




BEA
Bureau d'Enquêtes et d'Analyses
pour la sécurité de l'aviation civile


APAC-AIG 2020
BEA's framework for the management of CAT
incident notifications

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BEA  **Overview of BEA's activity and resources**

- Overall yearly activity (approx.)
 - 270 accidents in France (light aircraft mainly, including ultralights)
 - 140 new investigations
 - 1,000+ notifications of incidents mainly from commercial air transport operators
 - 300 notifications from foreign countries for accidents and incidents
 - 180 ACCREPs appointed
- 30 investigators available to be IIC or ACCREP

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BEA  **Overview of BEA investigation policy**

- Investigate all fatal accidents, including those involving non-ICAO Annex 8 aircraft
 - large number of microlights operating in France (approx. 16,500)
 - large number of fatalities due to microlight accidents (23 in 2019)
 - absence of bodies capable of providing feedback equivalent to that of the BEA
- Limited investigations or involvement
 - light aircraft events that do not generally result in serious or fatal injuries
 - foreign events involving aircraft designed or manufactured in France and for which no contribution from the design or manufacture is expected

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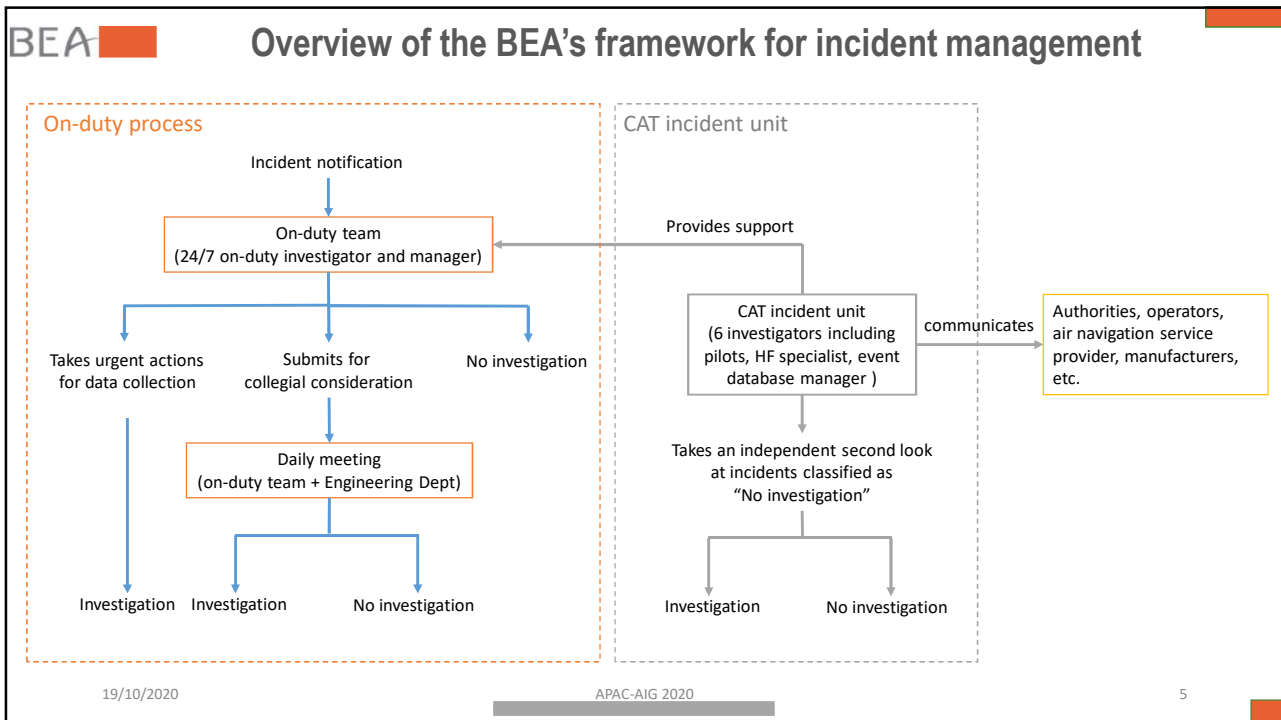
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BEA  **Management of incidents**

