



# AFI Flight Operations Safety Awareness Seminar (FOSAS)

## Benefits of reporting

ICAO/Airbus  
Nairobi, 19-21 Sep. 2017

**AIRBUS**

# Our Objective: Safety & Efficiency

## Continuous Improvement Process



# Regulations

- 

## The need for reporting

- 

## Examples

- 

## How and what to report?

- 



# Regulations

## The need for reporting

## Examples

## How and what to report?



# What reporting requests exist for the Operators?

## Reporting from Operators to State of Registry

- + ICAO annex 6 (§8.5): Airlines may be requested to report to their own local Authorities
- + EASA EU-OPS 1.420
- + FAA e-CFR 14 Subpart 125.409

## Reporting from Operators to aircraft manufacturers

- + EU regulations: Operators registered in Europe are required to report in-service events to Airbus



## What obligations already exist for Airbus?

EASA (Part 21A.3) requires:

- + That Airbus maintain a « system for collection, investigation and analysis of data »
- + That Airbus report to EASA any occurrence « which has resulted in or may result in an unsafe condition »



# Regulations

## The need for reporting

## Examples

## How and what to report?



# Collecting data



## COLLECT

Collect information, data from reports and in-service feedback

### MAIN SOURCES



Instructors



Flight Tests



Occurrences



Daily Queries



Events

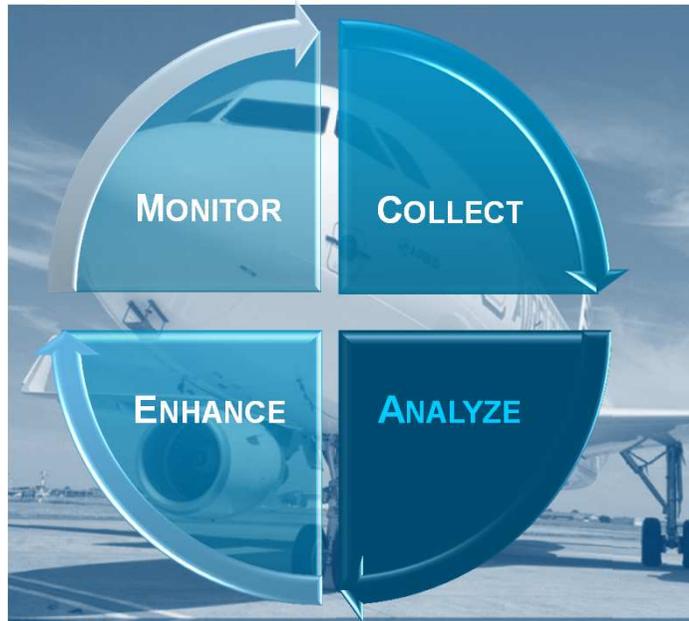


Airbus Contacts



Visits

# Action plan



## ANALYZE

Analyze all the available data and information to develop an action plan

Categorize the events or feedback

Identify:

- Threats & Errors
- The impact on the Airlines and on the Fleet (safety, operations, economics, ...)
- Trends

