

Aircraft Accident Investigation Inspector

Department: Aircraft Accident Investigation

Employment Type: Full-Time

Scope

As a member of the Investigation Team, this role contributes to the Civil Aviation Authority's aviation safety and security outcomes by carrying out investigations on behalf of the Civil Aviation Affairs. This critical role within the state's aviation safety framework is entrusted with the authority to lead, oversee, and conduct investigations into aircraft accidents and serious incidents, ensuring compliance with international standards to prevent future occurrences. The position involves gathering evidence, analyzing causal factors, coordinating with international and national stakeholders, and issuing safety recommendations, upholding the principles of Annex 13 to the Chicago Convention, focusing solely on accident prevention without apportioning blame or liability.

Person specifications

Person specifications include the behaviors (the way we do things) of Aviation Regulation as a profession.

Descriptors & Indicators

- **Systems Thinking:** Identifies the components of complex systems, their interactions and the implications for system performance. This includes understanding the interdependencies within the national and international aviation system to enhance overall safety and prevention strategies, and comprehending how different components of accident causation (human, technical, organizational) interact and function together.
 - Understands participants' business context, drivers and operating model and the impact these have on the business' structure, and purpose.
 - Accurately maps the participants' business functions, technologies and processes and how these interact.
 - Draws on the expertise of colleagues to identify the probable causes of system underperformance or failure.
 - Systematically identifies any unintended or hidden impacts of business systems and process design.
 - When making assessments and recommendations, targets the factors which have the greatest and/or critical impacts on system underperformance or failure.
- **Problem Solving** (Problem solving, teamwork and focus on results): Fosters a collaborative approach to identify, understand, and fix the important problems that have a negative impact on the aviation system. This includes the strong ability to deconstruct complex accident scenarios, identify systemic vulnerabilities, and mandate effective, regulatory-compliant solutions to operators and stakeholders.
 - Follows through, ensuring that solutions continue to work and that stakeholders remain engaged in monitoring and implementing them.

- Systematically identifies their key stakeholders, engaging them in identifying and solving key problems.
- Works with stakeholders to agree evidence based analyses of probable causes, potential impacts and priorities.
- Facilitates the identification and development of creative and effective solutions to key problems.
- Recognizes and turns conflict into a positive, harnessing energy and ideas into effective problem solving activities.
- **Critical Thinking:** Arrives at balanced and evidence-based judgements on complex regulatory issues through the disciplined use of analytical and evaluative techniques. This involves analyzing information critically to achieve consistent and desirable outcomes, ensuring all investigative activities maintain the highest standards of regulatory compliance, objectivity, and safety enhancement.
 - Carefully considers initial submissions and/or evidence, using disciplined enquiry to identify key risks.
 - Uses appropriate judgement criteria or rules around which to structure their enquiry.
 - Gathers evidence against judgement criteria or rules consistently and fairly.
 - Reconsiders their initial hypotheses when faced with new evidence or alternative interpretations of evidence.
- **Communication and Engagement:** Creates an effective interface between internal and external stakeholders to ensure that participants engage with, understand and act in accordance with safe aviation requirements. This requires exceptional diplomatic skills in negotiating, persuading, and building consensus among diverse and often powerful stakeholder groups to achieve safety objectives.
 - Actively reaches out and cultivates their stakeholders and participants to create a community of ideas and practice.
 - Establishes two-way conversations with the key individuals within participant organisations.
 - Understands their audience, its needs and expectations, crafts the safety message to account for these.
 - Presents a consistent aviation safety message, creating clarity and drawing out key insights to deepen participants' understanding.
 - Accurately identifies sources of resistance to aviation safety messages, moves quickly to address these.
- **Influencing** (Assertiveness, persuasion and determination): Tenaciously promotes a compelling aviation safety case, ensuring that participants understand how to behave in a safe way within the aviation system. This includes the ability to exercise state authority with confidence, providing clear, definitive, and compliant guidance during high-pressure investigations and coordination efforts.
 - Scans the environment for key ideas, information and messages to inform their ideas and influencing strategies.
 - Identifies key decision-takers and influencers and builds a relationship of trust with them.
 - Develops their arguments logically, identifies points of agreement and uses these to build towards consensus.

- Identifies others' underlying needs, motivations and unstated concerns and adjusts their communication accordingly.
- **Integrity and Impartiality:** Demonstrates integrity, transparency, and fairness in all investigative activities, guided by strong ethics and values. High ethical standards and impartiality are essential for a role vested with significant state authority, ensuring all actions enhance the credibility and mission of the Regulatory Authority while protecting sensitive investigation data.

