Senior Data Engineer

ICT and Digital

Team:	Business Information	**Location:**	Auckland
Reports to:	Data Engineering Manager	**Job family:**	ICT
Role Type:	Data Engineering	**Salary:**	TBC

About Us

KiwiRail's Role in Aotearoa, New Zealand

KiwiRail delivers sustainable and inclusive growth for our customers, our communities, and our people.

For more than 150 years, rail in New Zealand has connected communities, delivered goods and people around the country, and showcased our spectacular scenery to the world. Our purpose 'Stronger Connections, Better New Zealand,' speaks to connected people, networks, journeys, experiences, and ways of working that move KiwiRail, the transport sector and New Zealand forward.

Our Workplace

At KiwiRail our values define the behaviour we expect from everyone. We have a team of over 4500 people and every connection we make with each other, our union partners, our customers and all our stakeholders must be of the highest standard.

Health, safety and wellbeing is our number one priority. Good safety is good business

About the Role

Purpose of the role

The Information and Communication Technology (ICT) Group provides a comprehensive range of ICT planning, implementation, operational, and support services as a shared service across the KiwiRail Group.

The Data Engineering team enables the business to leverage data effectively by ingesting raw data from various sources and transforming, curating, shaping, and modelling it so that accurate and consistent information is readily available to inform business strategy and support data-driven decision-making.

The Senior Data Engineer, acting as a Subject Matter Expert (SME) in Data Engineering, is responsible for developing, validating, deploying, and maintaining data systems. This role will define standards and guidelines for data solutions, as well as oversee and structure the data platform while identifying trends or anomalies that may impact business outcomes. The ideal candidate will have a proven track record in implementing data ingestion and transformation processes, with hands-on experience building data pipelines using Azure Data Factory, Azure Synapse Analytics, and Microsoft Fabric. This role is weighted to be 30% strategic, 60% technical, and 10% governance and collaboration duties.

Key Accountabilities

Within the area of responsibility, this role is required to:

Data Engineering & Development:

- Design, build, and maintain scalable data ingestion, transformation, and modelling pipelines.
- Develop and optimise data workflows using Azure Data Factory, Synapse, and Databricks.
- Implement reusable frameworks and automation to improve pipeline efficiency.
- Ensure data solutions meet performance, reliability, and SLA requirements.

Architecture & Standards:

- Define and uphold engineering best practices, coding standards, and data modelling guidelines.
- Contribute to data architecture decisions and solution design patterns.
- Ensure alignment of data solutions with enterprise architecture, governance, and security frameworks.
- Review and improve platform design for scalability, maintainability, and future growth.

Data Quality & Reliability:

- Build and maintain data quality checks, validation rules, and monitoring mechanisms.
- Identify data anomalies, inconsistencies, and issues across source and curated layers.
- Maintain data lineage, metadata, and documentation to support governance and platform transparency.
- Ensure highly reliable, trusted data is available for analytics and decision-making.

Technical Leadership:

- Act as a Subject Matter Expert (SME) for data engineering tools, and processes
- Provide mentoring, guidance, and technical coaching to junior and intermediate engineers.
- Conduct code reviews, share best practices, and uplift team engineering capability.
- Drive continuous improvement and contribute to the technical roadmap.

Collaboration & Stakeholder Engagement:

- Work closely with analysts, data scientists, architects, and business stakeholders to understand requirements.
- Translate business needs into robust, scalable technical solutions.
- Provide clear communication on delivery progress, risks, dependencies, and impacts.
- Collaborate effectively within cross-functional and agile delivery teams.

Operational Support & Continuous Improvement:

- Monitor production pipelines and proactively address issues to ensure platform stability.
- Troubleshoot ingestion, transformation, and performance bottlenecks across the platform.
- Optimise compute usage, storage design, and platform performance.
- Create and maintain runbooks, documentation, and operational knowledge resources.

Security & Compliance:

- Implement security, privacy, and access controls across data pipelines and storage layers.
- Ensure alignment with organisational policies, regulatory obligations, and industry standards.
- Assess and mitigate risks related to data exposure, access, quality, and platform resilience.
- Promote secure development practices and ensure compliance is maintained during solution design and delivery.