Identify priorities

Identify appropriate actions

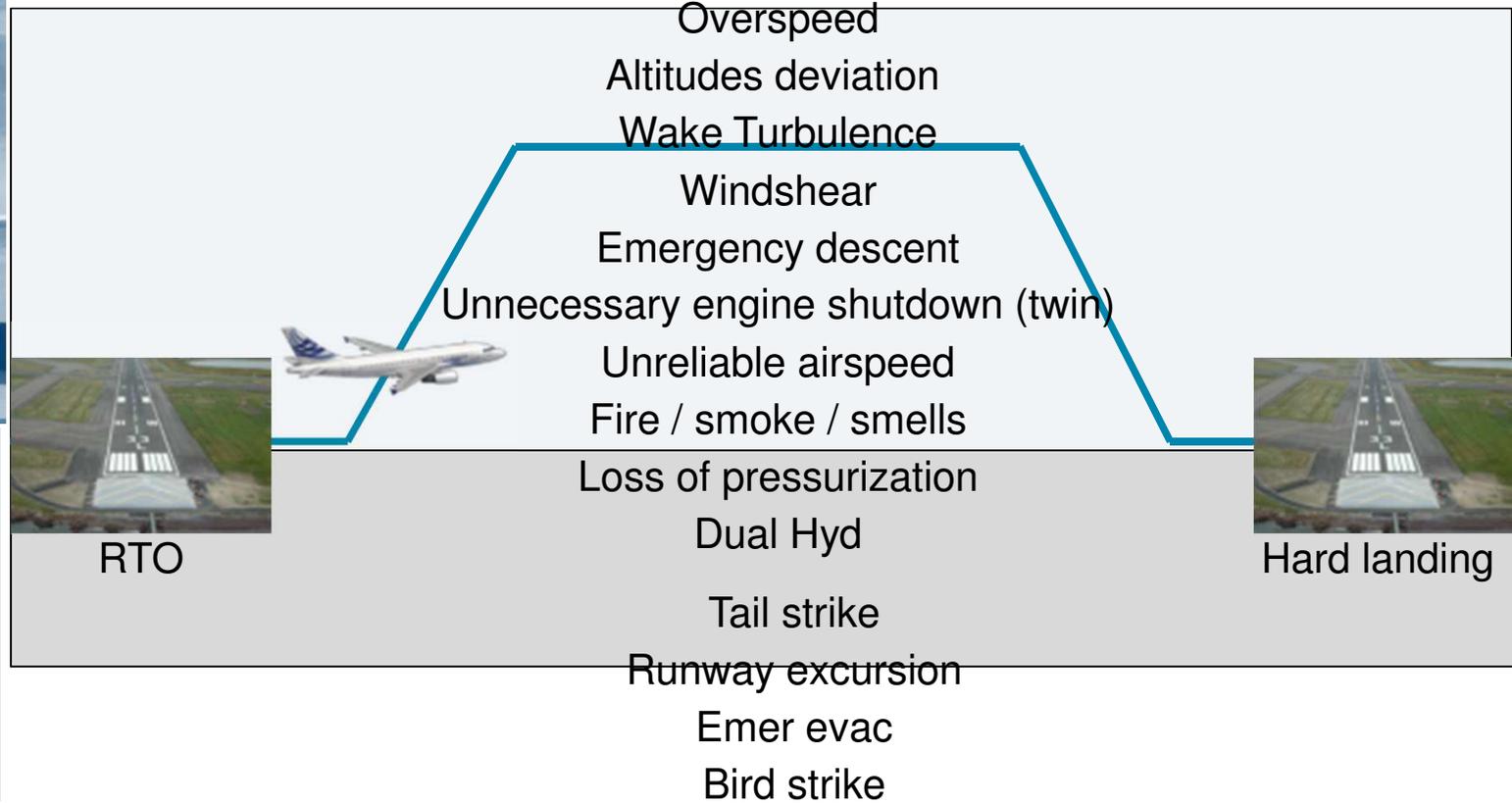
# Analyzing data



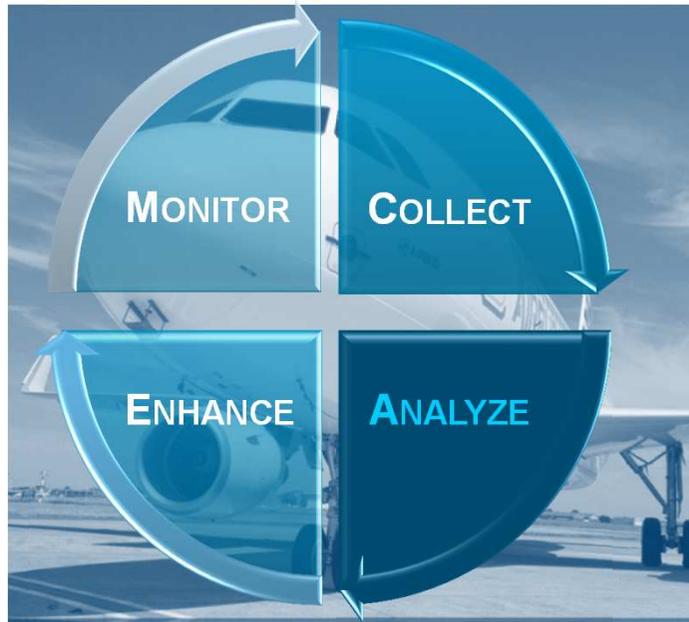
## ANALYZE

Analyze all the available data and information to develop an action plan

