



ICAO

**EIGHTH MEETING OF THE ASIA PACIFIC ACCIDENT
INVESTIGATION GROUP (APAC-AIG/8)**

(Wednesday, 21 October 2020 on Virtual Platform)

Agenda Item 4: Enhancing accident investigation capabilities

THE BEA'S METHODS FOR THE CLASSIFICATION OF SERIOUS INCIDENT

(Presented by France)

SUMMARY

The BEA's methods for the Risk-based Classification of Serious Incident are based on an assessment of the seriousness of the event and on the expected benefit of an Annex 13 investigation. This assessment can involve up to three parties within the BEA: on-duty investigators, participants in the daily review meeting and the commercial air transport incident unit.

Action by the APAC-AIG is in paragraph 2.1.1.

1. INTRODUCTION

1.1 Logically, a high level of safety is expected in commercial air transport. Regulatory requirements are organized to contribute to this. Among the requirements imposed on operational and industrial players, as well as on authorities, are those relating to safety management systems and State safety programmes (SMS and SSP).

1.2 Stakeholders must now analyse the incidents that concern them in terms of the robustness of their management systems. In other words, they must determine the most serious and probable scenarios that could have arisen from these incidents, evaluate the robustness of the safety barriers that should prevent the escalation into an accident, and identify and implement corrective actions if necessary.

1.3 In view of this new regulatory and organisational context, investigation authorities must position themselves with respect to the stakeholders in a consistent and relevant way. They must also take into account activities other than those related to commercial air transport as well as their internal constraints.

2. DISCUSSION AND RESULTS

2.1 The BEA's Investigation Department has approximately 30 investigators available for appointment as IIC. All of these investigators are also involved in the 24/7 duty roster. Each year on average, this staff handles the notification of:

- a) nearly 270 accidents in France (mainly concerning light aircraft) leading to approximately 140 investigations;

- b) probably more than 1,000 notifications of incidents (mainly concerning commercial air transport) in France or involving French operators;
- c) nearly 300 incidents and accidents reported by our foreign counterparts, leading to the appointment of approximately 180 accredited representatives.

2.2 In 2015, the BEA implemented a light aviation-oriented investigation policy aimed at investigating all fatal accidents, including those involving aircraft not certified by EASA and which are not eligible for an ICAO Annex 8 airworthiness certificate (microlights, amateur-built aircraft, historical aircraft). This choice was dictated by the large number of aircraft of this type operating in France, by the large number of fatalities that this represents, and by the absence of bodies capable of providing feedback equivalent to that of the BEA in a complicated emotional or legal context after a fatal accident.

2.3 In order to meet this objective with the constraints of a limited workforce, the BEA has gradually decided to reduce its level of investment in certain investigations. This concerns:

- a) Among the light aviation accidents that occur in France (see category (a) above), those falling within the categories of events that do not generally result in serious or fatal injuries. For these accidents, investigations are conducted by correspondence.
- b) Among the incidents and accidents notified by our foreign counterparts (c), those for which no particular contribution is expected from the French industry. For these, in coordination with the corresponding potential technical advisors (i.e. the manufacturer and EASA), the BEA no longer appoints an accredited representative.

2.4 However, the room for manoeuvre in these two areas of activity is limited due to the regulatory requirements and the wish of the French manufacturing industry to remain in the loop of foreign accident investigations involving their products. As a result, workload management is one of the primary concerns when it comes to handling French incidents (b), including commercial air transport incidents. ICAO Annex 13 and the European Regulation (EU) No 996/2010 provide a definition of serious incident and lists of examples of candidate serious incidents. However, the BEA considers that the decision to open an investigation into an incident or a candidate serious incident must also take into account the constraints resulting from the collective workload of all the other on-going French investigations and foreign investigations in which the BEA is involved.

2.5 Organization

2.5.1 To identify the most valuable events from a safety perspective, the BEA set up an organizational framework capable of handling commercial air transportation incidents and identifying those which should be investigated. This framework is depicted in the **Figure 1** below.

