

# Anatomy of incident investigation



# Annex 13



- Member States shall investigate all accidents **and serious incidents.**
- ‘Not to apportion blame or liability’ principle strongly embedded.
- Significance of article 5.12: protection of data.

# ICAO Definitions



## Incident

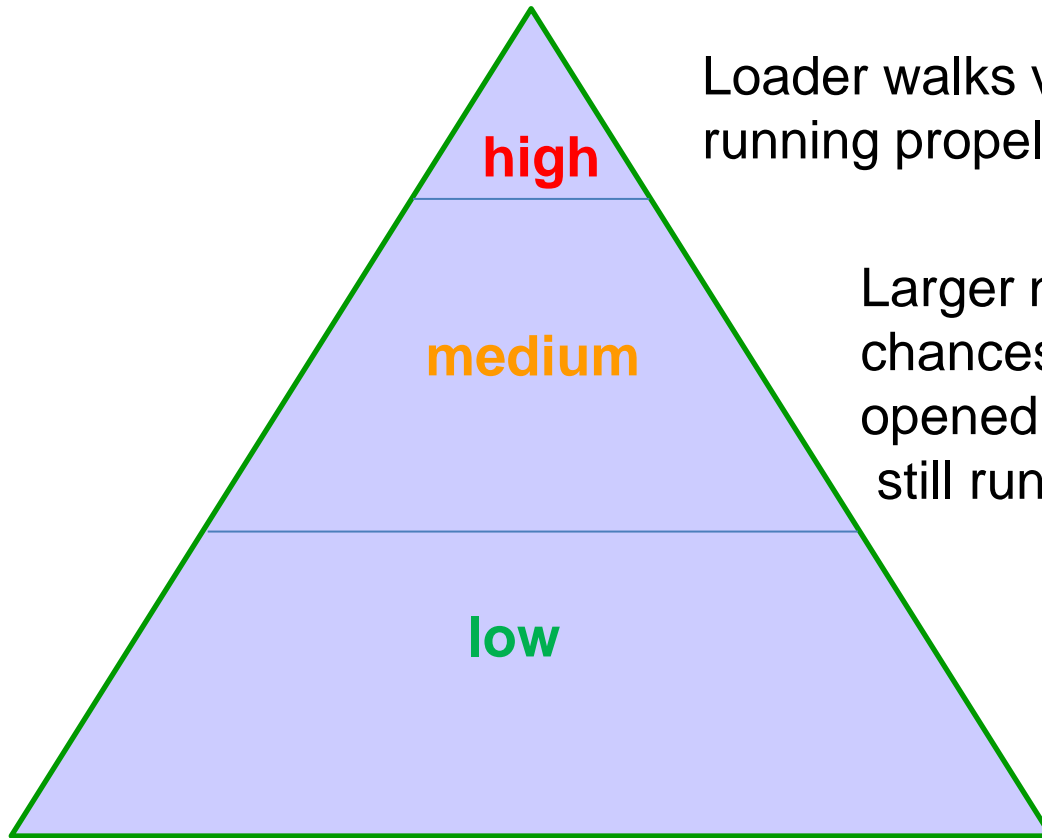
An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

## Serious Incident

An incident involving circumstances indicating that there was a high probability of an accident and associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down.

*Note: The difference between an accident and a serious incident lies only in the result.*

# Risk Assessment



Loader walks very close to a running propeller

Larger number of events increases chances that cargo doors are opened with engines still running

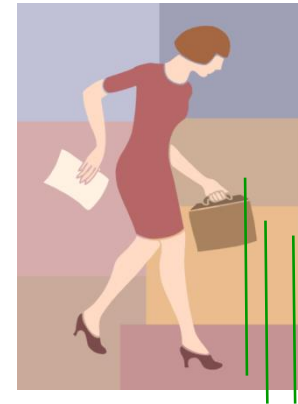
Cargo door opened before anti-collision light is turned off



'No' incident



Accident



Serious Incident

# CONCLUSIONS



- We need reliable and comprehensive monitoring of the number and frequency of events.
- We need accurate risk assessment.
- We should investigate an event based upon its risk or rate of occurrence regardless of any damage or injury.