## Categorize the events or feedback



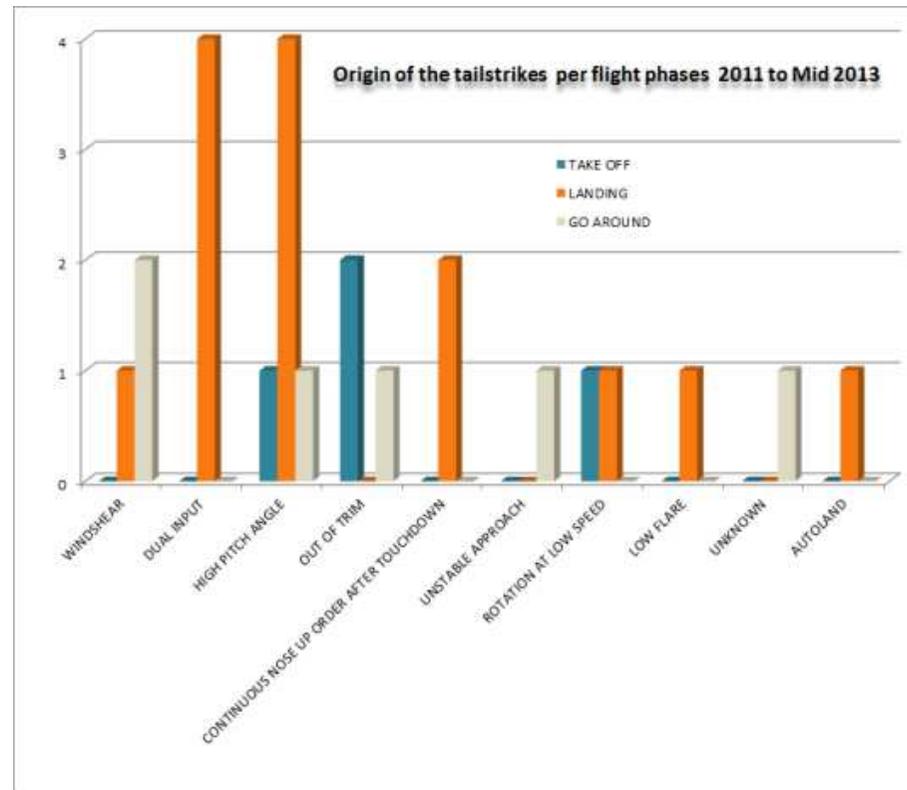
# Results of the analysis



## ANALYZE

Analyze all the available data and information to develop an action plan

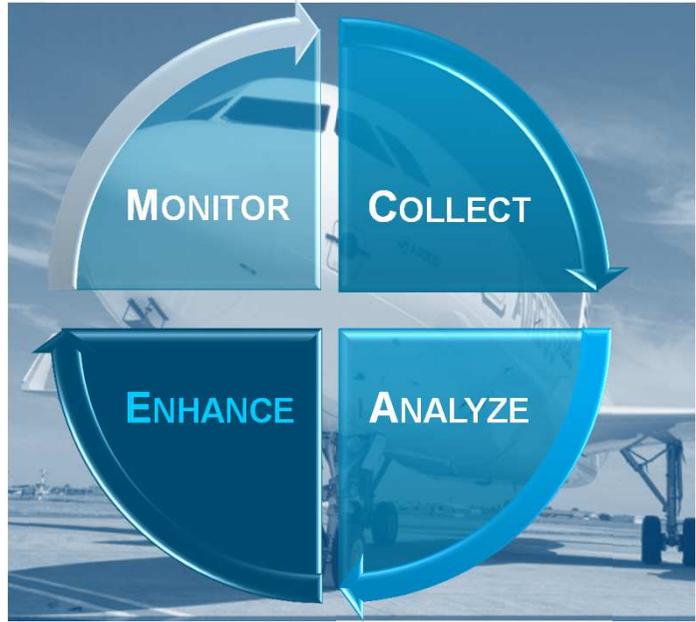
### Example: Tailstrike events on Airbus fleet



