Royal Devon University Healthcare NHS Foundation Trust

JOB DESCRIPTION

JOB DETAILS	
Job Title	Senior System Developer
Reports to	Data Architecture Manager
Band	Band 7
Department/Directorate	Business Intelligence

JOB PURPOSE

The post sits within the Data Architecture Team which forms part of the Business Intelligence (BI) Shared Service covering the Royal Devon University Healthcare NHS Foundation Trust (RDUH) and NHS Devon ICB. The BI Team is responsible for delivering a business intelligence service which provides high quality and timely information, analysis and decision support across the RDUH and ICB. The BI Team maintains and develops the organisations' reporting, monitoring and analysis framework.

The post-holder will support the development and provision of a comprehensive, efficient, secure data warehouse and will lead on developing
processes, software tools, websites and systems to support organisational decision making. The scope of the role includes the provision and maintenance of a data warehouse and tools to support all aspects of organisational business.

KEY RESULT AREAS/PRINCIPAL DUTIES AND RESPONSIBILITIES

The main duties and responsibilities of the post are:

- Responsible for the operational management of the corporate data warehouses, data warehouse optimisation and development plus management and development of online applications.
- Provides specialist technical expertise and support for the development and delivery of complex software / web pages / information systems.
- Leads on aspects of the systems development annual work programme and specific complex development projects.
- Provides specialist advice across a range of IM&T areas, particularly systems, applications, data warehousing, software development and information security.
- Supports development of the Data Architecture Strategy, interpreting national policy and guidance and relating it to the shared service organisations.
- Deputises for the Data Architecture Manager as required.
- Designing and building web applications (ASP.Net with C#, CSS, HTML, JavaScript). Working with clients to agree requirements specification, undertaking technical development and deployment. Managing content and programme of product support including improvement and development of additional functionality (involvement throughout Development Lifecycle).
- Optimisation and administration of the corporate SQL Server data warehouses including management of server storage requirements and structure. Creation of tables, views, indexes and oversees receipt of routine data feeds (includes Secondary Uses Service (SUS), local contract data, data extracts from GP Practices, daily reporting). Improving the performance of very large datasets accessed by SQL queries, Power BI, Excel, and web applications.
- Improvement of automated ETL processes and manual checks on data received, liaison with data providers to address issues. Facilitates analysis through application of local costing and Payment by Results rules to create specialised data views. Ensures high data quality standards and appropriate availability and access to clear and pseudonymised data.
- Maintaining provider and commissioning information server infrastructure including ETL, Indexing, database replication, backups and external linked server connections. Liaison with 3rd party suppliers regarding installation of server/client software.
- Ensuring robust application of Information Governance and Policies through planning for backup and recovery of database information, managing system security & user access. Applies NHS Best

Practice Guidelines in the administration of secure Health & Social Care Network (HSCN) facing websites and user password management.

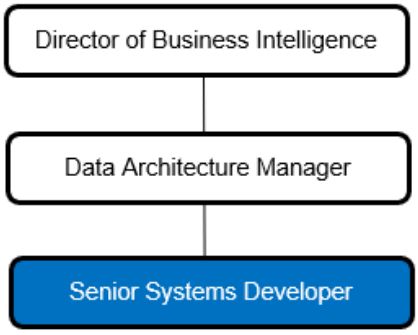
- The day-to-day senior expert technical advice and support to the BI team including SQL query and SSIS development, Python/R development and building reports using Power BI.

KEY WORKING RELATIONSHIPS

- The post holder will work closely with colleagues within the BI shared service and will support the Data Architecture Manager, deputising as required.
- The post holder will work closely with other members of the RDUH and ICB, including liaising with senior members of the commissioning, finance, contract and IT teams, health and social care providers, GPs and colleagues in other provider and commissioning organisations.
- The post holder will liaise with other system development staff in providers, commissioners, CSUs and NHS England. The post holder will work with a range of staff across the Trusts. Key contacts will include:

Internal to the Trusts	External to the Trusts
• Heads of Intelligence • Digital team • EPR team • BI team members • Corporate leads (finance, HR etc) • Transformation team	• Other providers • NHS Digital • EPIC Technical Experts • EPIC Application Experts

ORGANISATIONAL CHART



FREEDOM TO ACT

- Works to achieve agreed objectives and is given freedom to do this working within broad professional or organisational policies.
- Lead specialist for specific systems or processes, using own initiative whilst resolving day to day issues.
- The post holder will be expected to follow national and local policies and guidelines, and respond to guidance by adjusting practice and procedure.
- Demonstrated capabilities to manage own workload and make informed decisions in the absence of required information, working to tight and often changing timescales.

