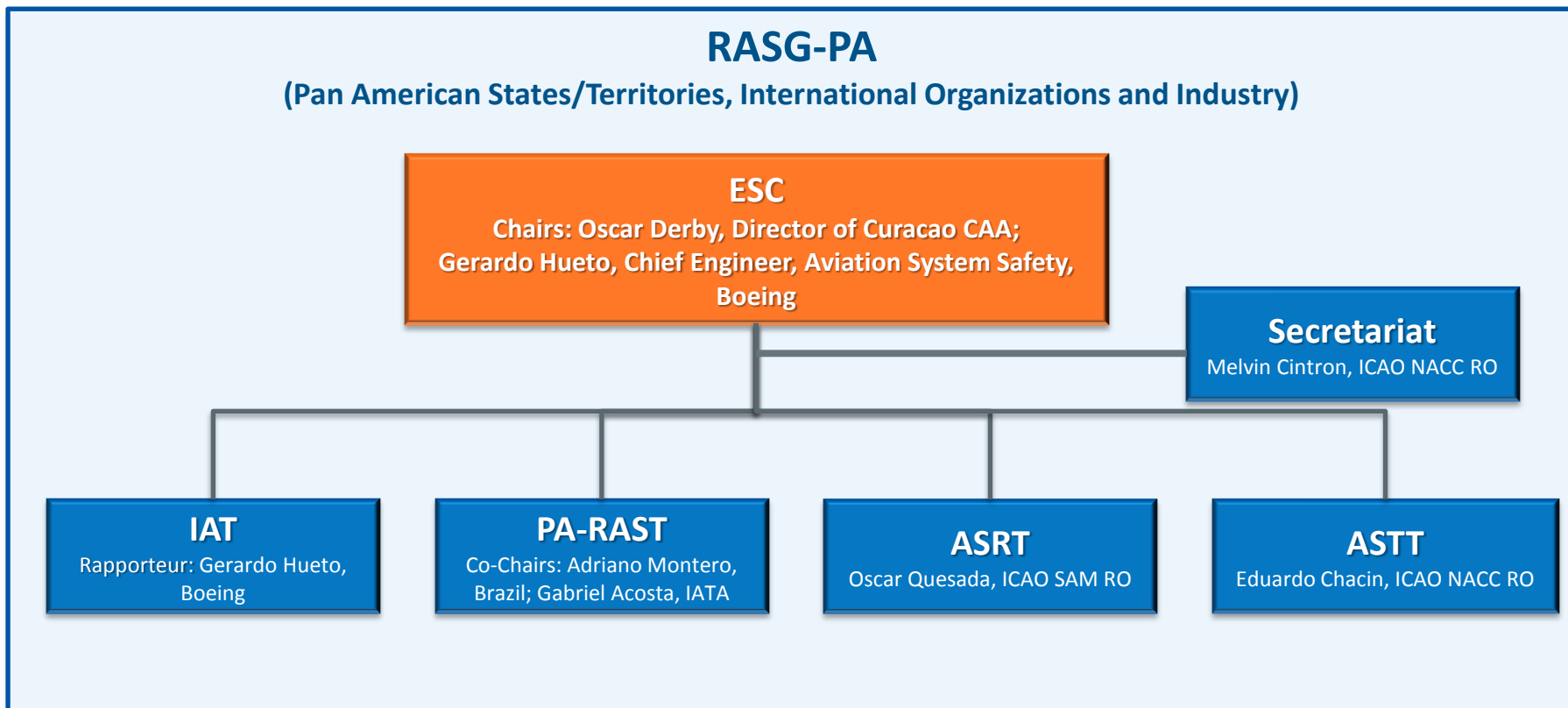
Data-driven Results Oriented

# RASG-PA Membership

## 34 NAM/CAR/SAM States, 19 Territories and...



# RASG-PA



ESC: Executive Steering Committee; IAT: Information Analysis Team; PA-RAST: Pan America – Regional Aviation Safety Team; ASRT: Aviation Safety Report Team; ASTT: Aviation Safety Training Team

