

## Data Engineer

### Job Description

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<b>Purpose</b>	Responsible for planning, developing, implementing and maintaining internally developed applications and interpreting business needs for the development team and acting as a first point of contact on our Pentaho data platform, Platform X.
<b>Responsible to</b>	Head Statistician
<b>Direct reports</b>	N/A
<b>Internal relationships</b>	The job holder will work within the Statistics and IT Development department; will work closely with both the Research and Audit teams; and will liaise with other members of ICNARC.
<b>External relationships</b>	To represent ICNARC when dealing with application or development queries from external customers and other relevant individuals, bodies or groups; and to represent ICNARC at meetings, Steering Groups and Conferences when required.
<b>Location/Environment</b>	This role will be based in Napier House, 24 High Holborn London but all employees are currently working remotely. It requires regular travel including site visits and meetings, external conferences and training venues.

### Principal duties and responsibilities

#### Leadership:

- To act as ICNARC's business intelligence expert and advise on future projects and development work. Support the development team in learning Pentaho applications and hold regular teaching sessions.
- Leading by example; sharing and developing personal expertise and knowledge and encouraging and supporting staff learning and development.
- To act as mentor for new and more junior staff by provide training and advice with application development systems and functionality.
- Foster an agile working environment for the development team and actively participate in regular agile ceremonies (stand-up, sprint planning, sprint retrospective, etc)

## Applications Development and Management

- Act as the product owner for our Pentaho data platform, Platform X.
- Work with project teams to understand and identify requirements when developing of, or performing updates to, internal applications, especially those built with Pentaho tools.
- Lead the development of applications, working with project teams to:
  - produce detailed functional specifications for application development;
  - provide insights on other internal stakeholders and applications to ensure efficient design of final products which can meet the individual needs of multiple projects whilst maintaining rigorous data collection and validation procedures.
  - coordinate system testing, log and clearly communicate issues, and make modifications where appropriate;
  - define, programme and test applications to ensure quality and that new applications or features meet the defined business need and definitions of done;
  - develop written instructions and provide support and guidance on the use of applications to both internal and external users.
- Ensure applications with reporting functionality maintain integrity of data for use in both internal and external reports.
- Ensure applications continue to undergo agile improvements with incremental releases of new functionality and features to meet changing needs.
- Ensure internal applications are developed with privacy-by-design in mind and meet data protection and security regulations for the relevant purpose or business need.
- Attend internal project meetings, leading discussions on application development and clearly document and circulate actions/decisions relating to datasets/data management.
- Prepare/complete data integrity updates and ensure, where possible, that legacy datasets are updated in line with new data integrity decisions. Use data interrogation and analytical skills to investigate potential data integrity errors and propose updates and safeguards to existing and new datasets.
- Work with project teams to provide ad hoc reports and solutions for routinely required information/tasks.
- Provide Training / Workshops for our internal and external users of internal applications.

**General duties and responsibilities as an employee**

- To work as part of a team and contribute to the overall aims and objectives of the organisation
- To be an advocate for the organisation
- Attend staff meetings and training as required
- All staff are required to operate in accordance with ICNARC’s values, policies and procedures, including but not limited to, Health and Safety, and Data Protection.

The above list of duties and responsibilities is not exhaustive, and you may be required to undertake other responsibilities and training as requested and as appropriate to your role level.

**Changes**

This is a description of the job as it is presently constituted. It is the practice of the ICNARC to examine job descriptions from time to time and to update them to ensure they relate to the job as then being performed, or to incorporate whatever changes are being proposed. This will be conducted in consultation with you.

This job description is supported by annual objectives and performance standards to provide an indication of the level of performance expected from the role.

By signing this job description I confirm as follows:

- I have read and understood the requirements of this position
- I am competent to hold and perform all the responsibilities listed
- I agree to perform fully, effectively and to the best of my abilities the tasks, responsibilities and duties listed.

Signed by \_\_\_\_\_ Date \_\_\_\_\_  
Job holder

Signed by \_\_\_\_\_ Date \_\_\_\_\_  
Line Manager

**Person specification**

Requirements	Essential	Desirable
<b>Educational attainment</b>	Undergraduate degree, preferably in Computer Science or Mathematics or similar (such as Physics, Electrical Engineering etc.).	

<b>Knowledge required</b>	<p>Application optimisation and Database Architecture</p> <p>Highly proficient with SQL including critiquing and optimising complex SQL statements</p>	<p>Agile project management</p>
<b>Experience required</b>	<p>Planning, developing, implementing and maintaining proper database architecture.</p> <p>Database administration and documentation, including SQL tuning, and advising on improvements to database structure and maintenance</p> <p>Continuous Integration/Deployment; Writing functional specifications and other technical documentation;</p>	<p>Planning, developing, implementing and maintaining SQL database structures and processes within a healthcare data setting.</p> <p>Data warehousing (preferably Kimball)</p>
<b>Skills and aptitudes required</b>	<p>Expert in business intelligence applications</p> <p>Excellent JavaScript, JQuery, HTML and CSS</p> <p>Advanced SQL and SQL tuning, optimisation, T-SQL and stored procedures.</p> <p>Dev Ops (Atlassian preferred) CI/CD/CR Continuous integration, Continuous delivery and Continuous release.</p> <p>Good stakeholder management</p>	<p>Pentaho cTools &amp; Data Integration</p> <p>Pentaho Reports Designer and Pentaho Analyser</p>

**Personal qualities required**

**Communication:** has the ability to communicate effectively with a variety of people, on the telephone, through face-to-face contact and through written correspondence.

**Conscientious:** works steadily, efficiently and dependably; checks work thoroughly for errors/omissions. Maintains a high level of detail in all aspects of work.

**Achievement orientation:** demonstrates motivation to achieve results by agreed deadlines; perseveres with plans.

**Analytical skill:** ability to assimilate and interpret information and to identify and investigate observed anomalies.

**Initiative:** proactive in identifying potential problems, seeks solutions and opportunities to improve work procedures.

**Organised:** has experience of managing a number of projects at the same time with the ability to plan ahead and deal with any issues as they arise. Ability to prioritise workloads within timescales and meet deadlines.

**Customer service orientation:** is courteous and helpful to collaborators. Shows understanding for their concerns and acts to accommodate their needs where possible.

**Relations with others:** is cooperative and gets along well with others. Keeps manager informed, reports problems promptly and seeks guidance when needed.