



Job Summary – Software Engineer (Specialist Analyst)

1. THE NES DIGITAL SERVICE GROUP

NHS Education for Scotland (NES) is the national health board with statutory responsibilities to effect sustainable change through workforce development, education and training across the health and social care system in Scotland, while working at UK level with partner organisations.

We are the leader in educational design, delivery and quality assurance and provide wide-ranging support to workforce development. We are the official provider of workforce statistics for NHS Scotland and support national workforce planning. We design and develop digital technologies supporting innovation and transformation.

Our purpose is to drive change and improve the quality of care experienced by citizens across Scotland by ensuring that we have the right staff, with the right skills, in the right place, at the right time. NES is integral to improving outcomes for people and in ensuring a skilled and capable workforce underpins the design and delivery of services. As an organisation, we recognise the significant contribution we can make to improving population health, reducing inequalities and economic development.

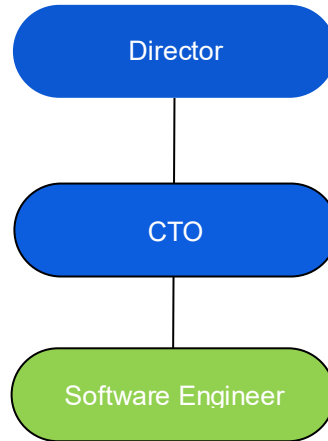
The function of the NES Digital Service Group is to deliver one of the key objectives of the recent Scottish Government's [Digital Health and Care Strategy](#). The Strategy called for a Scottish 'national digital platform' through which relevant real-time data and information from health and care records will be made available to those who need it, when they need it, and wherever they are, in a secure and safe way.

These responsibilities relate to the core functions of NES in the following areas:

- Development of a new, digital by default, technical environment and commensurate digital services to all NHS Scotland stakeholders

- Support and development of fit for purpose, digital platform systems and services to allow delivery of strategic outcomes
- Communication, support and leadership in digital and data science disciplines
- Research and development as appropriate

2. ORGANISATION CHART



3. JOB ROLE

This post has 2 main roles:

- To significantly contribute to delivering valuable solutions to complex problems across health and social care
- To develop solutions that meet standards of security, reliability, scalability and cost efficiency

4. KEY TASKS

Will include but not be limited to:

- Development, maintenance and operation of products and their constituent services
- Iteratively deliver value to stakeholders, learning with each step
- Participate in your team's planning

Band 7 Specialist Analyst

1. JOB IDENTIFICATION

Job Title: Software Engineer (Specialist Analyst)
Department(s): NES Digital Service - Engineering
Directorate: NES Digital Service (NDS)
Job Reference: JD04/H
Responsible to: Chief Technology Officer

2. JOB PURPOSE

The purpose of this role is to provide specialist advice across a range of IM&T areas e.g. Wireless networks, LAN/WAN, systems, applications, information interpretation, data analysis, information reporting, and information governance.

The postholder will have a critical awareness of knowledge issues in the field and at the interface between different fields. They are innovative, and have a responsibility for developing and changing practice and/or services in a complex and unpredictable environment.

3. DIMENSIONS

The postholder will be responsible for managing the operation of one or more systems which process, generate, create, update or store information.

They will assist in development of mid to long term IT development strategies and products including new technologies for workforce systems support.

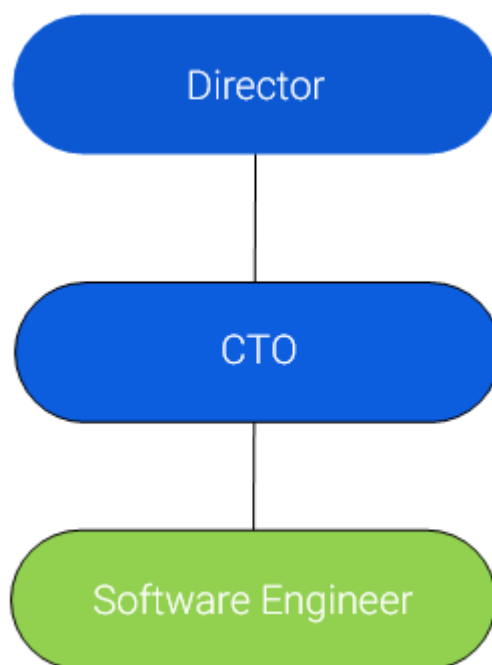
They will liaise with user communities to analyse business requirements and establish options to meet current and future solutions.

They will assist in providing leadership and direction concerning the company strategic objectives.