# Executive Steering Committee (ESC)



VP United States



VP Costa Rica



VP Chile



Co-Chair Boeing  
(International organizations & Industry)



VP Curacao and  
Co-Chair  
(States/Territories)



VP Brazil



# RASG-PA uses safety data/information from different sources

**Fatal Accidents by CAST/ICAO Taxonomy Accident Pan American\* Airline Domicile – 2000 thro**

CFIT										6
LOC-I										5
RE-Landing + ARC										5
RAMP										
MIC										
SCF-NP										
OTHR										
SCF-PP										

ARC: Abnormal Part  
CFIT: Controlled Flight  
LOC-I: Loss of Control  
MID: Midair/In-Flight  
RAMP: Ground Handling



**North America**

14 Accidents (2009)

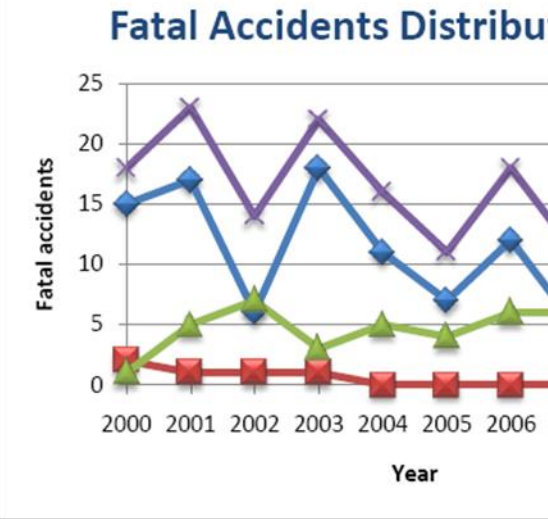
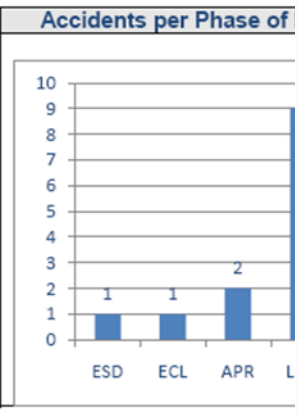
Passenger	Cargo
64%	36%

**IATA Members**

Hull Losses

Fatal

Ferry	Jet	Turboprop
0%	64%	36%



**ASIAs Members**

44 Airlines

- ABX Air
- Air Wisconsin Airlines
- Alaska Airlines
- Aloha Air Cargo
- American Airlines
- American Eagle Airlines
- Atlas Air
- Cape Air
- Chautauqua Airlines
- CitationAir
- CommutAir
- Compass Airlines
- Delta Air Lines
- Empire Airlines
- Evergreen International Airlines
- ExpressJet
- FedEx Express
- Frontier Airlines
- GoJet Airlines
- Hawaiian Airlines
- \*Horizon Air
- JetBlue Airways
- Mesa Airlines
- Miami Air International
- North American Airlines
- Omni Air International
- Piedmont Airlines
- Pinnacle Airlines
- Polar Air Cargo
- PSA Airlines
- Republic Airlines
- Shuttle America
- Silver Airways
- SkyWest Airlines
- Southern Air
- Southwest Airlines
- Spirit Airlines

**Government**

- FAA, NASA, Naval Air Force Atlantic, USAF Safety Center

**Industry**

- AIA, Airbus, ALPA, A4A, Boeing, CAPA, NACA, NATCA, RAA, SWAPA

\*Newest Member

As of 14 February 2013





# 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 Process



# Worldwide Accidents 2013 by RASGs

RASG	Estimated Departures (in millions)	Number of Accidents	Accident Rate (per million departures)	Fatal Accidents	Fatalities	Share of Traffic	Share of Accidents
AFI	0.7	9	12.9	1	33	2%	10%
APAC	8.6	19	2.2	1	49	27%	21%
EUR	7.9	21	2.7	2	71	25%	23%
MID	1.1	2	1.8	0	0	3%	3%
PA	13.8	39	2.8	5	20	43%	43%
WORLD	32.1	90	2.8	9	173	100%	100%