COMMUNICATION/RELATIONSHIP SKILLS

- The post holder will provide and receive highly complex and sensitive information. They will be a skilled communicator with the ability to construct and deliver concise yet insightful communications on complex and sensitive matters related to their role, for dissemination to diverse audiences.
- Provide advice to colleagues on the technical interpretation of data produced by external organisations e.g. NHS England.
- Develop a shared understanding of the system or software development needs of clinical, operational and managerial staff, overcoming communication barriers by providing training and negotiating solutions to meet customer needs.

- Provision of expert advice on the availability, quality and completeness of information.
- The post holder will be required to provide and present information to a broad range of staff at various levels within the organisation and the wider health community, nurturing key relationships and maintaining networks.
- Capable of navigating complex and difficult situations, requiring persuasion and influence skills to deliver clear ideas and concepts where there may be barriers to understanding.
- Communicate with staff, external organisations and colleagues in a courteous, professional and timely manner at all times.
- Ability to create and give presentations to a varied group of internal and external stakeholders.
- Manage email communication in a timely way and in line with the organisation's email best practice guide.
- Participate in relevant internal and external working groups/projects, services and initiatives to provide, information and analytical advice and expertise.
- Participate in team and directorate meetings as required.

ANALYTICAL/JUDGEMENTAL SKILLS

- Ability to analyse highly complex issues where material is conflicting and drawn from multiple sources.
- Work with clients to clearly define their information management requirements and to explain the implications of adopting different technical and presentational approaches, presenting a range of options.
- The post-holder will be expected to lead on the development of new types of complex data management process or to adapt previously used approaches, to reflect the changing information requirements within the NHS.
- Investigate and resolve the cause for data anomalies and validation errors that occur during processing of highly complex datasets and advise when lack of data, validation error or system errors prevents accurate or complete reporting.
- Using expert knowledge and experience, act upon incomplete information to make inferences and support decision making.
- Analyse and interpret very complex information, pre-empt and evaluate issues, and recommend an appropriate course of action to address the issues.

PLANNING/ORGANISATIONAL SKILLS

- Plan over short, medium and long-term timeframes and adjust plans and resource requirements accordingly.
- Initiates and plans data work programmes and makes adjustments to meet customer requirements.
- Support the implementation and on-going management of complex projects, services and initiatives in accordance with the agreed priorities of the Team.
- The post holder will be expected to plan and prioritise their own work and, as a senior member of the team, support the Data Architecture Manager in prioritising the workplan for the wider team.
- Strict deadlines will need to be met for daily, weekly, monthly and annual data processing.

PATIENT/CLIENT CARE

- No patient or client care required.

POLICY/SERVICE DEVELOPMENT

- Support the robust application of Information Governance and Policies to corporate data through maintenance of backup and recovery systems for database information and administering system security and user access. Applies NHS Best Practice Guidelines in the administration of secure websites and user password management.
- Develop and implement work policies/SOPs within the team and propose and implement changes to data processes that impact other areas within the organisation.
- Recommend and implement new systems and procedures for collecting, managing, analysing and presenting information.

- Provide coordination of and participate in relevant internal and external working groups and provide project advice, expertise and support where requested.
- Provide relevant and timely specialist advice and guidance on own portfolio of projects/function.
- Work with members of the team to investigate the causes of any variance from target/plan and proactively contribute to the implementation of solutions.

FINANCIAL/PHYSICAL RESOURCES

- The post holder has no direct budgetary responsibilities.
- Responsible for ensuring the correct use of departmental datasets in accordance with sound information management practices to avoid corruption of data or inappropriate access and use.

HUMAN RESOURCES

- No direct line management required.
- Support, motivate and develop staff within the team to ensure that they are able to deliver the responsibilities of the organisational strategy.
- Regularly provide specialist training on technical issues within their role to assist other members of the data architecture team in the achievement of a quality service. Also provide specialist training on complex technical areas such as automation or data processes to the wider Business Intelligence team.