# Accident v/s Incident Investigation



Accident investigation is normally a far more complex process that will essentially involve many more disciplines or areas of expertise than would normally be required for an incident investigation.

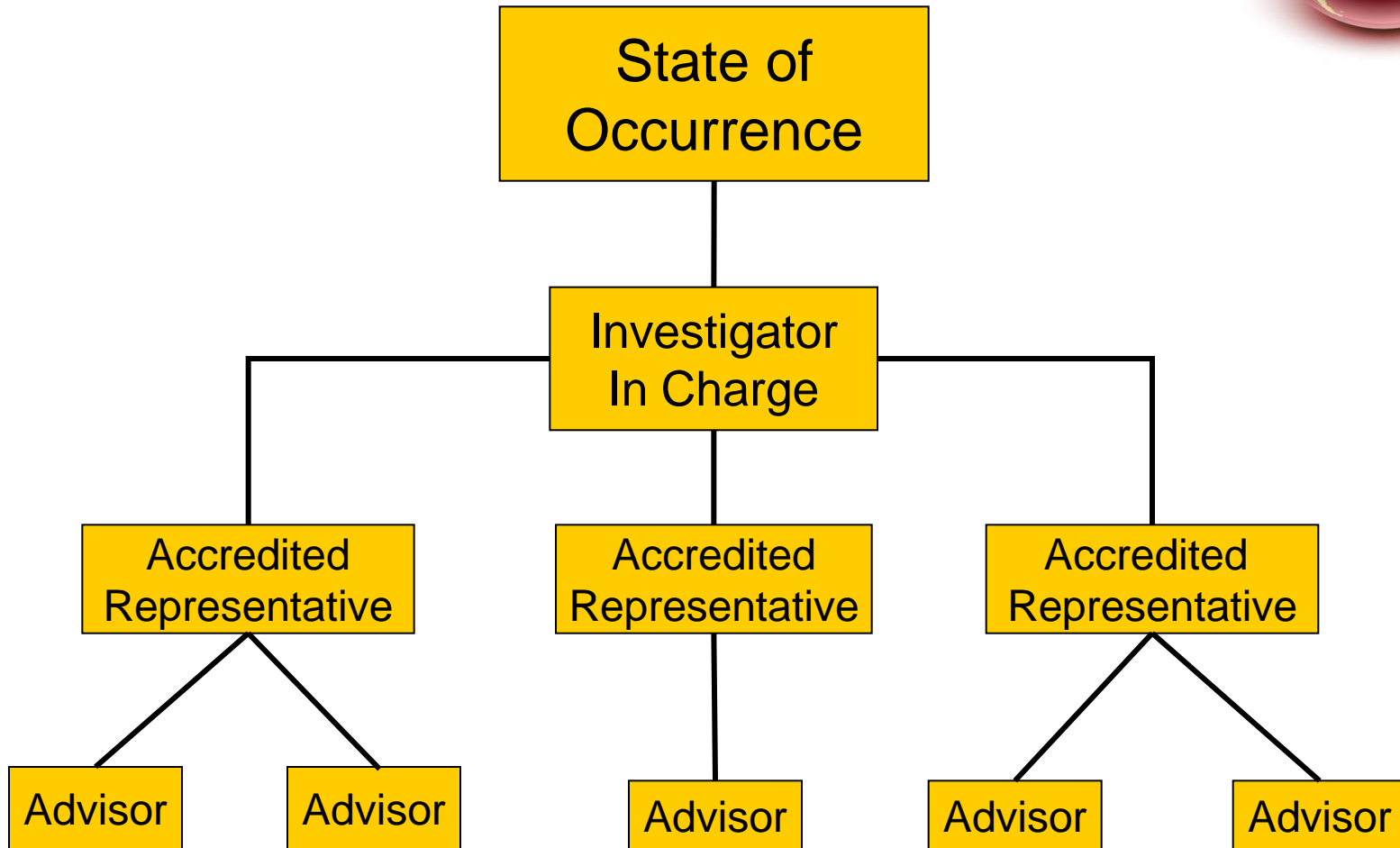
# Accident v/s Incident Investigation



- Media attention
- Judicial interests (Public Prosecutor, lawyers, insurance representatives etc.)
- Next of kin and family members
- Access to the accident scene
- Wreckage recovery
- Lost evidence
- (Un)availability of crew, parties involved