They will be managed by a line manager and may have line management responsibilities. The postholder will be required to assist in any other duties which are deemed reasonable to their role and band.

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4. ORGANISATIONAL POSITION



5. ROLE OF DEPARTMENT

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6. KEY RESULT AREAS (Key Result Areas convey **all potential** aspects of a job role. Key result areas will be further developed within the KSF outline with some being more relevant than others dependant on the current requirements for your role.)

- Development of complex and innovative software for further education/evaluation/business needs for NES and partners.
- Analysing business requirements, appraising options for technology solutions, and converting into technical specifications.
- Provide a source of expertise in Web technologies and advise NES on their adoption to meet educational and business needs.
- Ensure formal project management methods are applied effectively in support of web based projects.
- Responsibility for adhering to design and development standards.
- Single point of expertise to advise project sponsors on appropriate and innovative technical solutions to business needs.
- Delivery of unscheduled interventions in response to project issues – troubleshooting project difficulties.
- Responsible for acting as development and reporting resource and specifically ensuring key reporting needs are quantified, specified, developed, tested and delivered to the user community in a timely manner.
- Being proactive in the application of new technology for the advancement of NES aims.
- Responsible for the proper and safe use of IT equipment by users as well as the repair when necessary
- Facilitating workshops in support of prospective and new educational IT initiatives.
- Undertaking investigations into innovative IT architectures in order to advise IM&T management and IM&T team on options and products' adoption
- Provide system testing services as part of the quality assurance process before code is released to users for testing.
- Planning and implementing the delivery of formal and informal training services to the user community.
- Creation of new programming code from specifications approved by the principal developer and development manager.
- Line management responsibilities where necessary.
- Advise stakeholders on application or adaptation of developments to meet their needs.
- Reporting project progresses, risks and issues to Line Manager.
- Responsible for acting as development and reporting resource and specifically ensuring key functional requirements are quantified, specified, developed, tested and delivered to the user community in a timely manner.
- Liaise with IT Development Team Leader and database developers.
- Assist with integration of Business Objects with NES IT browser-based systems and standards.
- Individually responsible for delivering any IT software solutions as required, including development, enhancement, bug fixes for the Knowledge Network and other systems.
- Proposes and implements changes and suggestions as to how services can be improved for users and the public.

7a. EQUIPMENT AND MACHINERY

- A range of office, audio-visual and IT equipment
- PC for design, development and maintenance of IT solutions.
- Multi-function devices : scanners, copiers, printers, fax
- Telephone
- VC facilities
- Portable equipment (e.g. laptop, mobile phone etc)

7b. SYSTEMS

- Utilisation of current data and information systems relevant to role currently in use throughout the NES organisation.
- Regular use of complete MS Office suite of programmes.
- Use IT as directed, maintaining confidentiality.

8. ASSIGNMENT AND REVIEW OF WORK

- Deal pro-actively and reactively to events that pose potential risk to NES's reputation as a provider of information support systems and services.
- Strategic planning requires assessment of new and prospective technologies and this is self-initiated.
- The postholder has highest specialist technical ability within web technologies in NES and therefore internal checks on performance are limited.
- Project work dictated by steering groups and boards - some assignment and review of work comes from there.
- Web assignments are self-initiated in the main.
- Research-based work generated through research contact with others and personal research.
- The job permits programming creativity and work prioritisation within work assignments but constrained to the design and programming standards of the project.
- Contributing pro-actively at team meetings and proposing and defending work proposals.
- Establishing confidence levels in terms of capturing user needs, associated specifications completeness and fitness for purpose.
- Involvement of other team members allocating work where necessary.

9. DECISIONS AND JUDGEMENTS

- The role allows for personal judgement in the following areas:
 - Developing the most efficient way to create code to meet a specification.
 - Managing time in response to personal work pressures and conflicting team demands.
 - Arranging meetings with the user community to clarify/confirm needs, and to provide testing and training services.
- The job allows for decisions to be made using own discretion on how solutions may be developed subject to adherence with NES development standards.
- There is a requirement to analyse complex situations, identify the root cause of the problem in environments that are unpredictable and have many interrelated factors and resolve.
- Readily develop creative solutions to abstract problems and evaluate solutions to make recommendations or inform decisions, acting as a lead specialist in their own area.