INFORMATION RESOURCES

- Design and develop major information systems and assets, working with colleagues to produce clear specifications.
- Lead on implementation, monitoring and evaluation of new information systems/databases as required.
- Support the Data Architecture Manager in the collation, processing, management and reporting of data.
- Responsible for monitoring systems, data flows, websites and software tools to ensure that they continue to meet changing needs and adapt and improve as required.
- Responsible for checking the quality of data contained within the data warehouse or tools developed by the BI Team. Support maintenance and improvement of data quality through automated (ETL/SSIS) and manual checks on data received, liaising with data providers to address issues.
- Ensure the data warehouse, information sources, file contents, systems, tools and methods of analysis are fully documented, and version control is applied.
- Facilitate analysis through application of local costing and Payment by Results rules to create specialised data views.
- Ensure appropriate availability and access to clear and pseudonymised data in line with Information Governance rules and guidance.
- Develop and maintain the data warehouse, webpages, systems and software using a range of tools and techniques, in order to support complex information analysis.
- Development of systems and methodologies to support the production of management information reports.
- Ensure all documentation is produced to an excellent standard.

RESEARCH AND DEVELOPMENT

- The post holder is required to keep themselves up to date with relevant national research and guidance.
- To contribute to the NHS service improvement by participating fully in new projects and developments such as redesign work, proposing changes to working practices and procedures.
- Regularly test or adapt systems including applications.

PHYSICAL SKILLS

- Advanced keyboard skills are required, as speed and accuracy is needed to ensure data availability is timely.

PHYSICAL EFFORT

- Independent travel between Trust sites may be required.

- There may be a need on a daily or weekly basis to attend meetings or visit clients, which may require driving or walking.
- There will be a requirement to sit, stand and walk as needed.

MENTAL EFFORT

- Frequent requirement for concentration when managing data warehouse tasks, occasionally prolonged.
- The work pattern can be unpredictable, with interruptions from customers particularly in resolving any dataflow or app issues.

EMOTIONAL EFFORT

- Exposure to emotional circumstances is rare.

WORKING CONDITIONS

- VDU user

OTHER RESPONSIBILITIES

Take part in regular performance appraisal.

Undertake any training required in order to maintain competency including mandatory training, e.g. Manual Handling

Contribute to and work within a safe working environment

You are expected to comply with Trust Infection Control Policies and conduct him/herself at all times in such a manner as to minimise the risk of healthcare associated infection

As an employee of the Trust, it is a contractual duty that you abide by any relevant code of professional conduct and/or practice applicable to you. A breach of this requirement may result in action being taken against you (in accordance with the Trust's disciplinary policy) up to and including dismissal.

You must also take responsibility for your workplace health and wellbeing:

- When required, gain support from Occupational Health, Human Resources or other sources.
- Familiarise yourself with the health and wellbeing support available from policies and/or Occupational Health.
- Follow the Trust's health and wellbeing vision of healthy body, healthy mind, healthy you.
- Undertake a Display Screen Equipment assessment (DES) if appropriate to role.

GENERAL

This is a description of the job as it is now. We periodically examine employees' job descriptions and update them to ensure that they reflect the job as it is then being performed, or to incorporate any changes being proposed. This procedure is conducted by the manager in consultation with the jobholder. You will, therefore, be expected to participate fully in such discussions. We aim to reach agreement on reasonable changes, but if agreement is not possible, we reserve the right to insist on changes to your job description after consultation with you.

Everyone within the Trust has a responsibility for, and is committed to, safeguarding and promoting the welfare of vulnerable adults, children and young people and for ensuring that they are protected from harm, ensuring that the Trusts Child Protection and Safeguarding Adult policies and procedures are promoted and adhered to by all members of staff.

At the Royal Devon, we are committed to reducing our carbon emissions and minimising the impact of healthcare on the environment, as outlined in our Green Plan available on our website. We actively promote sustainable practices and encourage colleagues to explore and implement greener ways of working within their roles.

