



Go-arounds

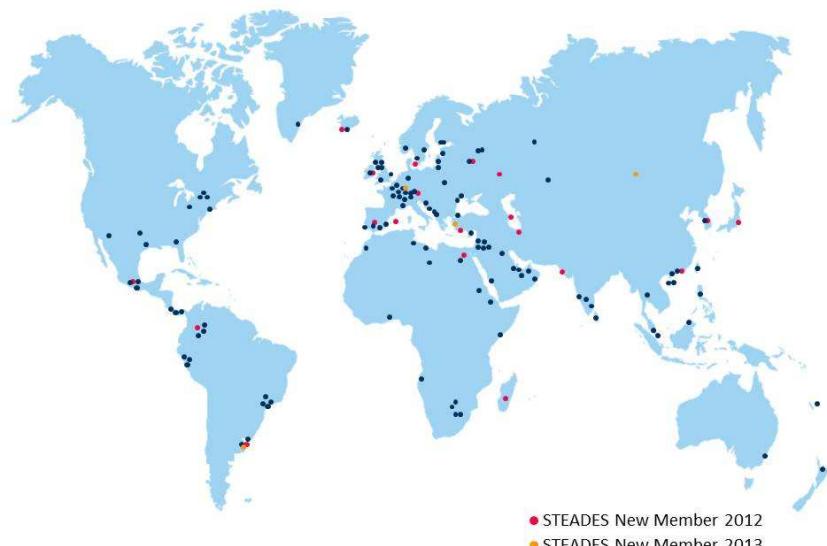
STEADES
High-level analysis

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- ↗ IATA GADM-STEADES database is the world's largest repository of operational safety reports
- ↗ ISO 27001 and ISO 9001 certification with transition to GADM
- ↗ more than 170,000 reports submitted annually
- ↗ over 150 member airlines

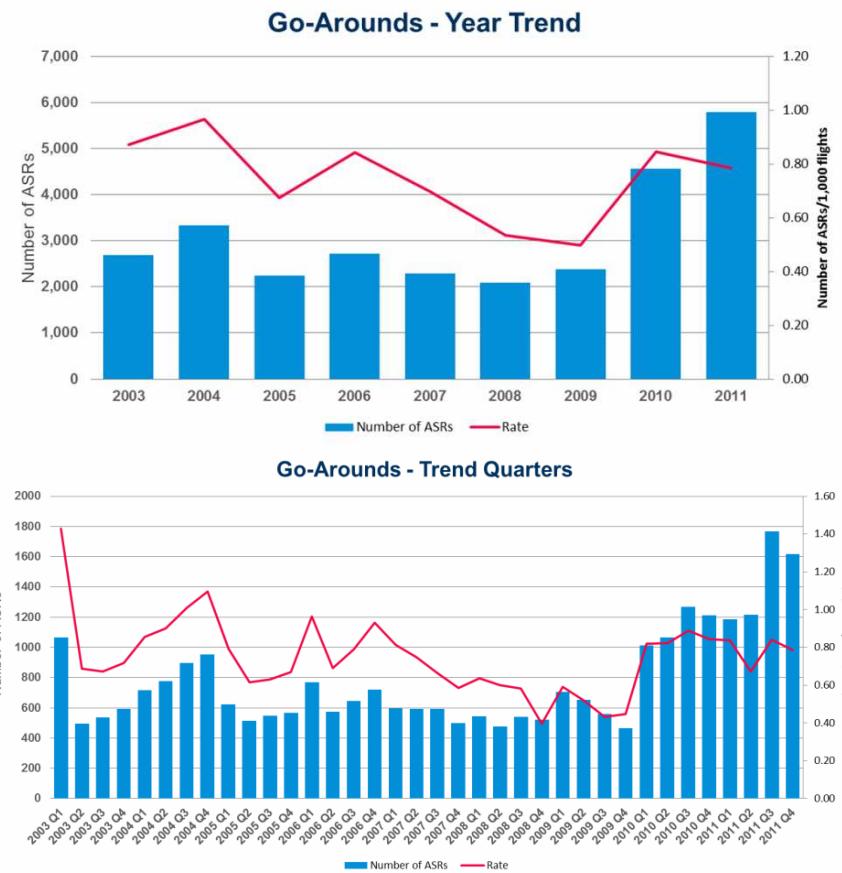
Go-around Study

- ↗ conducted based on a specific request to analyze safety reports of go-arounds
- ↗ Dataset includes Air Safety Reports (ASRs) from 2003 to 2011 inclusive
- ↗ 28,087 ASRs coded with the immediate effect "Go Around"



