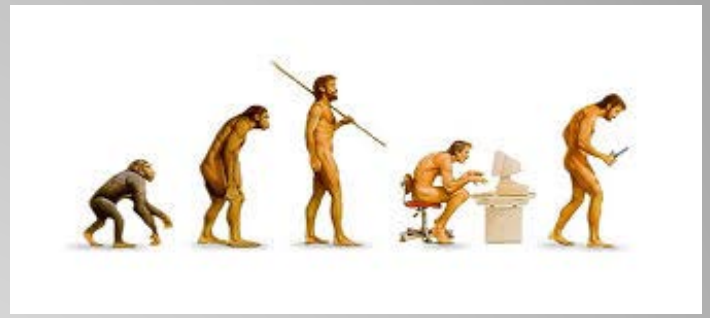
# Mid-Air Collision SET Status & Next Steps

PA-RAST/29, Fort Lauderdale
22-24 August 2017

# MAC Team Status



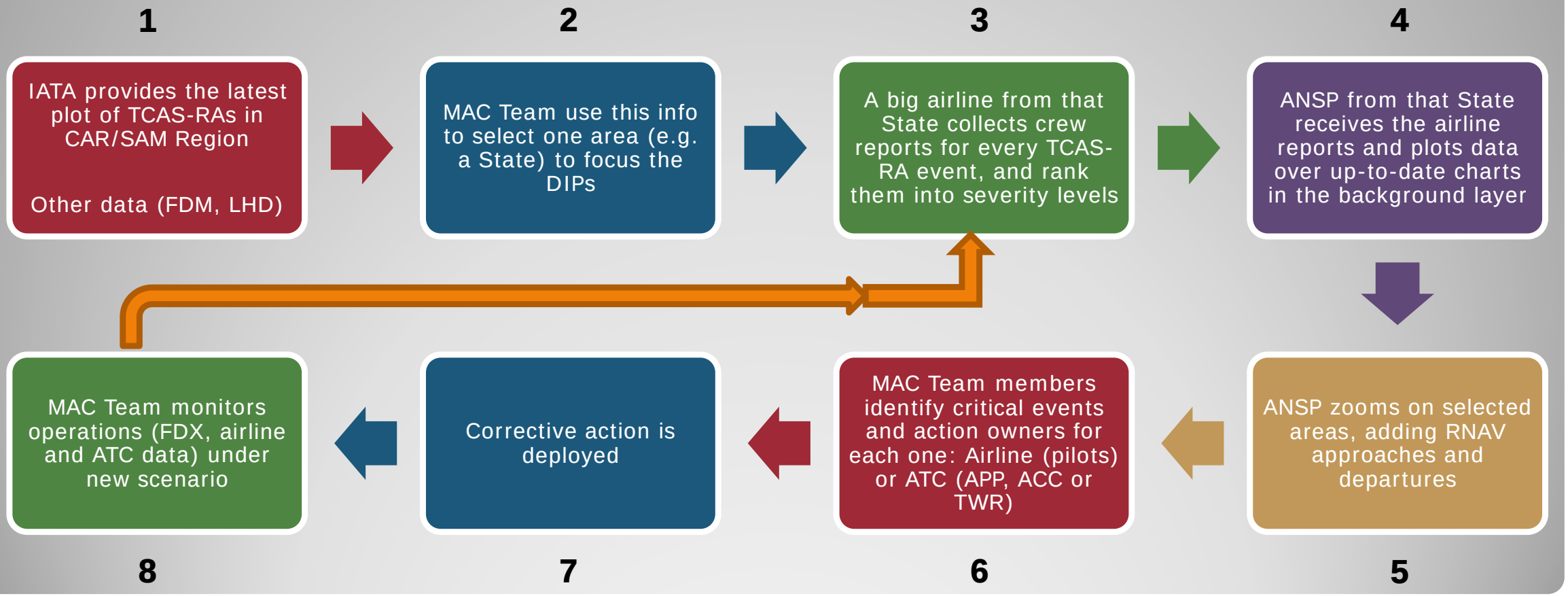
- History
  - **3 June 2016:** MAC Team's kick-off;
  - **2016:** Definition of working plan, MAC Team's objectives, rationale for MAC DIPs in CAR/SAM Region, membership list, preliminary 7-Step work methodology;
  - **PA-RAST/27:** Updated DIPs list, focus on DIPs #2 and #4
  - **PA-RAST/28:** Promotion of working methodology (Bolivia)

# MAC Team Membership

| | | | | |
|---|---|---|---|---|
| Airbus | ALTA | Boeing | CANSO | CARSAMMA |
| ECCAA | EMBRAER | IATA | ICAO | IFALPA |
| IFATCA | A4A | Avianca Brasil | GOL | Azul |
| United Airlines | ANAC-Argentina | ANAC-Brasil | DECEA | TC-CA |
| DGAC-Chile | Aerocivil | DGAC-Costa Rica | CAA-Trinidad | FAA |