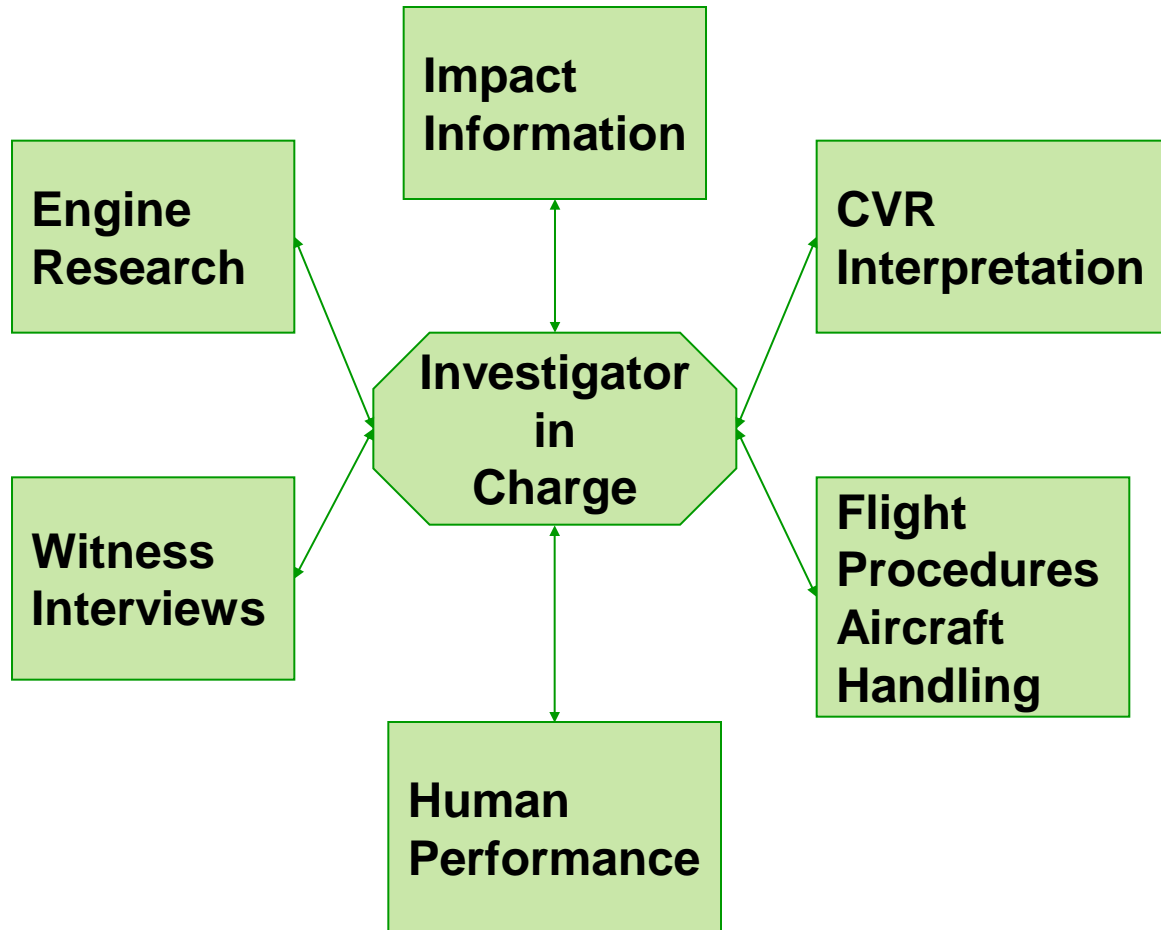


# Structure of the ICAO Investigation

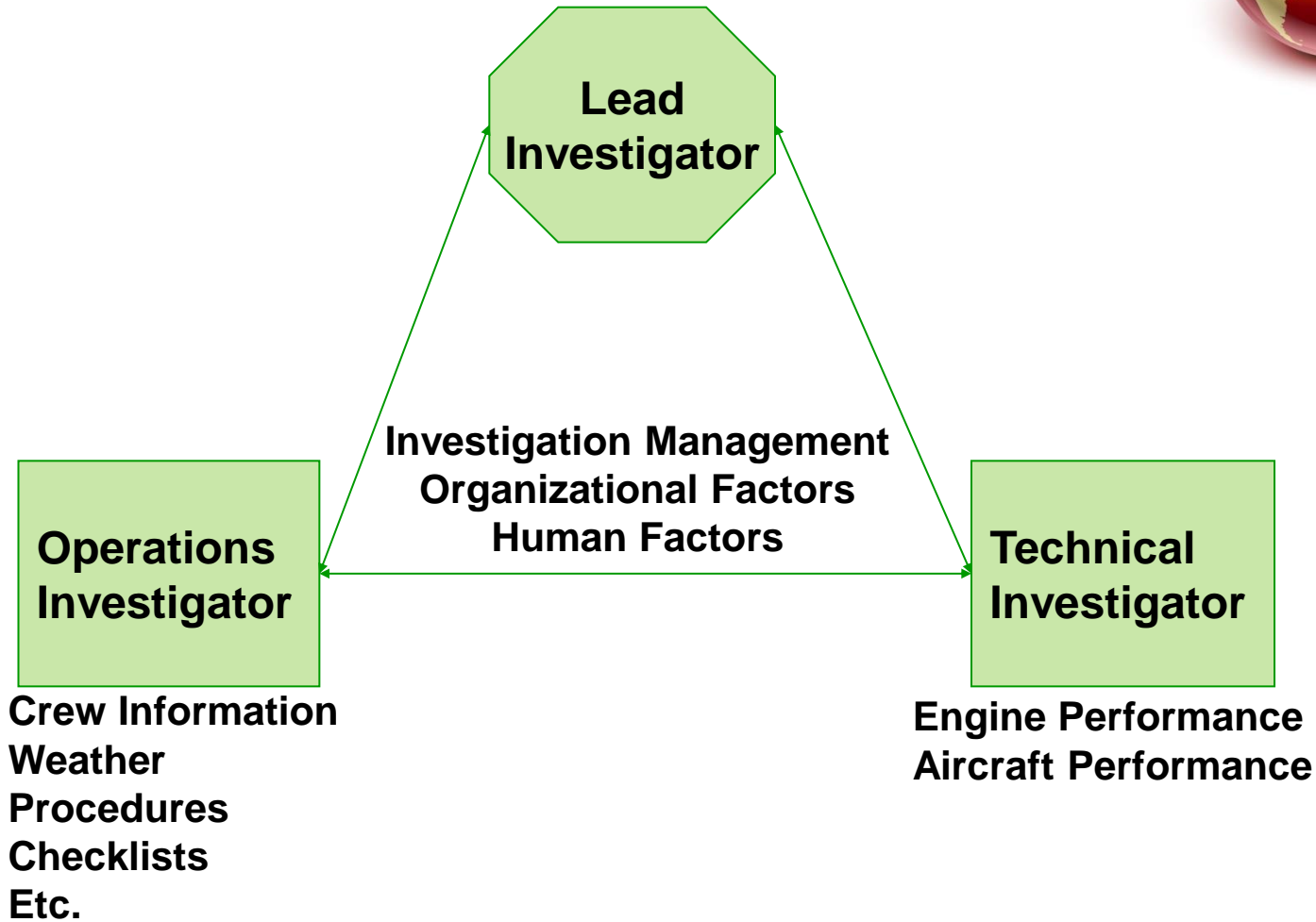


# Accident Investigation Structure

## party system



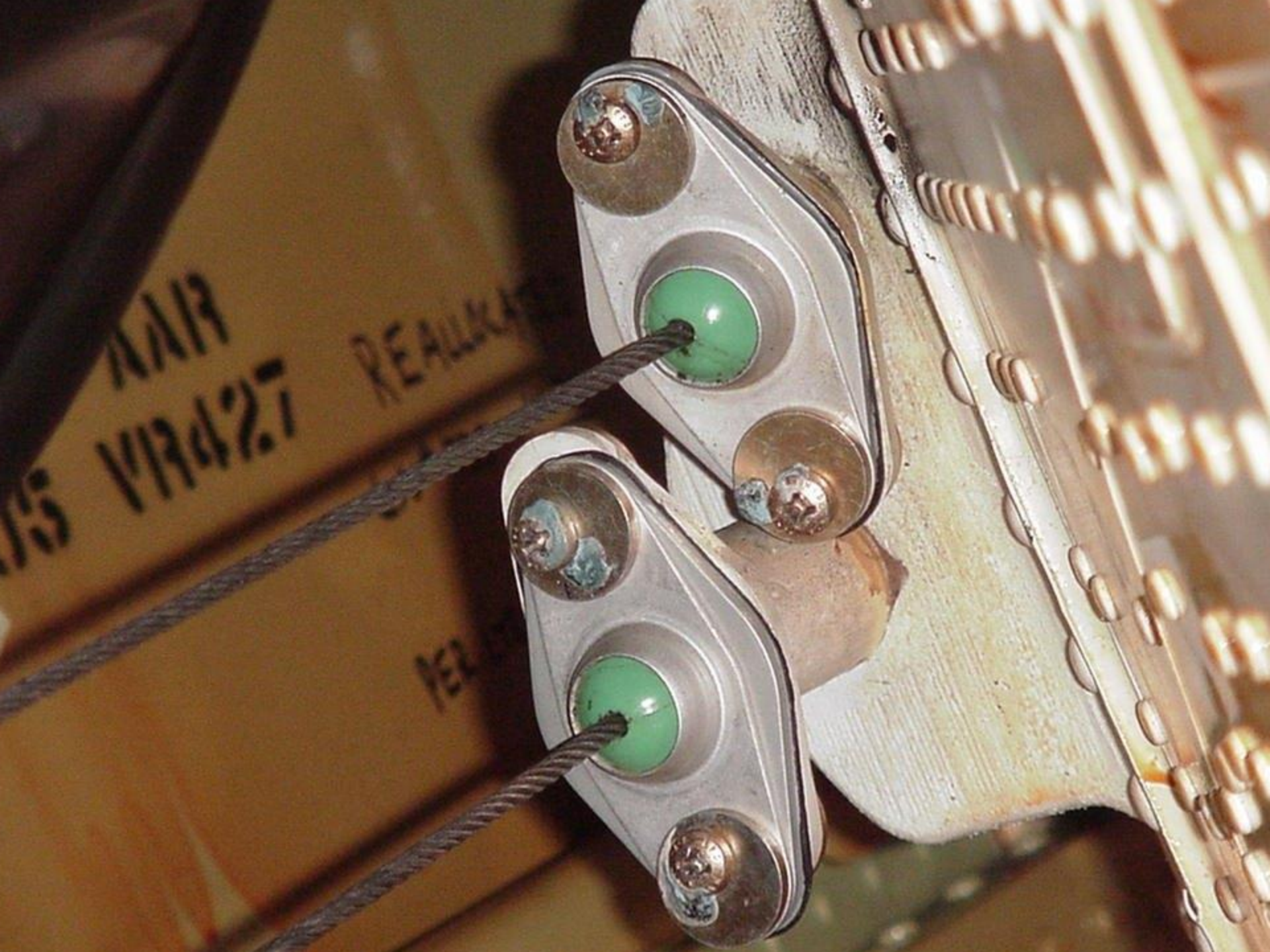