10. MOST CHALLENGING/DIFFICULT PARTS OF THE JOB

- The post involves specialist knowledge of a number of complex programming languages and technologies, which require analysis and interpretation of a range of options.
- Keeping up with the constant change in the complex technologies that are used to fulfil the role and the as yet emerging scope on NES in terms of its educational and training objectives.
- Working to the constraints of providers or platforms, yet still being able to produce high-quality feature rich environments desired by projects.
- Understanding the medical training terminology and the business processes underlying the application.
- Ensuring assigned work packages are progressed and delivered on time to the principal developer's satisfaction.
- Ensuring consistency and stability of delivered software solutions across NES business areas.
- Undertaking system testing of an application that is inherently complex for which specification documentation is incomplete.
- Determining exactly (and thereafter confirming) what user requirements are before commencing any piece of work.
- Educating business to the fact that once requirements are documented and agreed, they cannot change without a knock-on effect to delivery times.
- Delivering complex software where there is little scope for peer review due to small team size and differing responsibilities, skills and experience.
- Maintaining peer associations – lack of those at equivalent specialist level for discussion of designs and plans.

11. COMMUNICATIONS AND RELATIONSHIPS

- Listen to, understand and communicate often complex and multi-stranded information, using effective questioning techniques to elicit a range of views
 - Respond constructively and confidently to queries and complaints, ensuring contributions meet the needs of the audience and persuading and influencing others in a way that builds team confidence and promotes confidence.
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- Ascertain project requirements from stakeholders through face-to-face interaction, informal and formal group and workshop events.
 - Written reports and formal presentations when required, ranging from local meetings to international conferences.
 - Confidence will be needed in delivering user training and support services.
 - Advise NES project staff on appropriate Technologies for particular projects. There is often a barrier to understanding where complex information of computer programming and architecture concepts has to be explained to non-technical staff. Motivational and training skills are required.
 - Communicate internally and externally with a wide range of professional and support staff in stressful and challenging circumstances.
 - Communicate sensitively and assertively as required in managing technical conflicts, service level concerns and disagreements in IT operating practices.
 - Consult with NES IM&T colleagues and project teams to achieve technical objectives. Highly complex technical matters are discussed. Co-operation and persuasion are required.
 - As a single point of expertise in a number of technical areas, managing conflicting pressures from multiple projects requires tact and diplomacy.
 - The role requires good communication skills for user community meetings and for expressing complex issues in a clear and jargon-free manner.
 - The role is one of the team memberships, and therefore good team working is essential.

12. PHYSICAL, MENTAL, EMOTIONAL AND ENVIRONMENTAL DEMANDS OF THE JOB

Physical skills

- Requires advanced keyboard skills – manipulating complex data at speed.

Physical effort

- A combination of sitting, standing and walking.
- The role requires some physical effort in participating in regional visits/demonstrations requiring the transfer of equipment to another office.

Mental effort

- With the role having responsibility for both data accuracy and business process security, there is a frequent requirement for concentration and occasional prolonged concentration while computer programming or publishing to the Internet where results of a mistake could be crucial.
- Deadlines are set using a project planning tool and a great deal of mental effort is required to manage tasks to meet these deadlines.

Emotional effort

- Some emotional effort is involved in this role, as users can be very demanding and may require further discussions to design and implement training for new way of working to achieve national reporting.
- Exposure to distressing or emotional circumstances is rare. The postholder deals with staff performances and disciplinary issues.

Working Conditions

- Office conditions.
- Use of VDU more or less continuously on most days.
- Exposure to dust, dirt. Smell of noise when maintaining/installing equipment □
Travel to other locations at times.

13. KNOWLEDGE, TRAINING AND EXPERIENCE REQUIRED TO DO THE JOB

- Degree level qualification with in-depth experience and postgraduate or post registration study, such as that obtained through a master's degree or equivalent experience/ qualification □ Science or equivalent.
- Significant experience working in IT.
- Strong analytical and abstraction skills.
- Significant specialist experience in advanced systems design and testing. □ Experience of communicating and influencing at senior level.
- Project management, experience of giving presentations at local/national/international levels.
- Team building within programming staff.
- Delivery of training.
- Ability to deliver products under time pressures.
- Experience working with the Oracle Toolset or equivalent.
- Experience in developing mobile and tablet based solutions a great advantage.
- Experience in delivering an educational online portal tool.

14. JOB DESCRIPTION AGREEMENT

A separate job description will need to be signed off by each jobholder to whom the job description applies.

Job Holder's Signature:

Date:

Head of Department Signature:

Date:



PERSON SPECIFICATION – Software Engineer

Essential Criteria – these are attributes without which a candidate would not be able to undertake the full remit of the role. Applicants who do not clearly demonstrate in their application that they possess the essential requirements will normally be eliminated at the short listing stage.