### Contributing Factors :

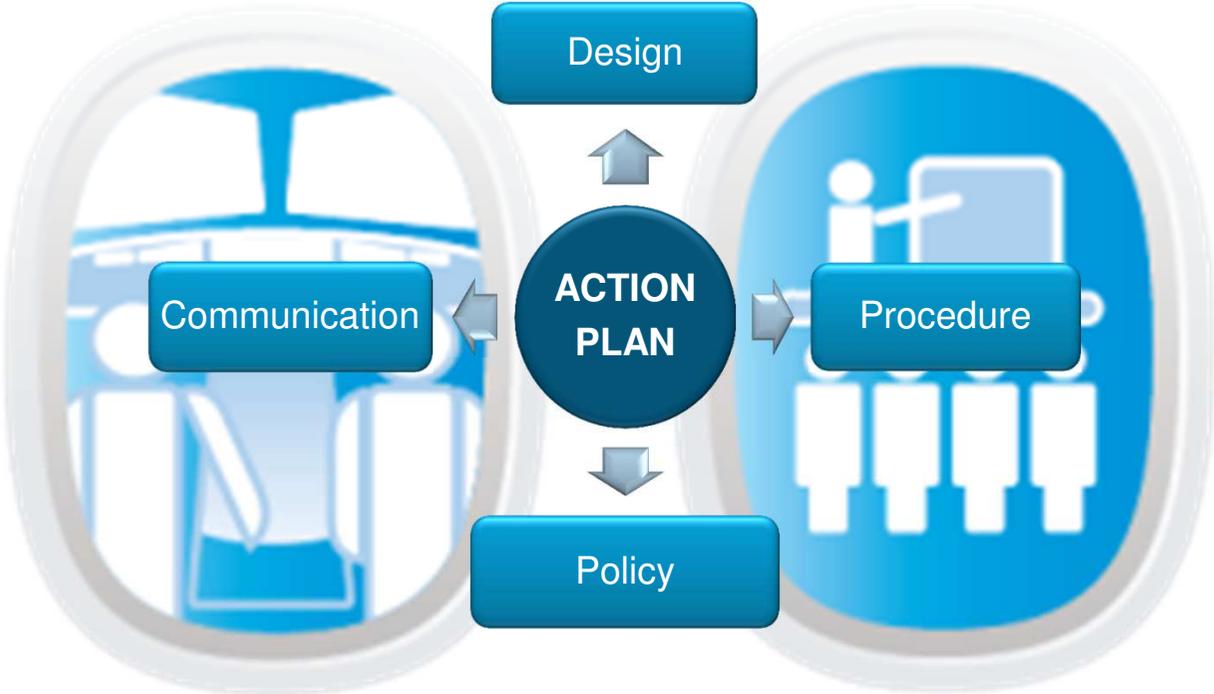
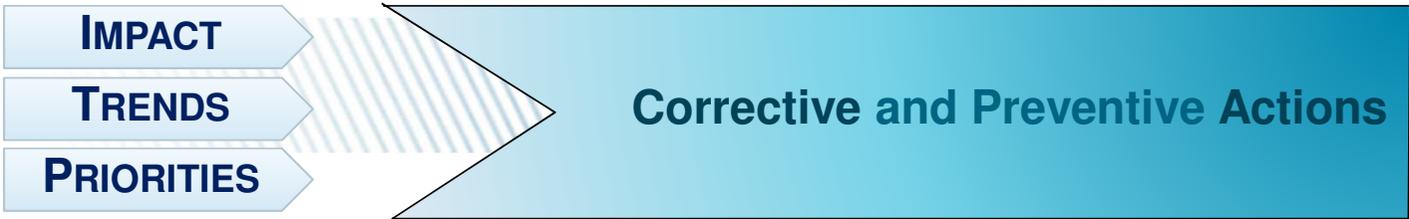
- Rotation Technique:
  - High pitch angle
  - Dual input,
  - Low flare,
  - Rotation at low speed
  - Continuous nose up order after touchdown
- Unstable approach
- Windshear
- Pitch trim setting