Core Responsibilities

The Investigation team is expected to work collectively and collaboratively as part of a multi-disciplinary team that conducts investigations into aviation safety and security incidents and accidents in the state civil aviation sector.

All Investigators, Aircraft Accident and Incident Investigation Inspector:

- Carry out investigations ensuring appropriate standards and procedures are applied that meet evidential requirements and will withstand public scrutiny. This includes leading or participating in on-site investigations, encompassing site security, wreckage examination, witness interviews, flight data recorder (FDR) and cockpit voice recorder (CVR) analysis, autopsies, and toxicological testing.
- Develop and implement investigation plans, including identifying appropriate technical expertise and other resources required for the investigation.
- Manage CAA investigations as assigned, with respect to reported incidents or accidents, as either the Lead Investigator or assisting the Lead Investigator.
- Investigate matters to a level that will identify and inform appropriate action in accordance with CAA regulatory decision-making policy. Analyze human factors, operational procedures, aircraft systems, and environmental contributors to determine causes and contributing factors, using established methodologies.
- Identify safety deficiencies and formulate risk-based safety recommendations to prevent recurrence, ensuring investigations remain independent and objective.
- Manage relationships and coordinate the resourcing of investigations with the team managers and staff, including the provision of technical expertise both internally and externally.
- Engage and work positively, collaboratively and cooperatively within your multi-disciplinary team (and across the Authority as required), in order to achieve the primary objective of attaining team goals and growth.
- Participate in a multi-agency approach to investigations when required, including liaising with personnel from emergency services (e.g., Police, Fire Service etc...), aircraft owners and operators, pathologists, funeral directors, and coordinating the CAA's response with other organisations (e.g., Police, Emergency services, etc..).
- Manage the notification process for accidents and serious incidents, including immediate alerts to ICAO, the State of Registry, State of the Operator, State of Design, State of Manufacture, and other involved parties as per Annex 13 requirements.
- Coordinate multi-state participation in investigations, including delegation of authority when necessary, and ensure protection of evidence, wreckage, and records from unauthorized

interference. Facilitate access for accredited representatives and advisers from other states or organizations, while maintaining confidentiality of sensitive information.

- Prepare and issue Preliminary Reports, Interim Statements, and Final Reports in the format specified in Annex 13, including factual information, analysis, findings, causes, and safety recommendations.
- Oversee the implementation of safety recommendations by relevant entities and track their effectiveness through the State Safety Programme (SSP). Contribute to the Accident/Incident Data Reporting (ADREP) system and share lessons learned with ICAO and regional safety groups.
- Serve as the primary CAA representative in joint investigation committees and international forums. Foster collaboration with entities such as air traffic services, manufacturers, operators, law enforcement, and judicial authorities to ensure seamless investigation processes.
- Act as a liaison for assistance to aircraft accident victims and their families, aligning with ICAO Doc 9998 policies.
- Develop, review, and amend national regulations, advisory circulars, and guidance material related to aircraft accident and incident investigation, ensuring alignment with ICAO Annex 13, ICAO Doc 9756, ICAO Doc 9962, and national aviation laws.
- Provide authoritative technical interpretation of investigation-related SARPs and regulatory requirements for operators, manufacturers, and other stakeholders.
- Conduct systematic oversight, audits, and reviews of investigation processes to verify compliance with standards for notification, evidence protection, and reporting.
- Identify possible breaches of rules and advising these in a timely fashion to the appropriate units/groups of the CAA for their action.
- Contribute to, maintain knowledge of, and practice Health and Safety processes and initiatives.
- Build and maintain professional and technical integrity and credibility both within the CAA and within industry.

Aircraft Accident and Incident Investigation Inspector are also expected to undertake some of the following additional functions in accordance with their skills and experience:

- Undertake thematic and systemic investigations.
- Manage occupational health and safety issues/matters with respect to the investigation team and other personnel/persons present at an investigation site.
- Physical site investigation and inspection, site, security and personnel management.
- Hardware evidence gathering and data logging for removal from an investigation site for further analysis.
- Collaborate and work with our internal legal team, and external solicitors as appropriate, regarding any prosecutions or other matters involving the court.
- Develop and deliver training for CAA staff, investigators, and industry stakeholders on investigation techniques, SARPs from Annex 13, and best practices.
- Participate in or lead post-investigation debriefs and simulations to enhance national investigation capabilities.

