

Position Description

Data 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

The Civil Aviation Authority of New Zealand is the country's aviation safety and security regulator. We are a Public Service Crown entity responsible through our Board to the Minister of Transport. We regulate a wide range of aviation activities, from commercial airlines to private pilots, ensuring that all aspects of the industry meet the highest standards of safety and security. Our important work not only saves lives but also facilitates travel, recreation, commerce, and protects the environment. By ensuring a safe and secure aviation system, we provide confidence and safeguard the reputation of New Zealand, benefiting our country as a whole.

Our Vision and Purpose

Everything we do is related towards the achievement of 'a safe and secure aviation system – so people are safe, and feel safe when they fly'.

Our Pathways

We have three pathways that lead us to delivering our vision and purpose:

1. Leadership and Influence

Through regulatory leadership we influence a safe and secure civil aviation system for New Zealand.

2. Active Regulatory Stewardship

We monitor and care for the civil aviation regulatory system through our policy and operational responsibilities.

3. Professional Regulatory Practice

We act to identify risk and reduce it through intelligence-led intervention.

Our Values

Our organisation's Values support how we work to keep New Zealand skies safe and secure.

Collaboration - *Me mahi tahi*

We work together to achieve and succeed

Transparency - *Me mahi pono*

We are open and honest communicators

Integrity - *Me mahi tika*

We do the right thing

Respect - *Me manaaki*

We treat all people with consideration and kindness

Professionalism - *Kia tu rangatira ai*

We act in a way that brings credit to ourselves and our organisation



These feathers symbolise our Values, which are inspired by the sacred huia bird – a revered symbol of friendship, respect, leadership and mana.

Each feather in the Values has a different hue to reflect different aspects of the diversity, leadership, talent and experience our people bring to their work every day.

Our Values are us – we are many cultures, languages, genders, unique personalities and perspectives working together to achieve our Vision and Purpose.



Role Purpose

The Data Engineer is responsible for building and maintaining the data service, enabling data management, data analysis and assurance of data reliability and quality.

They gather data requirements ensuring the data infrastructure exists to support insights generation.

This includes working with other Digital and Data specialists within CAA and externally with stakeholders and service providers to enable data sharing and alignment with government requirements.

Key Dimensions

Group:	Corporate Services	
Team:	Digital Delivery and Support	
Reports to:	Team Leader, Software and Data Engineering	
Location:	Wellington	
Salary Band:	Band 17	
Financial:	N/A	Delegation Level = Tier 5
People:	Direct Reports = N/A	Delegation Level = Tier 5
Key Relationships:	Internal: <ul style="list-style-type: none"> Digital teams Corporate Services group Analysts across CAA Business and system owners 	External: <ul style="list-style-type: none"> External stakeholders and service providers to enable data sharing Government functional leads
Essential requirement/s:		

Shared Accountabilities

- We work professionally, aligned with our Values, Code of Conduct and guiding CAA policies.
- We foster a safe, inclusive culture by respecting and embracing the diverse perspectives, experiences, and backgrounds of all.
- We ensure our work is aligned to our strategy, vision and purpose in our approach to delivering intelligence led, risk-based safety and security outcomes.
- We carry out work and conduct our relationships in a way that supports the CAA's commitment to the Te Tiriti o Waitangi.
- We work together to create an environment that keeps ourselves and others safe by following the responsibilities laid out in our people policies and our Health, Safety and Wellbeing Commitment statement.



Key Accountabilities

- Designs, implements, and maintains data engineering solutions to acquire and prepare data.
- Develop and test architectures that enable data extraction and transformation for predictive or prescriptive modelling.
- Creates and maintains data pipelines to connect data within and between data stores, applications and organisations.
- Carries out complex data quality checking and remediation.
- Implements database designs to support transactional data requirements for performance and availability.
- Implements data warehouse designs that support demands for business intelligence and data analytics.
- Develops and maintains specialist knowledge of database and data warehouse concepts, design principles, architectures, software and facilities.
- Applies standard data modelling and design techniques based upon a detailed understanding of requirements.
- Establishes, modifies and maintains data structures and associated components.
- Devises and implements master data management processes for specific subsets of data.
- Provides advice on the transformation of data from one format/medium to another. Maintains and implements information handling procedures.
- Enables the availability, integrity and searchability of information through the application of formal data and metadata structures and protection measures.
- Implements security measures to protect sensitive data and ensure compliance with data privacy regulations.
- Build data management solutions, developing and maintaining datasets, and improving data quality and efficiency.
- Work closely with colleagues across CAA, including digital and data specialists to ensure efficient data collection, storage, processing, and analysis.
- Ensure compliance with data privacy regulations and government advice and requirements.

The Authority's Smart Competencies

Get Smart – Knowledge & Context: Level 2 ■■■

Understands the role of the CAA within the aviation sector, and has a holistic understanding of the regulatory environment, the structure and interrelated operating practices of the CAA. Follows the guidance and processes expected of all CAA employees as a modern, adaptive regulator, set out in policies, legislation, aviation rules and other internal documents.

Think Smart – Sound Judgement: Level 2 ■■■

Makes appropriate and transparent decisions by analysing relevant information, takes into consideration different points of view, demonstrating the ability to make difficult and/or sensitive decisions. Has flexibility to both adopt a course of action and change it when required by the situation.

Work Smart – Achieves Results: Level 1 ■■■

Drives change and results through effective planning, collaboration, and communication. Builds trust, fosters teamwork, and demonstrates self-awareness to achieve shared goals and continuous improvement.

Act Smart – Personal Effectiveness: Level 2 ■■■

Is adaptable and resilient to meet changing needs and expectations. Displays self-awareness and is respectful of diversity. Takes responsibility for self-learning and development. Demonstrates behaviours consistent with the Code of Conduct and CAA Values.



Skills and Experience

- A relevant qualification, or equivalent experience in data engineering.
- Experience in/using:
 - database management and systems.
 - data warehousing technologies and services (e.g., Azure Synapse Analytics, Azure Databricks, Azure Data Lake)
 - distributed computing and big data technologies (e.g., Azure HDInsight, Azure Stream Analytics)
 - programming languages such as Python, R.
- Strong relationship building skills.
- Strong written and verbal communication skills
- Well-developed analytical and written communication skills (plain language)