Key Relationships Here are the key relationships relevant to this role		Manage /Lead	Deliver to	Collaborate with	Advise or inform
Internal	Data Engineering Manager		✓		✓
	Data and Information Architect			✓	✓
	Data Engineering Team			✓	✓
	Architecture Team			✓	
	Cyber Security Team			✓	✓
	ICT SLT Team				✓
	Data Insights Team			✓	✓
External	External Data Consultants + 3rd Party Suppliers and Vendors	✓		✓	✓

What you will do to contribute

Health Safety and Wellbeing	• Analyse workplace risks and develop mitigation strategies • Promote a culture of safety and wellbeing within your team • Respond effectively to safety incidents and near-misses • Support team members' physical and mental health
Customer Focus	• Provide a positive customer experience • Support a customer-focused culture at KiwiRail • Know our services well and explain them to customers • Respond quickly to customer needs • Develop solutions to meet customer requirements • Solve complex customer issues • Work with colleagues to improve customer outcomes
High Performing Teams Skills	• Set clear performance standards aligned with KiwiRail's goal • Build a supportive and cooperative team environment • Provide timely and constructive feedback • Actively seek diverse perspectives in problem-solving • Identify opportunities for coaching and mentoring
Commercial Acumen	• Plan and monitor resource allocation to achieve team objectives • Consider financial implications when making recommendations • Understand and comply with procurement guidelines • Work with suppliers to ensure quality outcomes • Recognise how financial decisions impact KiwiRail's overall position
Project Governance	• Follow governance frameworks and systems • Identify and address governance issues early • Monitor and review performance regularly
Risk Management	• Choose and adapt appropriate risk management frameworks • Identify and forecast risks, issues, and opportunities in projects

Decision Making

The position is responsible for making day-to-day technical decisions related to data engineering delivery and platform operations.

Key decision-making areas include:

- Technical decisions on data ingestion, transformation, and modelling.
- Choices around engineering practices, tools, and development approach.
- Identifying and managing risks related to data quality, performance, and security.
- Planning, prioritising, and scheduling work to meet delivery and operational needs.

Human Resources Delegations	Nil
Direct reports	TBC
Finance Delegations	None
Budget (operating and capital)	TBC
Travel Delegations	Nil
Statutory powers	Nil

Physical demands and the nature of work

This role is administration-based and requires:

- prolonged sitting and high computer usage
- limited walking, standing, twisting, bending (at the waist), crouching (bend knee)
- carrying of laptop and paperwork when alternating between home and office

Your role may include other tasks suited to your level, as your manager directs. This job description shows your current duties. We'll review and update it with you if your responsibilities change.

About you

Knowledge and experience

- **10+ years of experience in data engineering or similar technical roles.**
- Strong experience building data ingestion and transformation pipelines.
- Hands-on expertise with Azure Data Factory, Synapse, Fabric, and dbt/Coalesce.
- Solid SQL and PySpark skills for transformation and optimisation.
- Experience with data modelling (dimensional, relational, Lakehouse/Delta/Warehouse).
- Knowledge of data quality, validation, and monitoring practices.
- Experience supporting production data platforms and resolving issues.
- Understanding of data governance, security, and privacy controls.
- Familiarity with DevOps/CI-CD practices and Git workflows.
- Experience working in agile, cross-functional teams.
- Ability to translate business requirements into scalable technical solutions.
- Experience mentoring engineers and contributing to best practices.

Ways of working / Work-related qualities

- You communicate well at all levels
- You make good decisions and are politically aware
- You're flexible and practical. You focus on customers' needs
- You value diversity and help create an inclusive workplace

Other Requirements

KiwiRail uses Skills Framework for the Information Age (SFIA 8) to describe the skills required for roles within ICT. The skill level descriptions provide a detailed definition of what it means to practice the skill at each level of competency. You will need to demonstrate the following skills at the level listed. You can find detailed description of the skills and levels here: SFIA 9 Skills List.

- Data engineering (DENG)
- Business Intelligence (BINT)
- Data modelling and design (DTAN)
- Data analytics (DAAN)

- You should pass regular drug and alcohol screenings
- You have a current and valid NZ Driver's Licence

Qualifications

You need either:

- Tertiary qualification in Computer Science, Information Systems, Data Engineering, or a related field.
- Relevant Microsoft Azure certifications (e.g., **Azure Data Engineer Associate**, **Fabric Data Engineer Associate**) are highly desirable.
- Certifications in data engineering, cloud technologies, or DevOps (e.g., Databricks, ITIL, Scrum) are an advantage.

KiwiRail

CREATING
STRONGER
CONNECTIONS

KiwiRail