# Incident Investigation Structure



# Ingredients for Incident Investigators



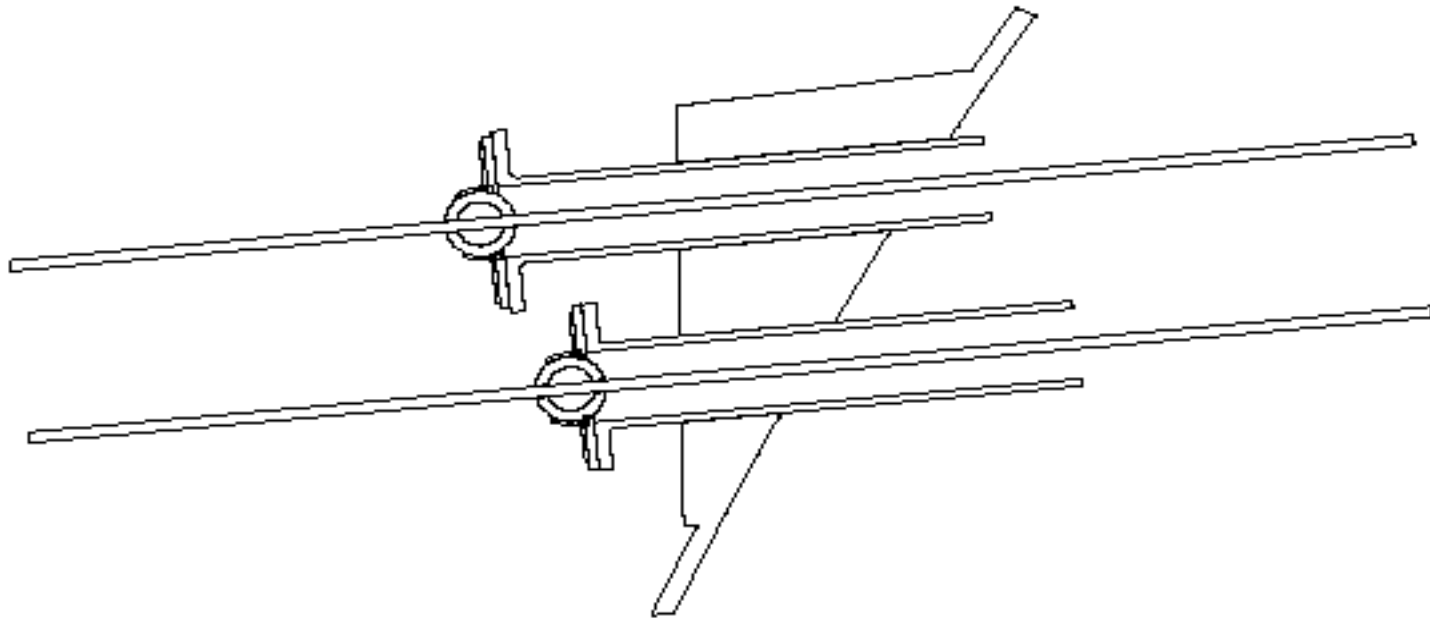
- Formal Accident or Incident Investigation Course
- Clear understanding of ICAO Annex 13
- Field experience
- Work experience with other investigators
- Reading other reports
- Researching appropriate web sites
- Relevant expertise eg: Operational / Maintenance
- Report writing skills
- Integrity

