



**EASA**  
European Aviation Safety Agency

# **“Inadequate Handling of Go-Around” IHGA**

## **Project status**

CASIA meeting – 09 May 2017

Alessandro Cometa

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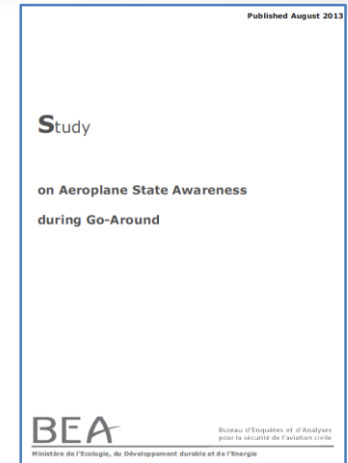
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# Background

## ➤ Recent existing studies on IHGA:

- Aircraft State Awareness during Go Around (ASAGA)
- Go-around Safety Forum held on 2013 by Flight Safety Foundation, European Regions Airline Association and EUROCONTROL.
- Studies from IASS-2016



## ➤ Term of Reference on IHGA project:

- The purpose of this project is to conduct a review of safety reports, existing studies related to the inadequate handling of a go-around, to assess mitigation actions already in place and the need of additional ones.

## ➤ Number of IHGA related events in the batch before starting the barrier description phase: **28 (2011-2016)**





# Organization of the study (update)

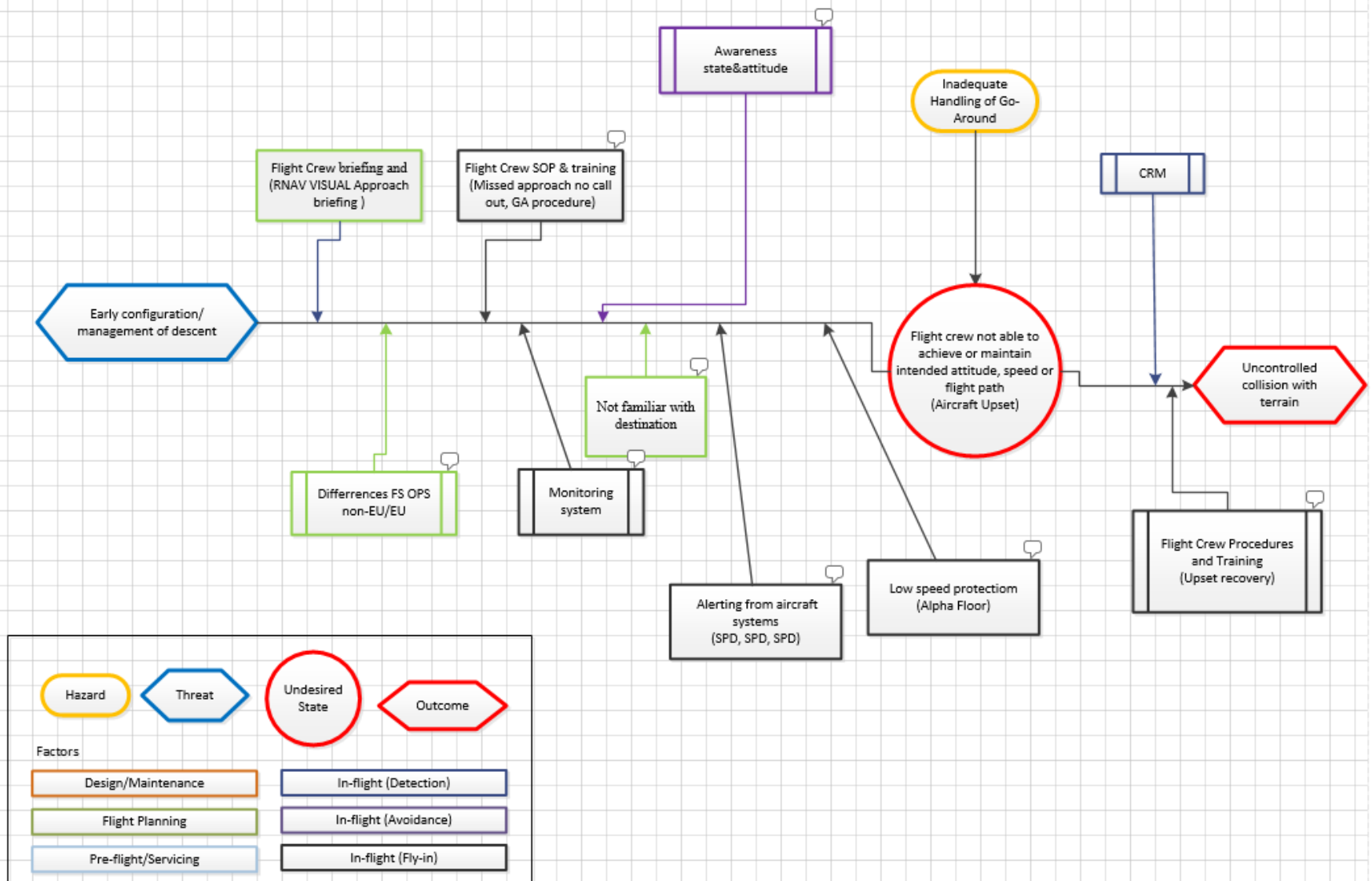
- Screening of DBs to identify the events to be analyzed.
- Preliminary analysis on the events to identify the main findings.