# Enhancing the operations



**ENHANCE**

Enhance by implementing corrective and preventive actions

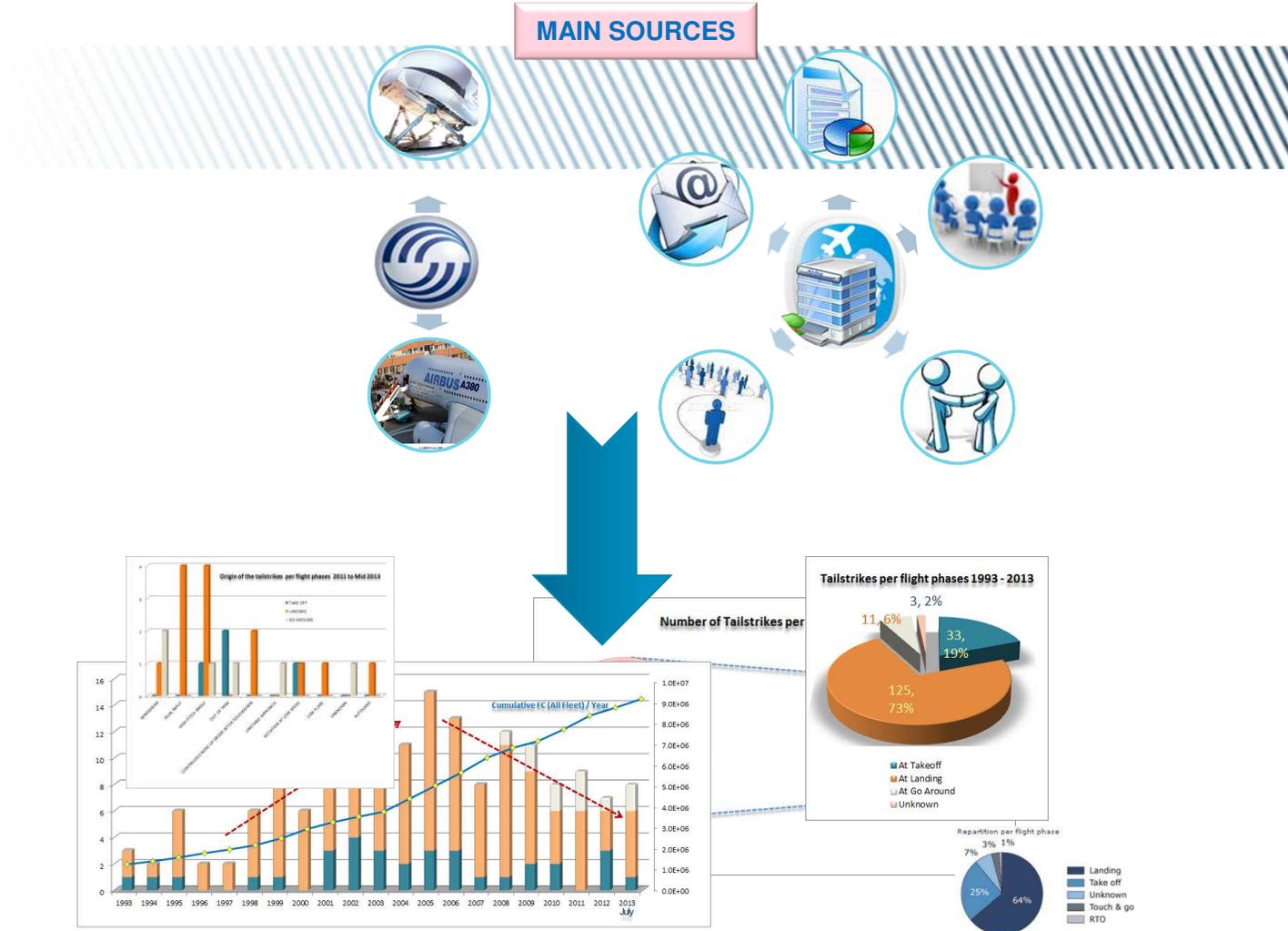


# Closing the loop



## MONITOR

Monitor the effectiveness of the different actions



# Regulations

## The need for reporting

## Examples

## How and what to report?



## Examples

**An A320 experienced a runway excursion beyond the runway end. The main LH landing gear and the nose landing gear went on soft ground.**

### WHAT HAPPENED ?

- 4000-meter runway, that the ATC reported as slippery.
  - Autobrake LOW and disconnected during rollout.
    - Reversers stowed at approximately 100kt.
    - No manual braking action applied for 50sec.
- 500m from the end of the runway, speed still 73kt → Max manual braking applied.
  - At 33kt parking brake applied.

## Examples

**An A320 experienced a runway excursion beyond the runway end. The main LH landing gear and the nose landing gear went on soft ground.**

### OUTCOME

- The pilot monitoring must call out the deceleration of the aircraft during the landing rollout.
- The callout must NOT be based on the DECEL light but on the flight crew's physical feeling of the deceleration and confirmed by speed trend going down on the PFD.