Outcomes

- The investigation team works collegially, collaboratively and effectively as part of a multi-disciplinary team.
- Industry safety performance is enhanced through the identification of any safety or security risk that if addressed will contribute towards ensuring or improving aviation safety within the state aviation system.
- Investigations are effectively and professionally conducted to the relevant international and national standards (e.g., ICAO Annex 13) and in accordance with the principles of procedural fairness and natural justice.
- Objective and robust investigation reports are produced that establish and document relevant facts, reach appropriate conclusions based on the available evidence, and recommend a suitable response to the operational unit responsible for determining what, if any, action should be taken in the public interest to enforce the applicable legislation.
- The Chief Investigations is fully informed of important safety information and risks identified during investigations.
- All stakeholders and/or participants (external and internal) receive accurate, impartial advice and courteous, effective service while maintaining or enhancing the reputation and integrity of the Authority.
- Initiatives that help prevent recurrences of safety failures are identified and advised to operational units.
- Appropriate and timely sharing of key safety information and messages both internally and externally is ensured.

Skills and Experience to be Successful

The Investigation Inspector must possess a high level of emotional intelligence and the ability to manage and cope with very challenging and emotionally difficult situations. In this role an inspector may be exposed to graphic accident scenes, deceased bodies and imagery associated with accident investigation.

All Aircraft Accident and Incident Investigation Inspector are expected to have:

- A relevant tertiary qualification or equivalent experience, such as a Bachelor's degree in Aviation, Aeronautical Engineering, Accident Investigation, Forensic Science, or a related field.
- Investigation training and experience in a relevant field (e.g. aviation safety, health and safety, regulatory and compliance), with a minimum of 7 years of experience, including at least 5 years directly in aircraft accident/incident investigation, aviation safety oversight, or related regulatory roles.
- Expert knowledge of the Civil Aviation legislative and regulatory framework, complemented by expert knowledge of ICAO Annex 13 (Aircraft Accident and Incident Investigation SARPs), ICAO Doc 9756 (Manual of Aircraft Accident and Incident Investigation), ICAO Doc 9962 (Manual on Accident and Incident Investigation Policies and Procedures), and ICAO Doc 9859 (Safety Management Manual).

- A relevant aviation document (e.g. pilot licence PPL, CPL, ATPL, Aircraft Maintenance Engineer Licence AMEL, or air traffic controller licence) is an advantage.
- The ability to lead investigative teams; work un-supervised, whilst meeting the professional standards and requirements of investigations.
- Practical experience conducting complex investigations with a variety of outcomes, including proven skills in conducting on-site investigations, evidence analysis, and causal factor determination.
- A high attention to detail with the ability to interpret technical and legal information.
- The ability to effectively communicate, both verbally and in written investigation reports, and engage with a wide range of internal and external parties with integrity and discretion.
- Responsible, highly motivated and able to work with minimal supervision and the flexibility to handle change and re-prioritize work if necessary to meet deadlines.
- Excellent analytical and problem-solving skills, including the ability to build professional and technical credibility with internal and external stakeholders in a confident and positive manner.
- A basic understanding of specialist investigation areas outside their core area of expertise sufficient to support multidisciplinary investigations.
- Being medically and physically fit and healthy as work can sometimes be hazardous and may include being winched to a site by helicopter, alpine or remote locations, walking and extreme climatic conditions.
- Demonstrated experience collaborating with international and multi-agency teams during high-stakes investigations.
- Applies and continuously improves technical knowledge and skills related to evolving investigation methodologies, emerging technologies, and international best practices.

Preferred Qualifications:

- Advanced certification such as ICAO Aircraft Accident Investigation Course, NTSB or equivalent investigator training, or Certified Safety Professional (CSP).
- Former experience in air accident investigation boards, aviation operations, or forensic analysis is highly desirable.
- Experience working with or for an ICAO USOAP audit team or another national aviation authority.

Aircraft Accident and Incident Investigation Inspector is expected to have one or more of the following additional areas of specialization depending on their skills and experience:

- Air Traffic Systems
- Flight operations for all aircraft operation types
- Airworthiness/engineering for small aircraft through to complex and heavy aircraft
- Airworthiness/engineering for rotary winged aircraft
- Aviation Psychology and human factors
- Systemic and thematic investigations
- Regulatory compliance and enforcement
- Airfield layout and operation
- Other expertise as required for evolving investigation needs