Scheduled Commercial Air Transport Accidents (Aircraft MTOW above 5,700 kilograms)  
 Source: ICAO 2014 Global Safety Report

# Pan American Accidents

Year	Total Accidents	Fatal Accidents	Total Fatalities
2003-2012 avg.	38.3	2.7	79.5
2012	35	1	2
2013	38	5*	20

Scheduled Commercial Air Transport Accidents (Aircraft MTOW above 5,700 kilograms)  
 Source: ICAO ADREP/ECCAIRS – 5<sup>th</sup> Ed. RASG-PA Annual Safety Report

\* 4 in the NAM Region, 1 in the SAM Region

# RASG-PA develops SEIs to tackle the main risk areas



Runway Excursion (RE)

Controlled Flight Into Terrain (CFIT)

Loss of Control-Inflight (LOC-I)

Mid-Air Collision (MAC)

Every SEI has an associated Detailed Implementation Plan (DIP) and Outputs

# RASG-PA 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 Risk Management Strategy



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



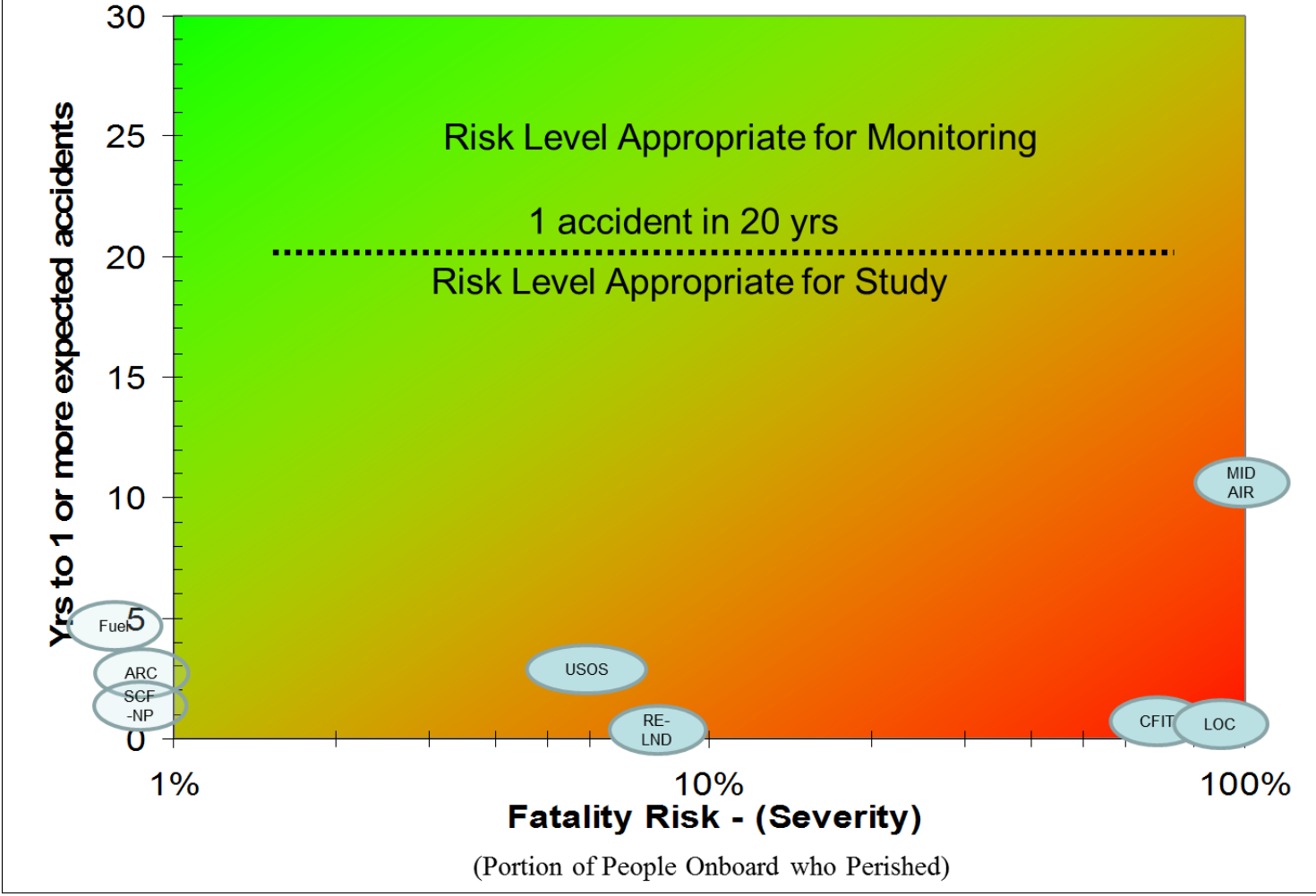
**Proactive:**  
Implement SEIs targeting specific high fatality risk areas