Desirable Criteria – these are attributes which would be useful for the candidate to hold. When short listing, these criteria will be considered when more than one applicant meets the essential criteria.

Means of Assessment – please note that candidates invited for interview will be notified if there will be a requirement to undertake a test or presentation. These additional assessments may be used to judge one or more criteria within the factor.

Factors	Essential	Desirable	Means of Assessment
Key Leadership Behaviours	<ul style="list-style-type: none"> Empowering Adaptive Collaborative 		Application & Interview
Education and Professional Qualifications	<ul style="list-style-type: none"> Degree level qualification or equivalent Postgraduate qualification in Computer Sciences/Software Development or equivalent or relevant experience 		Application & Pre-Employment checks
Experience/Training	<ul style="list-style-type: none"> Experienced in software development, across the entire software development life cycle, using a variety of software design patterns Ability to participate in planning and prioritising software delivery Experience in designing, implementing, deploying and operating small services Competent in cloud technologies Experience in continuous improvement of development and integration processes Experienced in Agile methodologies 	<ul style="list-style-type: none"> Experienced in leading and mentoring more junior developers 	Application, Interview, Design Exercise & Coding Exercise
Specific Skills and Knowledge	<ul style="list-style-type: none"> SQL and NoSQL databases (e.g. postgres and redis) Source Control Management systems (e.g. git) Unit testing Diagnosing and fixing issues in a production system Instrumentation of a system for production operation Continuous integration 	<ul style="list-style-type: none"> Cloud technologies, such as MS Azure or AWS Continuous Integration and Deployment using TeamCity or similar 	Application, Interview, Design Exercise & Coding Exercise

Personal Attributes	<ul style="list-style-type: none"> • Pragmatic: able to make the right decisions based on experience and common sense • Self-motivated: capable of working with limited supervision, pro-actively reporting on status and tasks • Excellent communicator: able to communicate with stakeholders across all levels of the business 		Interview
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Leadership Behaviours

NHS Education for Scotland (NES) assesses and selects employees based on our leadership behaviours which are expected at all levels in the organisations. These leadership behaviours support the NES ways of working and NHS Scotland values.

These leadership behaviours describe how we work, and what is expected of everyone who works in NES. A number of methods may be used to assess these behaviours as part of our recruitment and selection processes. Our leadership behaviours are:





CONDITIONS OF SERVICE

TITLE:	Specialist Analyst	LOCATION:	Flexible- your Contractual NES Office location will be agreed upon appointment
REPORTING TO:	Chief Technology Officer		
GRADE:	Agenda for Change Band 7	SALARY SCALE:	£40,872 to £47,846 per annum
HOURS AND DAYS OF WORK:	Full time OR Part time. Based on a normal working week of 37.5 hours. Office opening hours are 0700 to 1900		
JOB STATUS:	Fixed term/ secondment opportunity up to 31 st March 2022	NOTICE PERIOD:	4 weeks
ANNUAL HOLIDAYS:	27 days rising to 29 days after 5 years service, rising to 33 days after 10 years service	PUBLIC HOLIDAYS:	8 local/ Public Holidays per annum
REHABILITATION OF OFFENDERS CLASSIFICATION:	The 'exemption' status of posts within NES may change in the future and all successful candidates should be aware that they may be asked to obtain a further Disclosure from Disclosure Scotland at a later date, should a post's status change, or if they are transferred or promoted into a post that is exempt.		

SUPERANNUATION:

Please note under changes to workplace pension arrangements introduced by the UK Government, NHS Education for Scotland along with other employers requires to ensure all staff are automatically enrolled in a pension scheme. Consequently, all new starts from 1 October 2013 will be automatically enrolled into the NHS Superannuation Scheme (Scotland). Contributions are based on whole time pensionable earnings as set out in the table below;

Employee contribution rates 2020/2021		
Tier	Annual Pensionable Pay (Full Time Equivalent)	Contribution
1	Up to £20,605	5.2%
2	£20,606 to £24,972	5.8%
3	£24,973 to £31,648	7.3%
4	£31,649 to £64,094	9.5%
5	£64,095 to £89,731	12.7%
6	£89,732 to £119,560	13.7%
7	£119,561 and above	14.7%

Sessional workers who work more than 10 sessions per week under NHS condition may be unable to contribute further to the superannuation scheme.

The conditions above are for information purposes only and may be subject to variation. They do not form the basis of a legal contract.

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