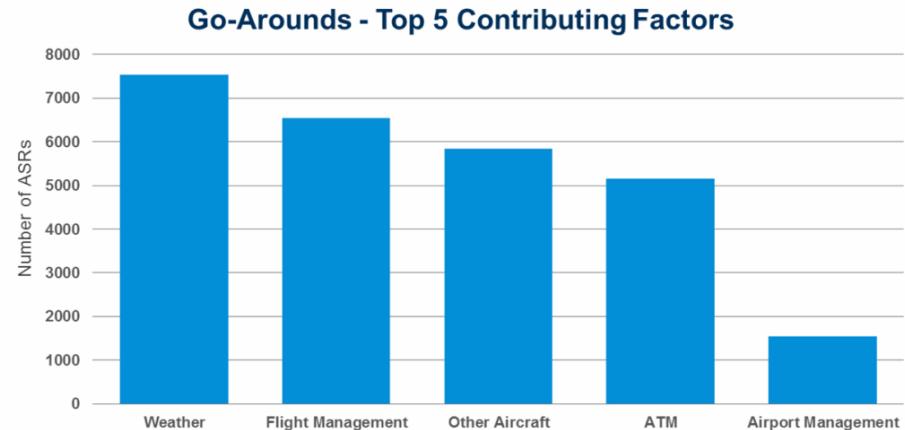
Go-arounds: Trend

- ↗ Overall rate for go-around events was 0.746 reports per 1,000 flights
- ↗ 2011 the year with highest go-around reporting in terms of number of reports
- ↗ With increasing number of ASRs decreasing trend



Go-arounds: Contributing Factors

- ↗ Top contributing factors:
 - ↗ 27% Weather
 - ↗ 23% Flight Management
 - ↗ 21% Other Aircraft
 - ↗ 18% ATM
 - ↗ 6% Airport management



Other factors include: EGPWS/GPWS, Flight Controls, Landing Gear System, TCAS, ...

Go-arounds: Flight Management

↗ Flight Management

- ↗ 76% High Energy/Unstable Approach
- ↗ 7% Manual Handling
- ↗ 7% Flight Crew Mis-Selection
- ↗ 6% Flight Management - Other
- ↗ 5% Aircraft Limit Exceedance

↗ Flight Crew Mis-selection:

- ↗ Inadvertent TO/GA selection
- ↗ Landing configuration mis-match

Sample Narrative:

“During deselect of automatics, TOGA buttons inadvertently selected causing thrust application resulting in becoming high on G/S. Go around continued normally and subsequent landing uneventful.”



Go-arounds: Recommendations

↗ IOSA Standards Manual Ed.7

FLT 3.11.60 The Operator shall have a policy that requires the flight crew to execute a missed approach or go-around if the aircraft is not stabilized in accordance with criteria established by the Operator. (GM)

FLT 3.11.59 The Operator shall have a stabilized approach policy with associated guidance, criteria and procedures to ensure the conduct of stabilized approaches. Such policy shall specify:

- i) A minimum height for stabilization not less than 1000 feet AAL for approaches in IMC or not less than 500 ft. AAL for approaches in IMC as designated by the operator and/or State where a lower stabilization height is operationally required;
- ii) A minimum height for stabilization not less than 500 feet AAL for approaches in VMC; [...]

Go-arounds: Air Traffic Management (ATM)

↗ ATM

- ↗ 40% Inadequate Separation
- ↗ 34% ATC Service Standard
- ↗ 10% ATM – Other
- ↗ 5% Landing Clearance with Runway in Use
- ↗ 5% Landing Clearance not Received

↗ ATC Service Standard:

- ↗ A high proportion of ASRs categorized with ATC Service Standard mentioned a preceding aircraft on runway

Sample Narratives:

“Go around at 500 feet due aircraft still on runway 16, as instructed by Tower. ATC spacing on approach not adequate.”

“Speed control from ATC on final approach led to tight spacing behind landing aircraft in front. Go around actioned at 300ft approx. Vectored for uneventful landing”

Go-arounds: Outcomes

- ↗ The biggest contributing factors were, Weather (27%), Flight Management (23%) and Other Aircraft (21%)
- ↗ Weather included additional information about Windshear, Tailwind and Insufficient Visual Reference
- ↗ Flight Management contained the contributing factor High Energy or Unstable Approach, Manual Handling, Flight Crew Mis-selection
- ↗ Air Traffic Management was mentioned in 18% of all go-around events with two key sub-categories Inadequate Separation and ATC Service Standard
- ↗ Findings of this comparison were that the 68% (63) of accidents in 2011 occurred during the phases approach, go-around or landing



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