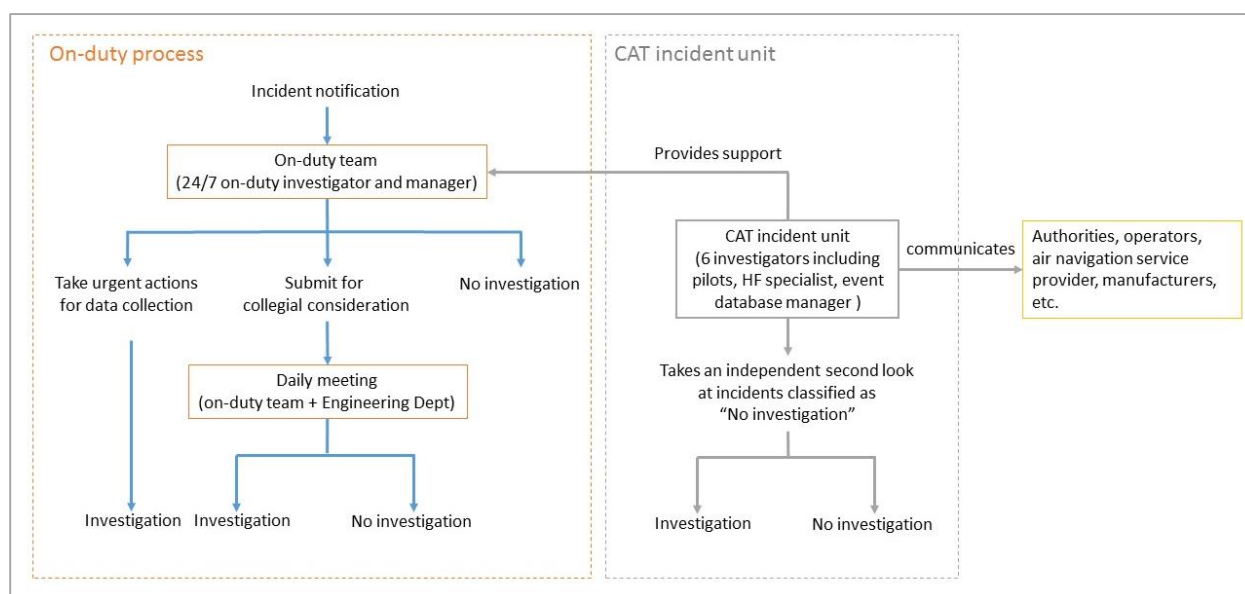


Figure 1 – BEA’s framework for the management of commercial air transport incident notifications

2.5.2 In the first instance, the commercial air transportation incidents, as for the other notifications, are handled by the duty investigator team (ie. on-duty operational manager + 24/7 on-duty investigator).

2.5.3 The 24/7 on-duty investigator can make his own assessment of all the incident notifications for which it seems self-evident that no investigation is needed. Conversely, he or she can choose to present in the daily meeting, those incidents that merit more collegial consideration. This meeting brings together the 24/7 on-duty investigator, his on-duty operational manager and a representative of the technical department. Every Monday, this meeting is also attended by the head of the Investigation department, members of the Commercial Transport Incidents unit (see below), as well as members of the team in charge of managing the BEA events database. This Monday meeting reviews the previous week’s notifications.

2.5.4 Without waiting for this daily meeting, the 24/7 on-duty investigator can consult with his on-duty operational manager, about the need to take without delay, all the justifiable data preservation measures relating to an "urgent" notification. The urgent notification procedures are set out in protocols that the BEA has established with the main French air operators and the French air navigation service provider. This concept is frequently discussed with these organisations when necessary.

2.5.5 In December 2019, the BEA set up a unit dedicated to commercial air transport incidents. Composed of six investigators, including two commercial transport pilots, this unit provides support at the request of the on-duty investigators. Above all, the unit is responsible for taking an independent second look at the notifications after they have been classified by the on-duty investigators. The investigators of this unit can request additional information from the notifiers and decide to open an investigation with a view to publishing a simplified report. This unit also positions itself as a key player in discussing aviation risks that may be associated with the notified incident and their management with the BEA's various contacts (authorities, air operators and other service providers, manufacturers).

2.6 Criteria for classifying and opening an investigation

2.6.1 Two aspects are taken into account in the classification process. Firstly, is the incident “serious” according to the ICAO Annex 13 definition? Secondly, is it relevant to investigate this incident?

2.6.2 To determine the seriousness of the incident, the BEA investigators’ reasoning is generally in line with the new criteria adopted in the amendment of Annex 13:

- a) Possibility of escalation into an accident; in particular, the BEA focuses on accident scenarios likely to result in serious or fatal injury.
- b) Number and robustness of the remaining safety barriers between the incident and the possible accident.

2.6.3 For certain areas of activity, the BEA has defined more specific criteria. This is the case, for example, for the risks of mid-air collisions, CFIT and runway incursions, for which criteria have been established in consultation with the main air navigation service provider.

2.6.4 Apart from the seriousness of the event, the BEA tries to evaluate the added value of the Annex 13 safety investigation compared to the risk management approaches implemented by the various organizations involved. There are no formally established criteria for this, but collegial reflections generally revolve around:

- a) The number of organizations involved and the complexity of seeing a common analysis emerge, for example in the presence of interests that are too divergent;
- b) Possible doubts about the maturity of an organization's management system or its momentary fragility in a particular context, notably suggested by the recurrence of worrying, similar events or phenomena and the absence of signs of serious consideration for the underlying aviation safety risks;
- c) The value of promoting certain lessons learned beyond the organizations involved.
- d) These reflections are not necessarily fully documented. They are based on the collective assessment of the investigators involved in the follow-up of the protocols established with the operators or of the members of the commercial transport incident unit.

2.6.5 Above all, the BEA's approach is intended to be pragmatic, adapted to the operational constraints of the on-duty investigator team and the level of information generally available at the time of notification. Moreover, in the absence of systematically exhaustive information being available, it is accepted that the reflection may be based on the BEA investigators' a priori knowledge of the normal working practices, even though they are not necessarily experts in the field concerned.

2.6.6 This does not mean, as mentioned above, that in certain cases the BEA will not request additional information in order to refine its assessment before deciding to open the investigation. This type of request generally follows a collective reflection during the daily review meeting. In addition, the BEA CAT incident unit takes an independent second look at the notifications after they have been classified by the duty investigators: it can request additional information from the notifiers and decide to open an investigation with a view to publishing a simplified report.

3. ACTION BY THE APAC-AIG

3.1 The APAC-AIG is invited to note the BEA's methods for the Risk-based Classification of Serious Incident, which are based on an assessment of the seriousness of the event and on the expected benefit of an investigation. This assessment can involve up to three parties within the BEA: on-duty investigators, participants in the daily review meeting and the commercial air transport incident unit.

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