A/C Type	Registration	Date	Location	A/C damages (Y/N)	Injuries (Y/N)	Findings	High thrust	ATM involvement	FG/AP modes	Technical failures	Weather	Somatogravic illusion	Spatial disorientation	Horizontal Stabilizer findings	Low airspeed alerting	CRM and/or crew training	Fatigue
B737-500	VQ-BBN	17/11/2013	Kazan Airport (RUSSIA)	Y	Y	Impact after go-around. Crew failed to recognize AP had disconnected. Crash in a complex spatial upset.	Y	Y	Y	N	Y	Y	Y	N	N	Y	Y

- Description of each event through barrier model.
- Synthesis of all barrier models in one “master bow-tie” – final draft.
- Risk assessment (ref. to previous studies - ASAGA, Go-Around Safety Forum, CATCAG FW studies) – ongoing.
- Risk assessment (ref. to EASA ongoing actions – RMT, etc).
- Proposal of actions.

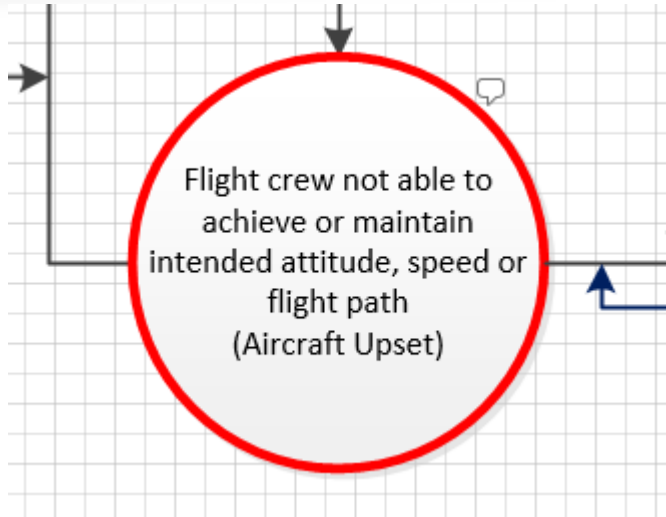


# Example of key factors description

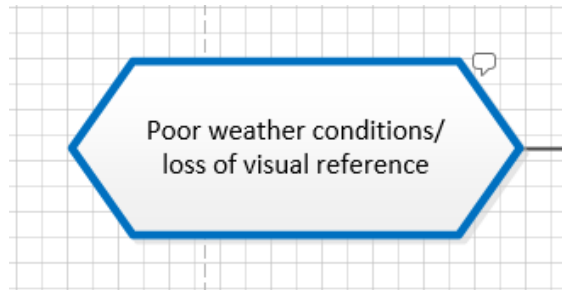




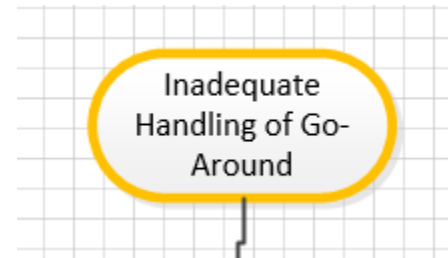
# Common characteristics



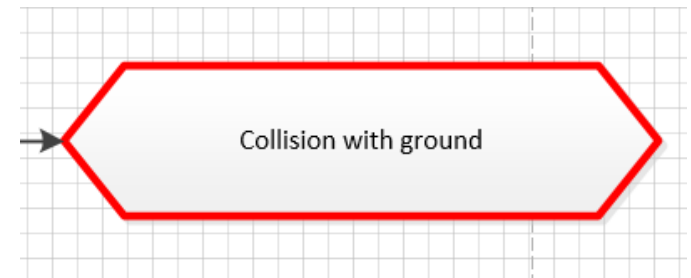
➤ Common Undesired state/event.



➤ Common Hazard.



➤ One only Threat.



➤ One only Outcome.