# MAC DIP Cycle (Reactive Approach)

**APPROACH 1**



# Running the Cycle

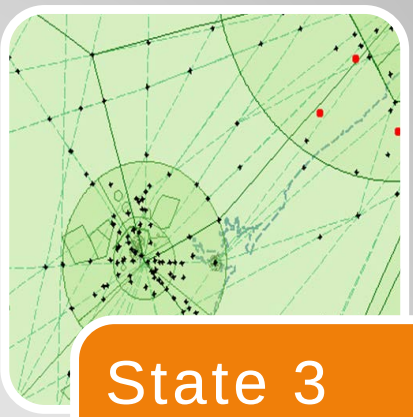
**APPROACH 1**

**State 1**

- Airline 1
- Airline 2
- Airline 3
- …

**State 2**

- Airline 1
- Airline 2
- …



**State 3**

- Airline 1
- …

# Adoption of Existing Recommendations (Proactive Approach)

**APPROACH 2**

Candidate DIPs for Immediate Development

| Item | Subject | Category | Affected Stakeholder(s) | Reference Material | MAC Team Champ |
|---|---|---|---|---|---|
| 1 | Implement the following recommendations:<br>- Update SOPs to reduce likelihood to level busts (e.g. reduce vertical speeds close to the end of climb);<br>- Reduce flight deck workload by avoiding all activity not directly related to the safe conduct of the flight;<br>- Ensure clear procedures for altimeter cross-checking and approaching level calls;<br>- Always confirm the clearance if any doubt exists on the flight deck;<br>- Always report the level cleared to when checking in on a new frequency while in the climb or descent. | Training/Procedures | Airlines | Eurocontrol's "Action Plan for the Prevention of Level Bust" (file: ActionPn.pdf) | TBD |
| 2 | Incorporate Eurocontrol's Level Bust Toolkit (30 minute e-learning module and Top Tips) into the flight crew and ATCO training programs. | Training/Procedures | Airlines / ANSPs | Eurocontrol's "Level Bust Toolkit" http://www.skybrary.aero/index.php/Toolkit:Level_Bust (file: Top Tips.pdf) | TBD |
| 3 | Verify current Call Sign designation rules and update them according to best practices, preventing communication flaws. | Regulation | National CAAs / ANSPs | Eurocontrol's "Call Sign Similarity Rules" and BCAST's MAC Team DIP | TBD |
| 4 | Incorporate AC90-48D (Pilot's Role in Collision Avoidance) content into the flight crew training programs. | Training/Procedures | Airlines | FAA AC90-48D (file: AC_90-48D_CHG_1.pdf) | TBD |
| 5 | Radio Discipline: use standard ICAO phraseology. | Regulation | National CAAs / ANSPs | Eurocontrol's "Action Plan for the Prevention of Level Bust", A Quick Reference Guide for Commercial Air Transport Pilots (PhraseologyManual.pdf) | TBD |
| 6 | Radio Discipline: avoid giving multiple clearances in the same transmission | Training/Procedures | National CAAs / ANSPs | Eurocontrol's "Action Plan for the Prevention of Level Bust", Top 5 Tips (TT4.pdf) | TBD |

# Where are we now?

- Idea is to run both approaches in parallel.
- Challenges:
  - Approach 1 has strong dependency on national ANSP and Airlines to cross-check relevant data (TCAS-RA, LHD, etc.)
  - Ideally for the PA-RAST, cases should be related to international traffic (domestic cases might be also relevant)
  - Inclusion of Carsamma data in hot spots identification

# Where are we now?

- Approach 1 DIPs:
  - Tentative initial work in Colombia (NAST);
  - BCAST is working on identified hot spots – applicability to intl. flights TBD
- Approach 2 DIPs:
  - (#2) Adoption of Eurocontrol's "Level Bust Toolkit": es / pt_br transl.
  - (#3) Review of Call Sign designation rules and "confusion avoidance" mechanism: BCAST case is moving forward
  - (#4) Survey for adoption of AC90-48D: content is on the way.

# Moving forward

- Restore virtual meetings schedule (‘recipe’)
- Promotion of national safety teams works
- Evaluate new cases for DIPs
- Tools to work with (SurveyMonkey, GoToMeeting, etc.)
- Update DIPs #2, #3 and #4 arrangements

# Moving forward

- DIP #2: “Incorporate Eurocontrol's Level Bust Toolkit (30 minute e-learning module and Top Tips) into the flight crew and ATCO training programs.”
  - The toolkit has been translated to Portuguese (BCAST)
  - Need to confirm translation to Spanish has been done/validated
  - Publishing in the RASG-PA Website and promotion strategies among relevant audience

# Moving forward

- DIP #3: “Verify current Call Sign designation rules and update them according to best practices, preventing communication flaws.”
  - Assess the situation in the region (State-level assessment of current procedures for Call Sign designation)
  - The method employed by the BCAST MAC Team is one possible solution – BCAST can compile the necessary information

# Moving forward

- DIP #4: “Incorporate FAA AC90-48D (Pilot's Role in Collision Avoidance) content into the flight crew training programs.”
  - Review final text of survey to assess the situation in the region (State-level assessment of AC contents awareness)
  - IATA (with support) will “spread the word” of the survey
  - Compile results for next meeting: initiate studies of mitigation strategies (IOSA, specific action with local carriers, etc.)

# Final thoughts

- Integrate efforts with the FSF's GSIP?
  - This year's webinars have provided good discussions around the promotion of reporting – MAC Team is directly benefited by expanding the availability and use of reports.
- Work on metrics for SPIs?
  - The Team could start discussing a process for safety performance indicators related to MAC? (this area is currently out-of-scope of the GASP)

# QUESTIONS / COMMENTS?

# THANK YOU / OBRIGADO / GRACIAS