**This information can be found in the FCOM and the FCTM, but Airbus decided to reinforce the message in training documents.**

## Examples

**An A320 experienced a runway excursion beyond the runway end. The main LH landing gear and the nose landing gear went on soft ground.**

### THE DECEL LIGHT

- The ON light comes on in blue → Autobrake mode armed.
- The green DECEL light comes on when actual deceleration is 80% of the selected autobrake deceleration rate.
- On slippery runways the selected deceleration rate may not be reached and the DECEL light will not come on. However, this does not mean that the



# Examples

**During takeoff, the flight crew realized that there was no takeoff speed displayed on the PFD.**

## WHAT HAPPENED ?

- Taxi out: ATC cleared for a departure with a given waypoint instead of SID.
- The Pilot Monitoring pressed DIR TO and entered the given waypoint.
  - Takeoff roll: FLEX NOT SET Warning → Pilot Flying applied TOGA.
    - No takeoff speed displayed on the PFDs.
  - V1 and VR called at 140kt (based on data previously inserted).
    - Once airborne, normal flight resumed.

## Examples

**During takeoff, the flight crew realized that there was no takeoff speed displayed on the PFD.**

### OUTCOME

- When a DIR-TO is performed on ground after runway departure and Performance Take-Off data inserted, the FMS considers that there is a runway departure change and invalidates the runway.
- All takeoff speeds previously entered are removed from the FMS.

**Following this event, the Airbus documentation was updated to prevent DIR TO on ground.**

# Examples

**During approach, an A330 performed a Go-Around with no SRS mode after FLAPS LOCKED triggered on the ECAM.**

## WHAT HAPPENED ?

- Approach: ECAM Warning "F/CTL FLAPS LOCKED".
- Flaps locked in the retracted position.
- The flight crew called for a Go-Around.
- Both levers → TOGA then pulled back to MCT.
- SRS mode did not engage → the aircraft continued to descend on the glideslope.
- The flight crew took manual control to fly the Go-Around.

# Examples

**During approach, an A330 was not able to perform a Go-Around with SRS mode engagement after FLAPS LOCKED triggered on the ECAM.**

## OUTCOME

- Flaps were locked in the retracted position.
- In the case of a Go-Around, the SRS guidance engages only if the CONF is at least 1 and the landing gear is down.

**Following this event, the Airbus documentation was updated to add this information.**

# Regulations

---

# The need for reporting

---

# Examples

---

# How and what to report?

---



# What to report?

## Air Safety Report (ASR)



<b>AIR SAFETY REPORT</b>		!! THIS BLOCK FOR FLIGHT SAFETY OFFICE USE !!		XYZ AIRLINES	
1. TYPE OF EVENT (CHECK ALL THAT APPLY)		IS THIS EVENT A REPORTABLE OCCURRENCE? YES <input type="checkbox"/> NO <input type="checkbox"/>		REFERENCE No:	
2. CM1		CM2		CM3	
3. DATE OF OCCURRENCE (DD MM YR)		4. TIME (DAY / NIGHT)		5. SERVICE NR./CALLSIGN	
6. ROUTE FROM / ROUTE TO		7. DIVERTED TO		8. AIRCRAFT TYPE	
9. REGISTRATION		10. NR. OF PASSENGERS / CREW		11. TECH LOG REFERENCE NR.	
12. FLIGHT PHASE: TOWING - PARKED - PUSHBACK - TAXI-OUT - TAKE-OFF - INITIAL CLIMB - CLIMB - CRUISE - DESCENT - HOLDING - APPROACH - LANDING - TAXI-IN		13. ALTITUDE (FL) _____ FT		14. SPEED (MACH NR. / TIME)	
15. FUEL DUMPED: QUANTITY / LOCATION		16. MET CONDITIONS: IBC / VMC		17. WIND ACTUAL: WIND / VISIBILITY / CLOUD / TEMP (°C) / QNH (mb)	
18. SIGNIFICANT WX: MODERATE/SEVERE: RAIN - SNOW - ICING - FOG - TURBULENCE - HAL - STANDING WATER - WINDSHEAR					
19. RUNWAY: L / C / R		20. RUNWAY STATE: RVR: DRY - WET - ICE - SNOW - SLUSH - DEBRIS		21. AIRCRAFT CONFIGURATION: AUTOPILOT / AUTOTHROST / GEAR / FLAP / SLAT / SPOILER	