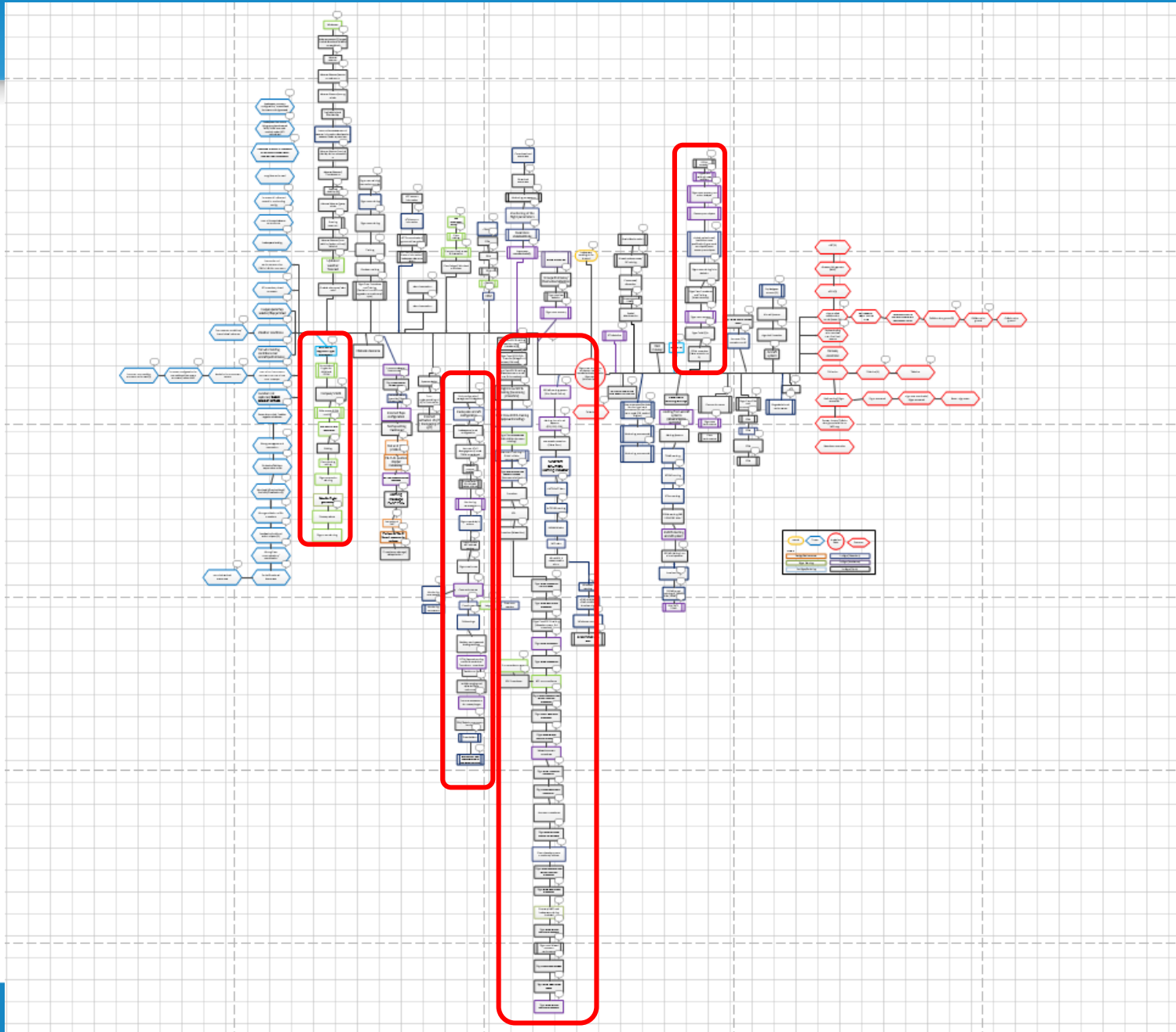
# Common characteristic

- Comments on each box in order to link it to the correspondent part of the final report and make easier the work of the experts.

The screenshot displays a software interface with a grid background. A horizontal axis at the top is labeled with values -550, -540, -530, and -520. A red circle containing the number '1' is positioned next to a box labeled 'Workload/Startle effect/ Partial SA/Focalisation'. Overlaid on the right side of the grid is a comment box titled 'VIROLES Leopold' with the date 'February 08, 2017'. The comment box contains two entries: '2.2.1 Taking over control of an aircraft at an altitude of perhaps less than 10 metres and at the same time starting a go around manoeuvre means a significant increase in a person's workload' and '2.2.2 It is therefore likely that the commander, despite the available heading information'. A 'Reply...' input field is located at the bottom of the comment box.



