Job Description

Comp ID: 035715
Job Title: Chief Technology Officer
School/Department: ADAPT Centre, School of Computer Science and Statistics
Job Category and Level: Appointment will be made on the Administrative 1 (point 1-6) Salary Scale at a point in line with Government Pay Policy [€60,091 - €95,149 per annum]

The Purpose of the Role
The Chief Technology Officer will work closely with the Principal Investigators (PIs) and the clinical and ICT research leaders to define and roll out the platform and the ICT environment for the PrecisionALS Programme. This will include defining and coordinating the roadmap for the ICT research programme required for the programme. The Chief Technology Officer will understand the requirements of the PrecisionALS Programme, propose the architectural approach, specify the solution and lead on the acquisition, development and implementation of the solution.

The Chief Technology Officer will bridge Enterprise IT, ICT and Clinical research. The role holder will provide leadership for ‘Work Package 1’ through the development and coordination of the ICT research programme to support a data intensive clinical research programme.

Context
PrecisionALS is a €10 million multidisciplinary and collaborative research programme hosted by the ADAPT Centre in the School of Computer Science and Statistics and FutureNeuro with funding from industry partners from leading global Pharma, Biotech and ICT enterprises and co-funded by Science Foundation Ireland.

The project goal is to enable a data-driven and a precision medicine approach towards new drug development for neurodegenerative disease by combining applied clinical research with cutting edge data science.

The Chief Technology Officer will report to the Director of ADAPT, and will be hosted in the School of Computer Science and Statistics in Trinity College Dublin. They will be responsible for the delivery of the PrecisionALS Work Package 1, under the leadership of Professor Vinny Wade, which provides the technology solutions and infrastructure for the programme.
The Chief Technology Officer will manage a small team (no. 5+) of IT and software development professionals and researchers. As the leader of the key ICT Work Package, the Chief Technology Officer will co-design and co-ordinate the ICT research programme with ADAPT Centre (TCD and TUD) research leaders who are collaborating in the project. The ICT research team will include 6 principal investigators and up to 10 postdoctoral researchers.

**Main Responsibilities**

This is a list of the tasks, duties and responsibilities for the role;

The research ICT infrastructure will be commissioned and deployed to ensure the high levels of functionality, performance, capacity, security, usability, assurance, flexibility or extensibility that are required for this project. The Patient Data Platform will support traditional ETL type of data movement as well workflows to assure data quality, data governance, data transformation and techniques for protecting personally identifiable data.

There are a number of ICT research challenges to be investigated and tackled within the research programme, these include: how best to gather, handle, collate, analyse and report on the multi-source, multi-format, multi-modal and longitudinal data in an ethical and GDPR compliant manner that is easily accessible, while also being mindful of appropriate data governance. In addition, the programme will demand ICT analytics research solutions for the selection and execution of appropriate machine learning algorithms and user friendly approaches to support clinician scientists.

**Strategic & Technical Leadership**

- Development, implementation and ownership of Work Package 1 in particular the PDP technical architecture and strategy, based on understanding and articulating the requirements and objectives of our clinical research colleagues and the technology development or ICT research required to address those objectives.
- Drive the development of data architecture and management principles, policies, processes, standards and controls, in conjunction with the PrecisionALS leadership team for Work Package 1.
- Oversee the ongoing Identification, analysis and integration of new data sources into the PDP and development of data analytics capabilities/technologies.
- Assist the PI, in directing activities for scope, business analysis, design, development, testing, deployment etc.
- Provide technical leadership and serve an integral role in operations and business development.
- Design and lead the implementation of the strategy and programme plan for technology development while ensuring the implementation and enforcement of technology standards across the programme.
● Ensures appropriate programme governance frameworks and risk assessment are in place and monitored throughout the project lifecycle

**Team Leadership**
- Develop the research team and, be a mentor to team members & empower them to achieve the ambitious project goals
- Lead the team that develops, implements and owns the PDP
- Build relationships across functions and disciplines and drives a collaborative approach to deliver high standards of stakeholder management customer service

**Person Specification**
The role-holder will require the following knowledge, skills and attributes for successful performance in the role.