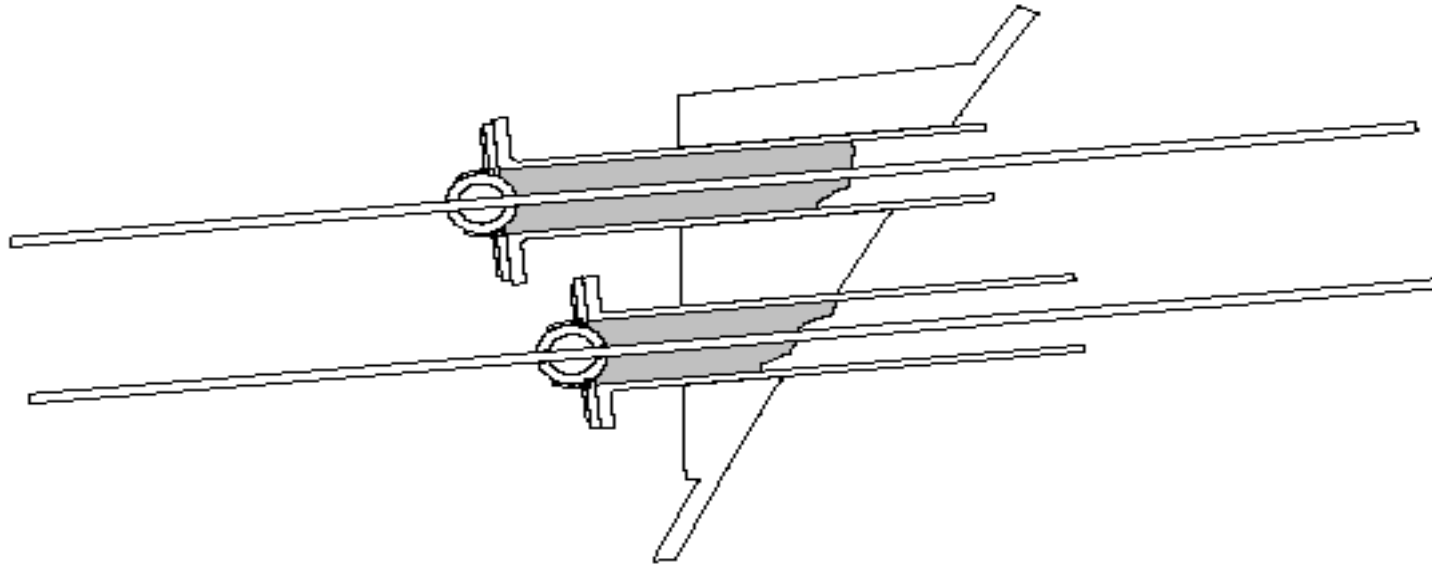


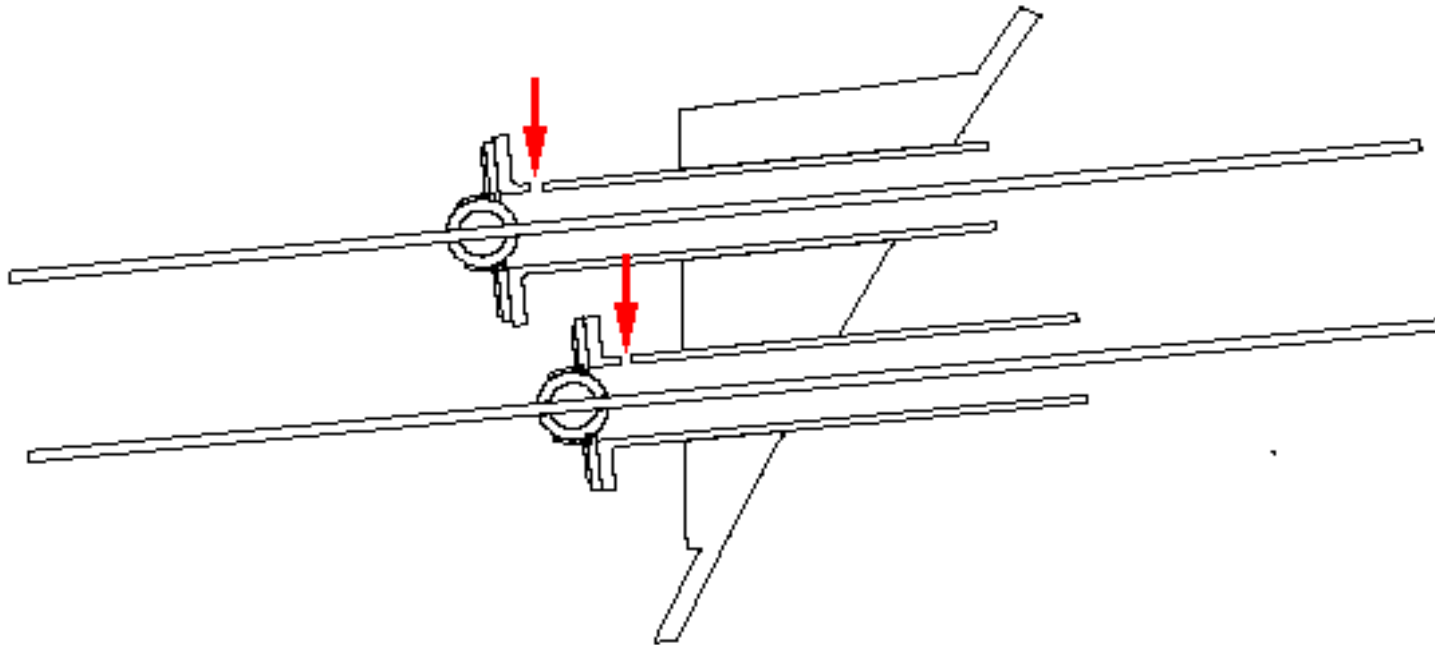
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