# Master bow-tie





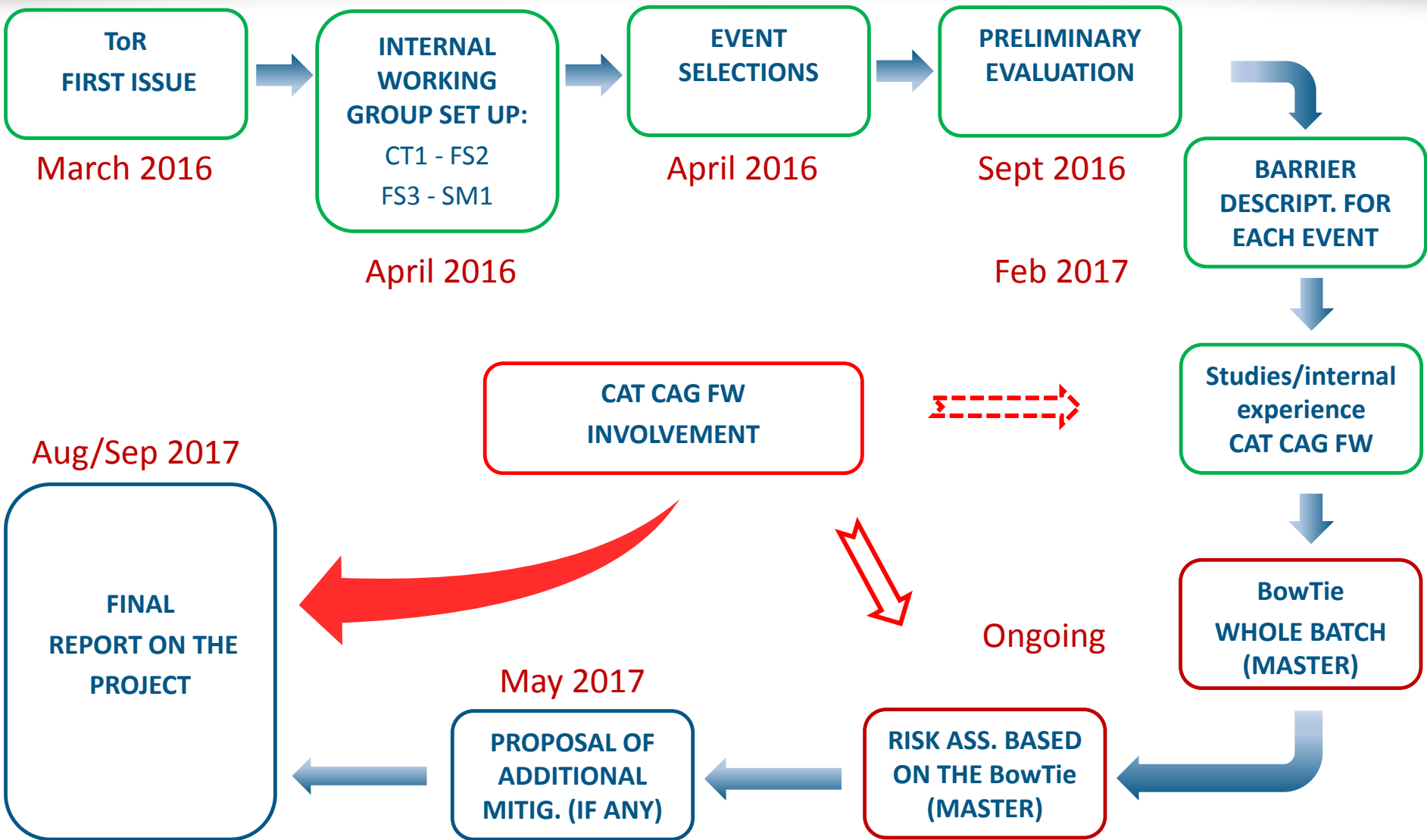
# First results from barrier description of the selected events

- During the analysis performed to draft the barrier description, one of the events was removed from the batch because not related to IHGA: **27 selected events in the final batch.**
- On **20 events the “adverse weather cond.”** played an active role in the identified root cause – about 75%
- The following key factors played an active role in the identified root cause of the events:
  - Flight crew training (on G/A and upset recovery) – about 70%
  - Flight crew procedures application (SOP and FCOM) – about 70%
  - CRM – about 50%
  - Crew Situational Awareness – about 25%
  - ATC communication/instruction, somatogravic illusion, crew stress/fatigue, crew pairing, system automation, about 10%





# SRP CAT FW - IHGA related project





# IHGA project – working group

## Internal stakeholders

- Experts from CT.1 (Certification)
- Experts from FS.2 (OPS)
- Experts from FS.3 (Crew training and licensing)
- Experts from SM.1 (Safety Investigation & Reporting System)

## External stakeholders

- Active participation of CAT CAG FW
  - Operators
  - Manufacturers
  - Associations



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**Thank you for your attention!**

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