

Certification Engineer

This position description is designed to give an overview of the type of work and performance required for this role and may include other duties as required.

Who we are as an organisation and what we are about

Everything we do is related to our **vision and purpose** – *a safe and secure aviation system - so people are safe and feel safe, when they fly.*

We will have the following **impacts**:

Being safe – fewer people die or sustain injury while participating in the aviation system.

Feeling safe – people’s choice to participate in the aviation system is not limited by perception of unsafe practices.

Our **pathways** to achieve this are:

Leadership and influence – through regulatory leadership we influence a safe and secure civil aviation system for New Zealand.

Active regulatory stewardship – we monitor and care for the civil aviation regulatory system through our policy and operational activities.

Professional regulatory practice – we act to identify risk and reduce it through intelligence-led intervention.

Scope

Reports to: Team Leader Product Certification

Group: Aviation Safety

Location: National Office, Wellington

Role Overview

Responsible for working either individually or as part of a team assessing new aircraft types, products, parts and appliances to ensure they meet the requirements for certification, completing all associated activity necessary to gain assurance that the product meets the required standards detailed in the relevant Civil Aviation Rules, and to make and give effect to product certification decisions.

Will have specialist areas of expertise associated with aircraft and product certification.

Person specifications

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

Descriptors

Indicators

Systems Thinking

- Understands participants’ business context, drivers and operating model and the impact these have on the business’

Identifies the components of complex systems, their interactions and the implications for system performance

- 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

- 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
- Recognises 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

- 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

- 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

- Scans the environment for key ideas, information and messages to inform their ideas and influencing strategies

determination)

Tenaciously promotes a compelling aviation safety case, ensuring that participants understand how to behave in a safe way within the aviation system

- 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.

Qualification Requirements

- Bachelor of Engineering Degree or equivalent in an aeronautical or mechanical discipline, with a minimum of eight years' of commercial experience in related engineering fields.
- Specialist aircraft airworthiness and design qualifications and experience.

Core Responsibilities

- Conduct audits and inspections, certification and investigations of aviation participants (Air Operator, Design and Manufacturing organisations) as required.
- Carries out and documents assessments for the issue, renewal and amendment of aviation documents and approvals in accordance with the appropriate entry standards and requirements.
- Plan and conduct aircraft type acceptance/certification activities for issuing a Type Acceptance Certificate or a Type Certificate.
- Plan and conduct compliance assessment activities of products, appliances and components as required.
- Raises and submits reports and makes recommendations for assessment of the airworthiness requirements to support operational approvals, when required.
- Carries out engineering investigations and makes recommendations on airworthiness issues including input to ICAO and international agreements.
- Provides input for the issue of external delegations for design and the performance of delegation holders.
- Exercises delegated powers and functions legitimately.
- Provides specialist advice on aircraft certification and other related specialist areas to other Units in the CAA.
- Works on other tasks and projects as may be required from time to time to assist the achievements of CAA vision, mission, business, group, unit and team goals.
- Provides feedback into the safety certification entry and exit processes.
- Work on tasks and projects with other groups/units across the Authority, and other regulatory agencies, as directed by the team leader or manager.
- Support the wider Aviation Safety Group and CAA outputs as required.
- Carry out work and conduct interpersonal relationships in a way that supports the Authority's commitment to the principles of Diversity and Inclusion and the Treaty of Waitangi.

- Contribute to, maintain knowledge of, and practices Health and Safety processes and initiatives.

Outcomes

- The Authority is recognised by stakeholders, industry, and the public as an operationally proactive, credible, and effective best-practice regulator
- All stakeholders (external and internal) receive accurate, impartial advice and courteous, effective service that meets their needs while maintaining or enhancing the reputation and integrity of the Authority.
- The safety objectives and statutory responsibilities associated with this position are applied correctly.
- Informed, analysis-led and evidence based decisions are made within the relevant sectors
- The Authority is a safe workplace and meets legislative standards.

Skills and Experience to be Successful

- An awareness of requirements covering Civil Aviation Regulations Rules Part 21, 39, 43, 47, 91, 146 and Part 148 and/or equivalent foreign regulations.
- An understanding of the compliance requirements for aircraft and product design approvals.
- An understanding of the requirements for aircraft type certificates, type acceptance certificates and supplemental type certificates.
- A sound understanding of the NZ Civil Aviation legislative and regulatory framework and other statutory requirements.
- An ability to build professional and technical credibility based on experience, qualifications and knowledge – both within the CAA and industry; an ability to foster respectful relationships.
- Well-developed interpersonal skills, including the ability to effectively communicate with a wide range of internal and external customers in a confident and positive manner.
- An understanding of the design and manufacturing procedures and administrative requirements for airworthiness certification covering quality assurance, technical services, planning, production, maintenance and inventory control. Understands the management functions in co-coordinating these functions.
- Proficiency in Microsoft Office suite.
- Proven ability to work with minimal supervision and possessing the resilience to handle change and re-prioritise work.
- An ability to travel both domestically and international if required.
- Bachelor of Engineering Degree or equivalent, with a minimum of eight years' of commercial experience in related engineering fields.
- Specialist aircraft airworthiness and design qualifications and experience.
- Experience in conducting audits and investigations that involve safety, quality or risk based management systems.

- Experience in applying safety management principals.
 - NZ registered quality systems auditor or have experience with aviation management systems (SMS, quality, risk management).
 - Experience in compliance verification of aircraft related activities, safety management systems, quality systems and risk management systems.
 - Experience in conformity inspection of aircraft and aircraft parts.
 - An understanding of ICAO/international standards and recommended practices for civil aviation.
 - Formal qualification along with specialist training and experience in fatigue and damage tolerance analysis; additive manufacturing; aircraft maintenance and reliability programs and system safety analysis.
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