**Qualifications**
- Computer science or computer engineering undergraduate or graduate degree
- PhD or equivalent in a relevant discipline (desirable)

**Knowledge**
- In-depth Technical and Data Architecture expertise and experience;
- Understanding of the breadth and complexity of data management challenges;
- Strong technical knowledge of data management technologies;
- Knowledge and understanding of GDPR/Privacy issues as related to personal data for research.
- Good knowledge of industry trends and emerging technologies;
- Vendor and partner management experience, gained engaging with a variety of technology vendors;
- Knowledge of DevOps tool chains and processes;
- Knowledge of cloud architecture and implementation features from at least one of the leading cloud service providers; and knowledge of how to evaluate architectural alternatives for private, public and hybrid cloud models

**Experience**

**Essential**
- Proven experience and skills in at least 2 of the following; technical architecture, application development, middleware, database development/management, systems development, data integration.
- Proven experience and skills in one of the following (senior Data Architecture role, senior Technical Architecture role or senior software development role)
● Proven executive leadership skills and experience roles with a demonstrable track record of technology innovation, design, development, and implementation.
● Proven experience across multiple areas of software, hardware and integration technologies;
● Proven experience and skills in developing and implementing data strategies in a data rich environment;
● Proven Experience of the full data lifecycle;
● Proven experience and skills in Sound IT Security knowledge gained by direct experience or training or by collaborating with specialist IT Security experts.

Desirable
● Experience in cloud computing and automation
● Scientific research experience at postdoctoral level or equivalent
● Experience of DevSecOps and MLOps
● Experience in data intensive or biotechnological or clinical research
● Experience in data analytics in a data driven environment;

Skills
● An ability to think strategically and the ability to communicate and inspire others to follow
● Proven leadership skills, initiative and drive;
● Project management skills.
● Ability to assess needs, evaluate options and develop technology solutions
● Problem solving
● Proven ability to develop and mentor a Mentoring and developing high performing technical teams

Personal attributes
● Ability to work as part of a team;
● Confident in your judgment and decision making
● User focused, collaborative, innovative, open
● Understands the importance of quality service and pro-actively delivers this.
● Pays close attention to quality standards.
● Takes pride in providing excellent customer service providing a helpful and courteous approach to colleagues, students, academic staff and customers.
● Committed to achieving results, putting in additional effort as required.
● Flexible approach to working hours as the demands of the post may require work outside normal office working hours from time to time.

Trinity Competencies
In Trinity there are 6 Core Competencies that are applicable to all roles across a range of professional, administrative and support jobs, unlike specialist or technical skills which may be job specific. They provide a common language for describing performance and the abilities/attributes displayed by individuals. They focus on ‘how’ tasks are achieved, not ‘what’ is achieved.

Below is a summary definition of the 6 Core Competencies.
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<tr>
<th>Competency</th>
<th>Summary Definition</th>
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<tr>
<td><strong>Agile Leader</strong></td>
<td>Sees the big picture and harnesses opportunities to achieve the University's goals. Creates clear direction for the future and how to get there.</td>
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<tr>
<td><strong>Unlocks Potential</strong></td>
<td>Energised, capable and confident to take ownership and responsibility for their development and goals. Motivates, supports and develops people to perform to the best of their ability.</td>
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<tr>
<td><strong>Service Ethos</strong></td>
<td>Finds ways to increase stakeholder and customer satisfaction. Builds relationships, is proactive and delivery focused in order to anticipate, meet &amp; exceed expectations.</td>
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<td><strong>Builds Trusted Relationships</strong></td>
<td>Communicates in a clear and respectful manner building trust and commitment for mutually beneficial outcomes.</td>
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<td><strong>Decision-making</strong></td>
<td>Confidently makes timely decisions based on knowledge, evidence and sound judgement.</td>
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<tr>
<td><strong>Achieves Results</strong></td>
<td>Delivers results by setting direction, planning, executing and evaluating impact.</td>
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**Application Information**

In order to assist the selection process, applicants should submit a Curriculum Vitae and a Cover Letter (Max 2 x A4 page) that specifically address the following points in their application.

- Applicants must have the essential experience set out in this role specification and applicants should clearly address this experience and how they obtained their knowledge in their application.
- Applicants should demonstrate their ability to drive the development, implementation and ownership of the PDP technical architecture and strategy, providing examples of previous relevant experience.
- Illustrate, through past examples, their ability to collaborate with researchers and with other stakeholders in research and/or technology development projects.

**Further Information**

Informal enquiries about this post should be made to declan.mckibben@adaptcentre.ie