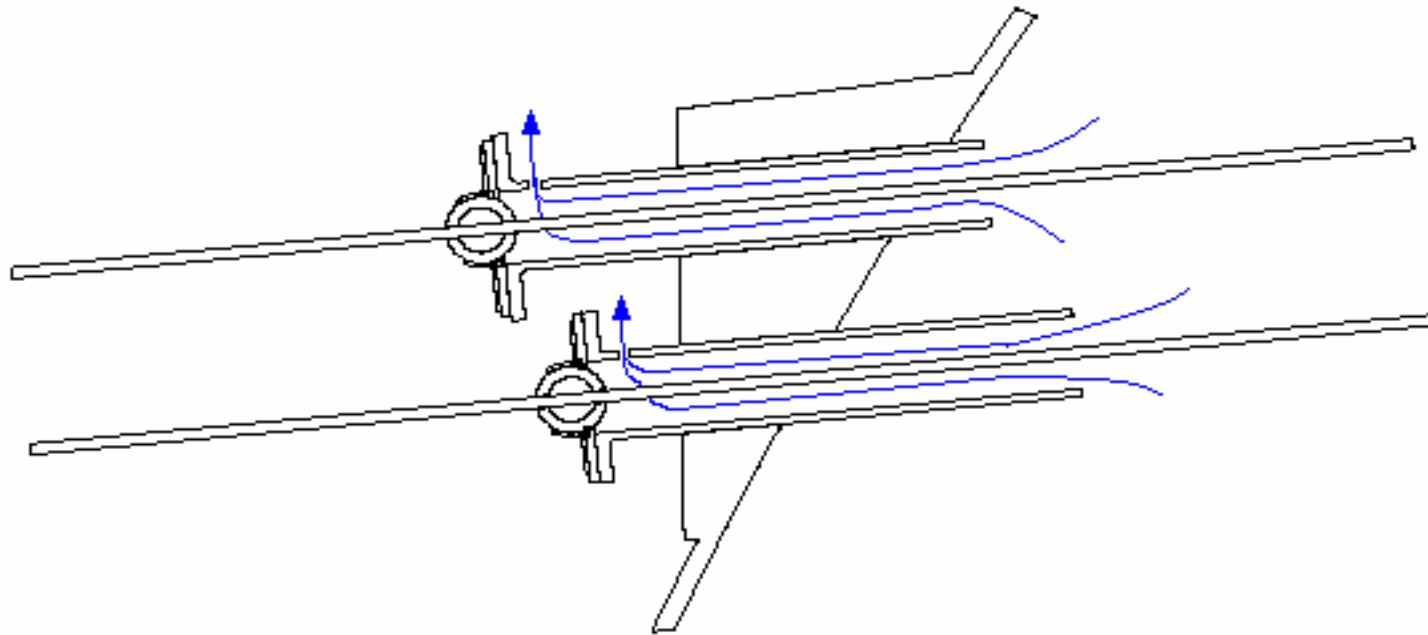
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# Investigation Set-Up