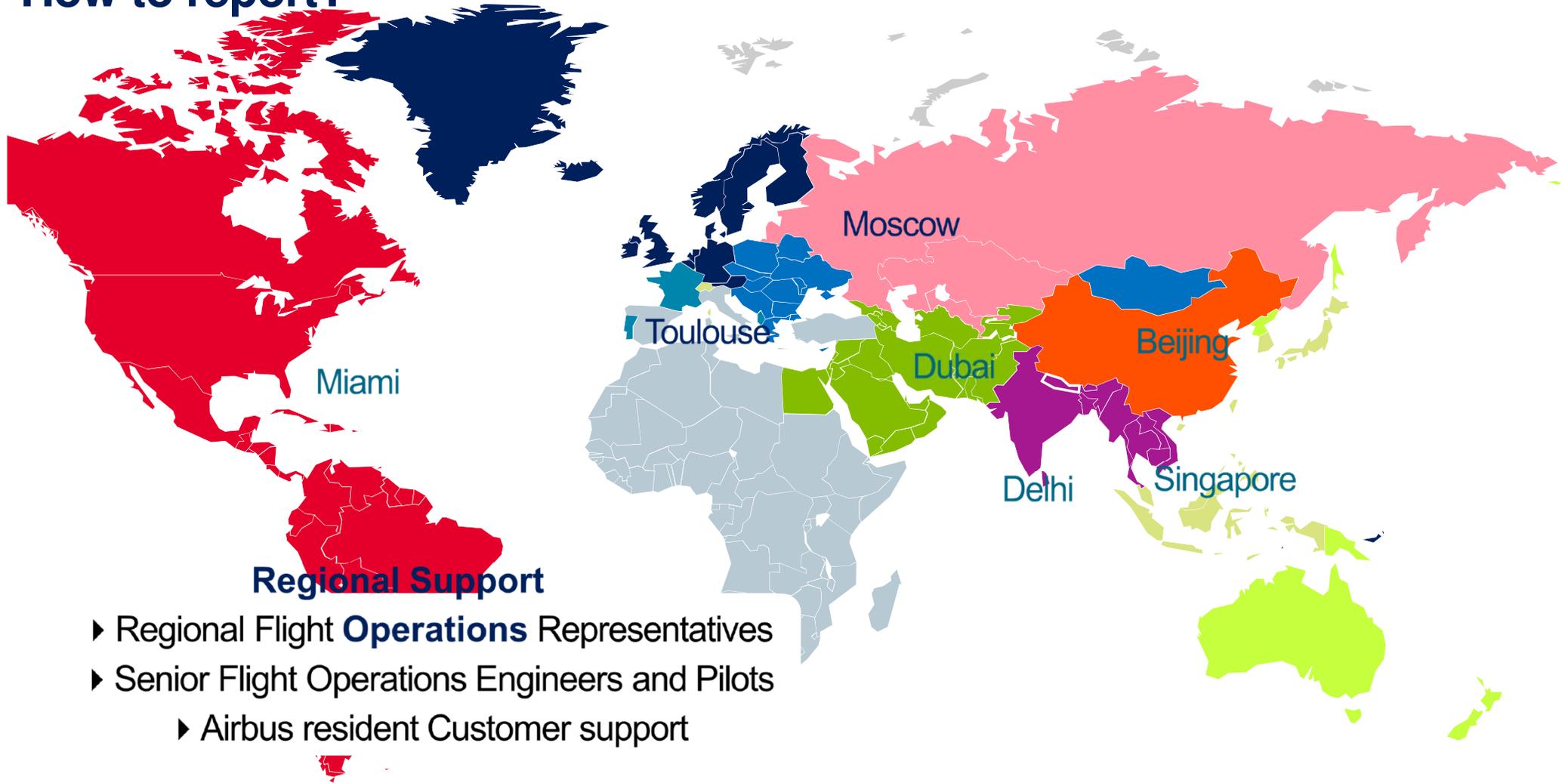


- Detailed flight crew report
- DFDR, QAR raw data
- List of any MEL items open
- Any additional information of interest, e.g. photos, videos, etc....