**Predictive:**  
Verify effectiveness of SEIs using precursor trends in FOQA

### 10 yr. Average of Severity and Occurrence Rate of 2002-2011 Latin America & Caribbean Accidents by CICTT Category

(Hull Loss and /or Fatal Accidents with operations equivalent to Part 121 Operations)





# Methodology used to calculate the impact of a safety enhancing intervention

$$\text{Accident/Risk Reduction} = f \left( \begin{array}{l} \text{Effectiveness} \\ \text{that an intervention} \\ \text{has for reducing the} \\ \text{accident rate if} \\ \text{incorporated} \end{array} , \begin{array}{l} \text{Portion of} \\ \text{Fleet} \\ \text{with} \\ \text{intervention} \\ \text{implemented} \end{array} \right)$$

## ✈ RASG-PA Safety Enhancements Initiatives (SEIs)

✈ RE/04, RE/08, RE/09, RE/11; CFIT/02, CFIT/04; LOC-I/06, LOC-I/07, LOC-I/09

## ✈ Accident set used for evaluation

## ✈ 2000-2010 hull loss and fatal accidents

✈ Operators with operations similar to Part 121

# RASG-PA Risk Analysis

**RASG-PA Goal: 50% fatality risk reduction for the period 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**

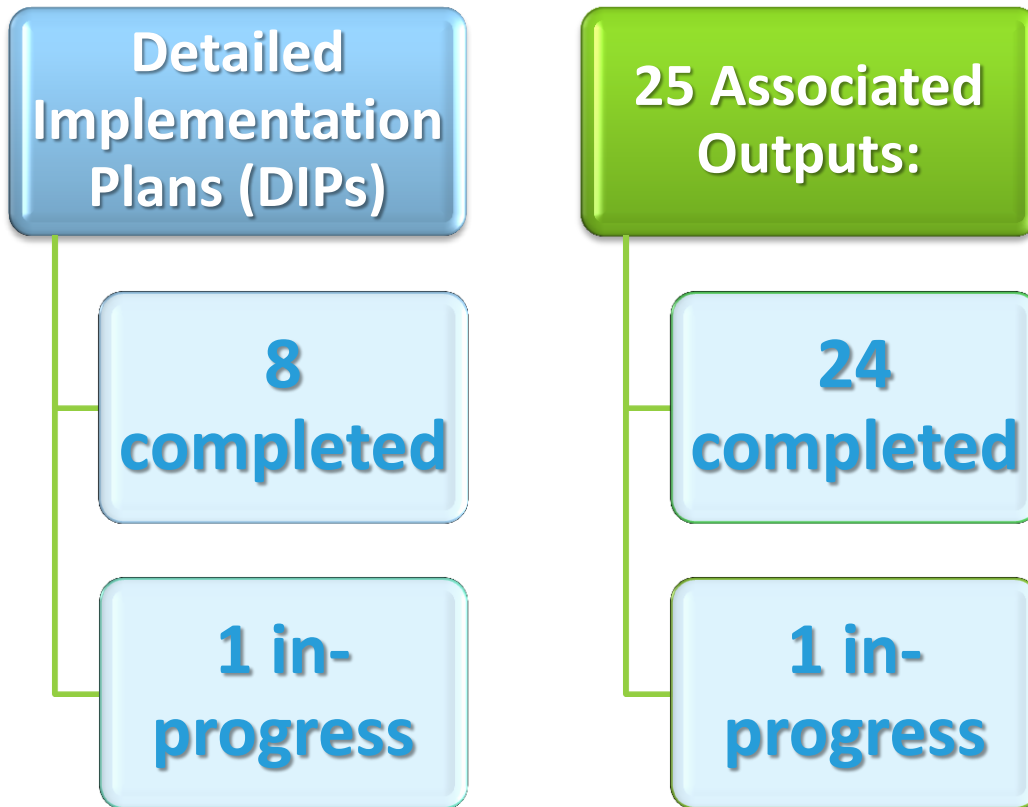
**Calculated reduction due to SEIs implemented in the period 2009-2013 = 24%**