PERSON SPECIFICATION

Job Title	Senior System Developer

Requirements	Essential	Desirable
QUALIFICATION/ SPECIAL TRAINING		
Educated to post-graduate diploma level in a subject which incorporates relevant skills to the post, or equivalent level of experience of working at a similar level in a specialist area relevant to the post.	E	
KNOWLEDGE/SKILLS		
Good organisational and personal effectiveness skills	E	
Knowledge of NHS information systems		D
Possess excellent analytical and numeracy skills	E	
Advanced knowledge of development lifecycles (e.g. Waterfall, Agile (TDD)) plus an understanding of the selection criteria to be applied in their selection		D
In depth knowledge of a range of contemporary development environments, application frameworks plus their usage and configuration e.g. Visual Studio	E	
Expert use of SQL Server as a database administration and optimisation tool	E	
In depth expert knowledge of Transact SQL.	E	
Knowledge of version control systems such a Git for tracking code changes		D
Advanced use of MS Excel including Pivot Tables and Statistical Functions		D
Knowledge of the application of the Data Protection Act, Computer Misuse Act, Freedom of Information Act and Caldicott documentation.	E	
Knowledge of the IT infrastructure that supports provider and commissioning information hardware & software platforms plus their configuration.	E	
Knowledge of the protocols underpinning developed information support systems (e.g. http, https, tcpip)	E	
Ability to apply an information intelligence to the data and present information to multidisciplinary audience	E	
Excellent oral and written communication skills and good personal presence. Ability to effectively liaise with a variety of staff across all grades	E	
Knowledge of strategic developments in health informatics	E	
Ability to plan, prioritise work and manage deadlines	E	
Ability to deal with material of a confidential nature	E	

EXPERIENCE		
Experience of Web Application development and support using C#, ASP.Net, CSS, JavaScript	E	
Experience of database administration and optimisation	E	
Experience in communications and stakeholder management	E	
Significant experience of the NHS Data Model and its use in assuring information standards		D
Experience of working with clients in the production of system specifications and the successful implementation of these specifications to completion for medium sized systems (20+ users) and above	E	
Experience of implementing new systems and ways of working within organisations and teams, with large datasets preferably across a number of organisations (e.g. EIS, data warehousing, websites, etc.)	E	
PERSONAL ATTRIBUTES		
Excellent interpersonal and communication skills and able to act with discretion	E	
Ability to organise, plan, prioritise and manage tasks/projects to deadlines	E	
Ability to work on own initiative	E	
Ability to work as part of a team	E	
Ability to problem solve	E	
Good attention to detail	E	
Reliable and flexible	E	
OTHER REQUIREMENTS		
An ability to maintain confidentiality and trust	E	
Professional, calm and efficient manner	E	
Commitment to continuing professional development	E	
Positive and flexible approach to work	E	
Ability to travel to other Trust locations as required	E	
The post holder must demonstrate a positive commitment to uphold diversity and equality policies approved by the Trust.	E	

WORKING CONDITIONS/HAZARDS		FREQUENCY (Rare/ Occasional/ Moderate/ Frequent) R	O	M	F
Hazards/ Risks requiring Immunisation Screening					
Laboratory specimens	N				
Contact with patients	N				
Exposure Prone Procedures	N				
Blood/body fluids	N				
Hazard/Risks requiring Respiratory Health Surveillance					
Solvents (e.g. toluene, xylene, white spirit, acetone, formaldehyde and ethyl acetate)	N				
Respiratory sensitisers (e.g isocyanates)	N				
Chlorine based cleaning solutions (e.g. Chlorclean, Actichlor, Tristel)	N				
Animals	N				
Cytotoxic drugs	N				
Risks requiring Other Health Surveillance					
Radiation (>6mSv)	N				
Laser (Class 3R, 3B, 4)	N				
Dusty environment (>4mg/m3)	N				
Noise (over 80dBA)	N				
Hand held vibration tools (=>2.5 m/s2)	N				
Other General Hazards/ Risks					
VDU use (> 1 hour daily)	Y				✓
Heavy manual handling (>10kg)	N				
Driving	Y		✓		
Food handling	N				
Night working	N				
Electrical work	N				
Physical Effort	Y	✓			
Mental Effort	Y				✓
Emotional Effort	Y	✓			
Working in isolation	Y	✓			
Challenging behaviour	Y	✓			