ISI N°eng-1658

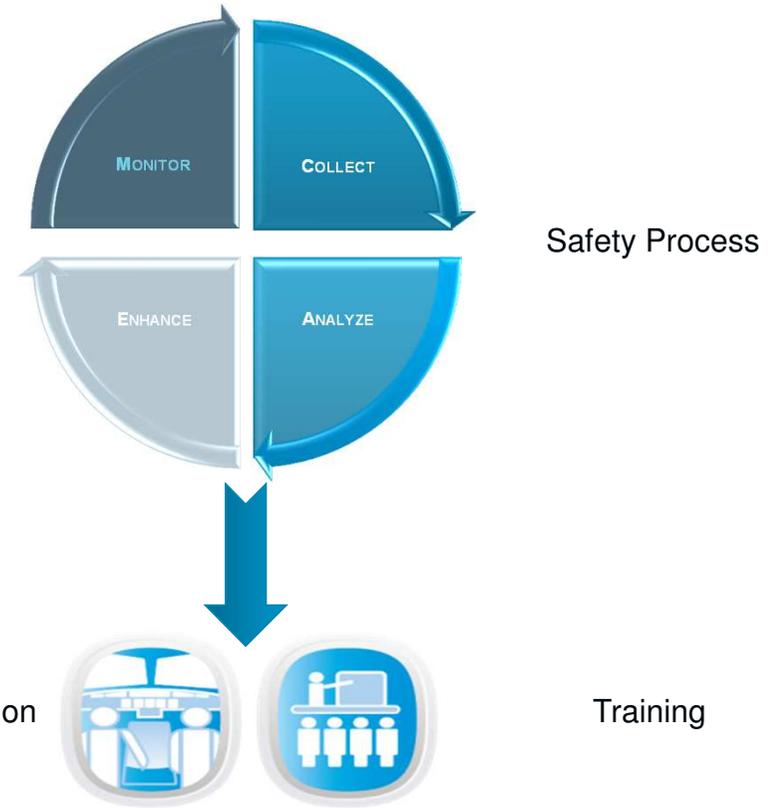
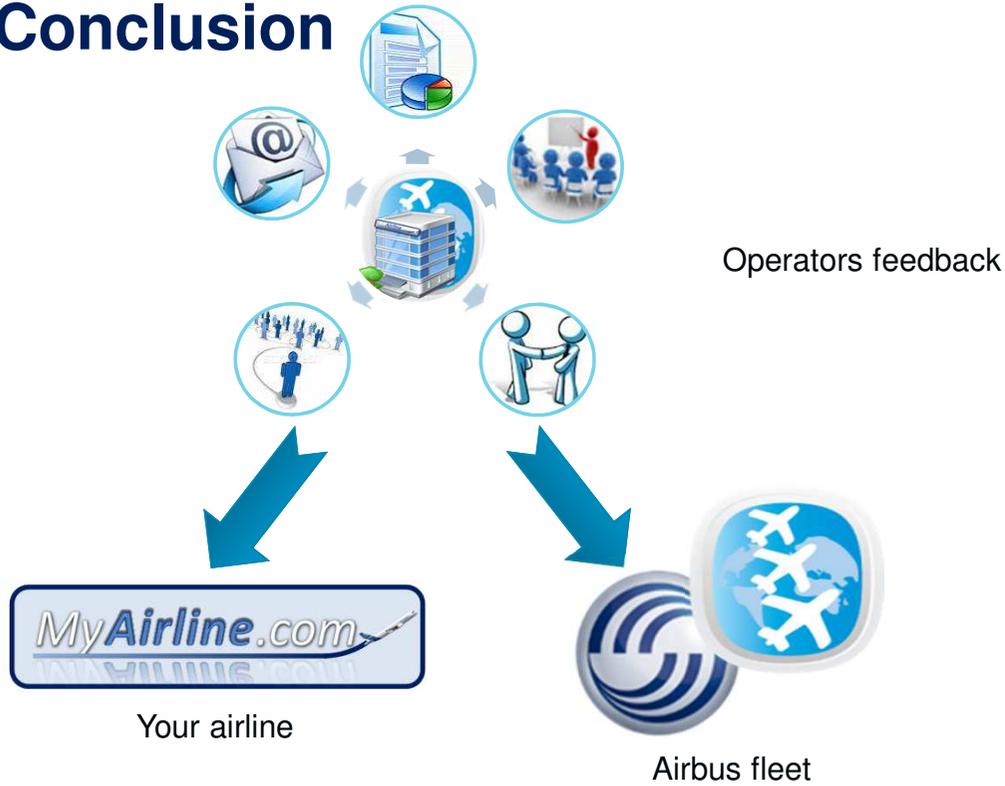
# How to report?



## Regional Support

- ▶ Regional Flight **Operations** Representatives
- ▶ Senior Flight Operations Engineers and Pilots
  - ▶ Airbus resident Customer support

# Conclusion



**In-service event reporting supports safety.  
A correct reporting is essential for a better efficiency  
It is in our common interest !**