**Calculated Risk through 2013 = 0.4**

# RASG-PA Deliverables

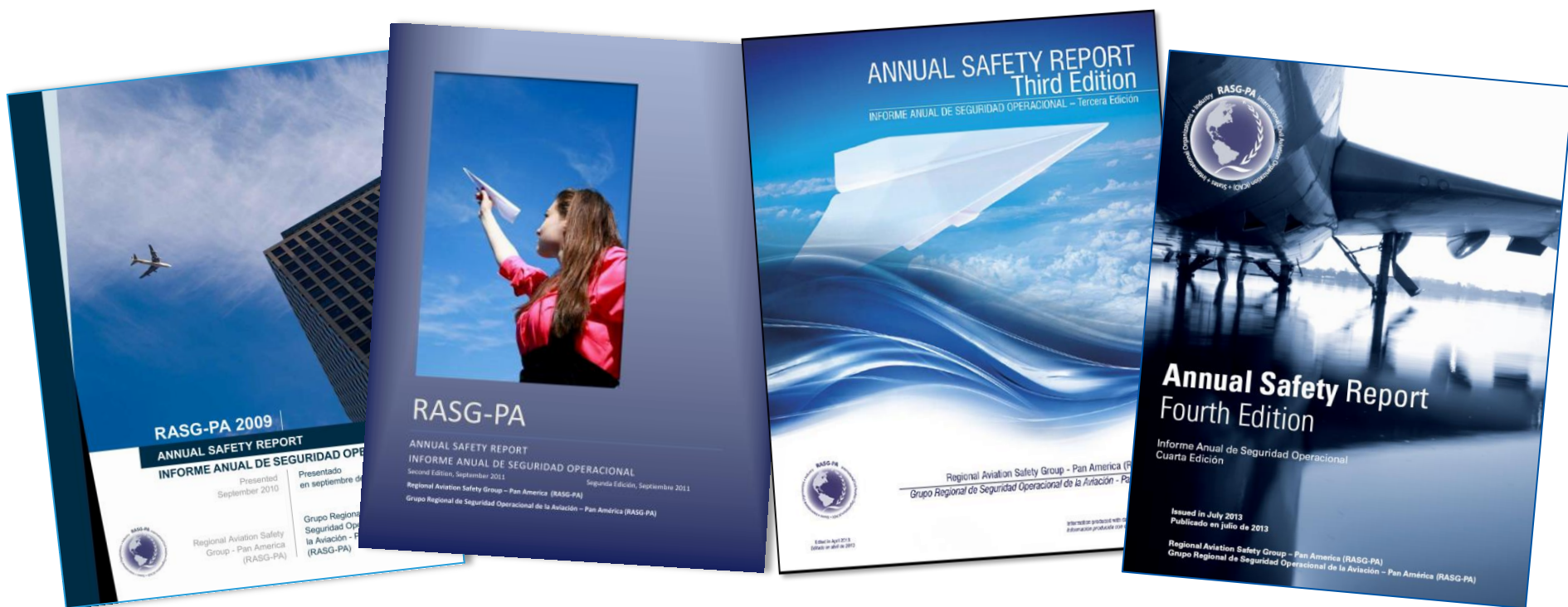


# SEI Summary



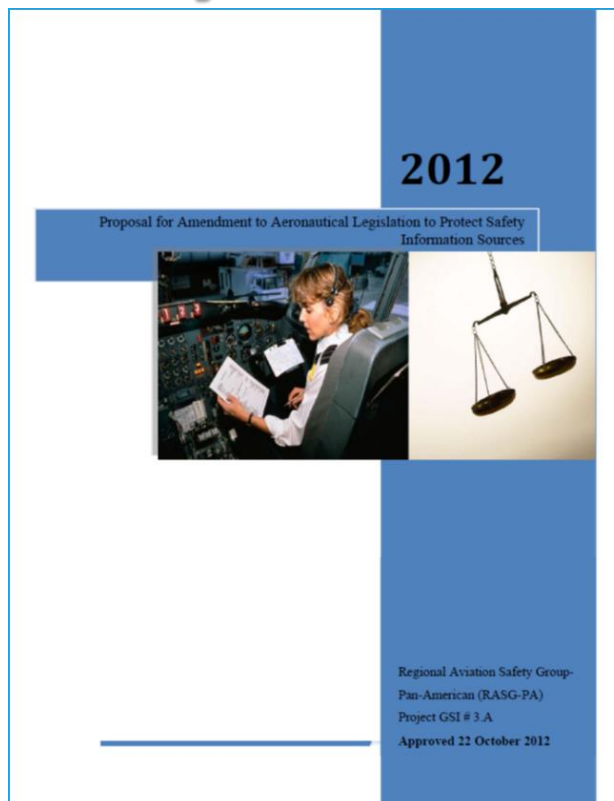
**New SEIs are under development by the Safety Enhancement Teams (SETs)**

# RASG-PA publishes Annual Safety Reports



## Measuring results

# 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

June 15-16 Mexico City

Working together for a safer industry



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  
SEPTEMBER 9-10th, 2014

CURAÇAO



# Other Deliverables

- ✈ Consistent use of Standard Spanish and English Phraseology in accordance with the ICAO PANS-ATM – Air Traffic Management (Doc 4444) - Completed
- ✈ Establishment of the Central American Accident and Incident Prevention Investigation Commission - Created
- ✈ Flight Information Quality Assurance (FOQA) Programme in Central America (PASO) – Active
- ✈ Bird Strike Reduction Programme - Completed
- ✈ Development of Metrics to Measure Institutional Strengths of the Civil Aviation Authorities 



# RASG-PA Programme 2014 - 2016

- ✈ Align RASG-PA work programme with GASP
- ✈ Support roll-out of new GASP and Annex 19
- ✈ Mitigate RE, CFIT, LOC-I and MAC risks
- ✈ Monitor/act regarding regional safety issues
- ✈ Ensure coordination with GREPECAS, RSOOs
- ✈ Increase participation of stakeholders
- ✈ Positioning as strategic regional safety forum
- ✈ Collect info for ICAO regional performance dashboard

# Regional Challenges

- ✈ Traffic growth
- ✈ New air transport operators
- ✈ Significant number of new aircraft orders
- ✈ Demand for skilled aviation personnel
- ✈ Training capacity
- ✈ Attractiveness of aviation
- ✈ Attrition related impact
- ✈ Infrastructure deficiencies
- ✈ Resources
- ✈ Political will



**Regional Aviation  
Safety Group  
(RASG-PA) is a key  
contributor to  
safety enhancement  
in the Pan American  
Region**



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