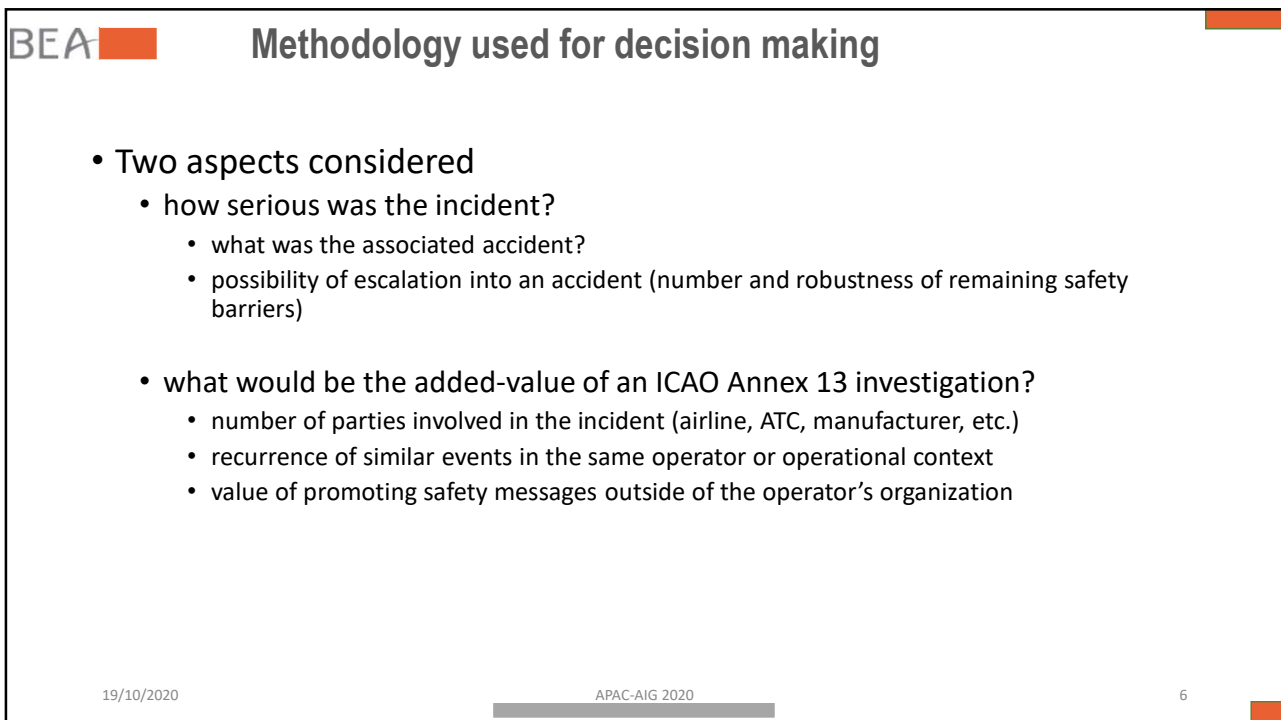
- Our experience showed that incidents in commercial air transport (CAT) are a valuable source of safety lessons
- Main assessment process done by the on-duty team
- Dedicated unit put in place in Jan 2020
 - to provide support to the on-duty team
 - to have an independent second look at notifications
 - to collect additional information if needed for decision making
- Workload from other investigations also taken into account in the decision process

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Methodology used for decision making

- In line with ICAO Annex 13 methodology
- Additional information often needed to make a documented decision
 - implies time and resources
- Process relies on the experience of investigators and collective thinking
 - complementarity and collegiality
 - six investigators in the CAT incidents unit (2 airline pilots, 1 HF specialist, the BEA database manager, two investigators)
 - process not formalized through the use of a tool or table so far

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Methodology used to assess the need to open an investigation

- Example of an investigation opened into a CAT incident
 - Notification from ATC
 - Go-around at 2 NM in final approach initiated by the crew of aircraft 1
 - Take-off of aircraft 2 at the same time from another runway cleared by ATC
 - Instruction given to aircraft 1 to climb and turn left
 - ATC saw the aircraft going slightly to the right, over the tower
 - Once the aircraft turned left, slight descent
 - Crew explained to ATC that they encountered windshear
 - Crew of aircraft 2 had visual, ATC was aware of the conflict
 - No investigation decided initially by on-duty team

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- CAT incident unit asked the operator for further information
 - Subtle incapacitation of pilot flying during go-around procedure following a predictive windshear warning
 - ILS approach after a 11-hour flight
 - F/O was PF, stabilized on ILS
 - AP OFF, no turbulence or adverse weather indication
 - Shortly after, predictive windshear warning “GO AROUND, WINDSHEAR AHEAD”
 - Captain ordered Go-Around
 - No reaction from PF to ATC instructions and to captain’s commands
 - Captain took over controls
 - Lateral deviations from published procedure, altitude overshoot
 - Low energy warning
 - Flight path recovery and 2nd approach by captain uneventful

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- Final assessment made
 - Associated accident: CFIT, Loss of control, mid-air collision
 - Remaining barriers:
 - for CFIT: ATC instruction, GPWS warning, crew reaction
 - for loss of control: flight envelope protections, crew reaction
 - for mid-air collision: ATC instruction, TCAS warning, crew reaction

⇒ **Incident**

Most credible scenario	Remaining safety barriers	
	Effective	Limited
Accident	INCIDENT	
No accident		

- But...
 - Startle effect and go-around difficult to handle for the crew
 - Good opportunity to share these issues that are of interest for crews of commercial operators
 ⇒ **Added value of an Annex 13 investigation**
- Added-value of an Annex 13 investigation report was predominant in the decision, compared to the seriousness of the incident

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- To be honest
 - assessment made in Feb 2020, shortly after the setting up of the CAT unit
 - no formal table was used
 - assessment made collectively in line with ICAO methodology
- For non-serious incidents, added value of an Annex 13 investigation and available resources are also considered in the decision
- Three investigations into non-serious incidents were opened in the same spirit in 2020