- Who is required
- What is required
- Data to be collected
- Persons, Parties to be interviewed
- Company / Union Protocol
- Estimated Duration
- Estimated Cost
- Communication within and outside the Company
- Immediate actions, Preliminary Recommendations, Corrective Measures

# Organizational Principles



## Investigations by a single investigator are not desirable

- Almost always some aspect of the incident will be beyond the knowledge, experience or expertise of a single person
- A single investigator may ignore what he or she does not understand or make assumptions that are not true
- A single investigator may not be able to gather all the facts. The quality of the analysis and conclusions will be determined by the range of facts that are collected

# Organizational Principles



**Investigations by a single investigator are not desirable**

- It is easier to maintain objectivity with more than one investigator
- With more investigators, a broader range of opinions and ideas will be at hand. This helps prevent omissions and enhances a multi-faceted approach.

# Code of Conduct



- Remain objective
- Do not commit to a point of view too early
- Avoid jumping to conclusions
- Do not be afraid to be wrong
- Always be open to accept facts that may contradict personal theories
- Admit any lack of knowledge
- Seek help and assistance when necessary
- Listen to other investigators
- Always keep the purpose of the investigation in mind

# Dealing with Dissenting Opinions



If it is not possible to resolve a conflict of opinion it is accepted practice to state both opinions in the report. It is also accepted to state the opinion that the investigators consider to be more credible, and the reasons why.

Dissenting opinions could exist between:

- Two or more parties involved in the incident
- Two or more parties who witnessed the incident
- One party and the investigation committee



