

Post Title:	Automation & Tooling Solution Architect
Grade:	8

Job Description

2.1. Purpose

The Automation & Tooling Solution Architect will architect and design systems in line with the overall enterprise architecture and in accordance with the needs of the business. They will drive a culture of automation, service improvement and agile working across the IT product lifecycle. They will work with the Chief Technology Officer to assure the cyber-security needs of the business and to deliver the Information Security Strategy for the University Group.

The post holder will have an excellent understanding of technology and technology trends within the field of systems automation technology and middleware. They will further understand industry approaches such as 'DevOps' and know how to apply this across the product lifecycle to improve services and speed of delivery. They will apply this insight to enable the business to innovate through the use of technology, tooling and automation approaches.

They will pro-actively scan the market and look to bring in emerging technologies and techniques that the University Group might lever for competitive advantage.

The post will be line-managed by the Chief Technology Officer and will work closely with other architects across disciplines in order to build effective solutions for the University Group.

2.2. Main Duties and Responsibilities

1. Leads the development of solution architectures for specific automation and tooling systems and middleware. Ensures that appropriate tools and methods are available, understood and employed in architecture development. Within a change programme, leads the preparation of technical plans and, in liaison with business assurance and project staff, ensures that appropriate technical resources are made available. Provides advice on technical aspects of solution development and integration and ensures that relevant technical strategies, policies, standards and practices (including security) are applied correctly.
2. Actively maintains recognised expert level knowledge in automation and tooling technologies and middleware. Provides definitive and expert advice in automation and tooling technologies. Oversees the provision of specialist advice by others, consolidates expertise from multiple sources, including third party experts, to provide coherent advice to further organisational objectives. Supports and promotes the development and sharing of specialist knowledge within the organisation.

3. Takes responsibility for the design, procurement, installation, upgrading, operation, control, maintenance and effective use of IT automation and tooling components & middleware and monitors their performance. Provides technical management of IT automation and tooling & middleware, ensuring that agreed service levels are met and all relevant policies and procedures are adhered to. Schedules and supervises IT automation and tooling & middleware maintenance and installation work. Ensures that operational problems are identified, recorded, monitored and resolved. Provides appropriate status and other reports to specialists, users and managers. Ensures that operational procedures and working practices are fit for purpose and current. Investigates and manages the adoption of appropriate tools, techniques and processes (including automation) for the management of systems and services.
4. Develops organisational policies, standards, and guidelines for systems integration and build. Leads the development of organisational capabilities for systems integration and build including automation and continuous integration. Provides resources to ensure systems integration and build can operate effectively and ensure adoption and adherence to policies and standards.
5. Provides advice and guidance on security strategies to manage identified risks and ensure adoption and adherence to standards. Obtains and acts on vulnerability information and conducts security risk assessments, business impact analysis and accreditation on complex information systems. Investigates major breaches of security, and recommends appropriate control improvements. Contributes to development of information security policy, standards and guidelines.
6. Reviews current and proposed automation and tooling systems for compliance with the organisation's obligations (including legislation, regulatory, contractual and agreed standards/policies) and adherence to overall strategy. Provides specialist advice to those accountable for governance to correct compliance issues.
7. Maintains an awareness of the global needs of the organisation. Promotes (to both information systems and business management) the benefits that a common approach to information and communications technology deployment will bring to the business as a whole. Coordinates the promotion, acquisition, development, and implementation of automation and tooling systems and services in close liaison with those responsible for management and strategy.
8. Manages the automation and tooling innovation pipeline and executes innovation processes. Develops, evolves and adapts innovation tools, processes and infrastructures to drive the process of innovation. Identifies resources and capabilities needed to support innovation. Encourages and motivates innovation communities, teams and individuals to share creative ideas and learn from failures. Manages and facilitates the communication and open flow of creative ideas between interested parties and the set-up of innovation networks and communities.

9. Monitors the external environment to gather intelligence on emerging automation and tooling technologies. Assesses and documents the impacts, threats and opportunities to the organisation. Creates reports and technology roadmaps and shares knowledge and insights with others.
10. Provides advice, guidance and expertise to promote adoption of methods and tools and adherence to policies and standards. Evaluates and selects appropriate methods and tools in line with agreed policies and standards. Implements methods and tools at programme, project and team level including selection and tailoring in line with agreed standards. Manages reviews of the benefits and value of methods and tools. Identifies and recommends improvements. Contributes to organisational policies, standards, and guidelines for methods and tools.
11. Adopts and adapts appropriate systems design methods, tools and techniques selecting appropriately from predictive (plan-driven) approaches or adaptive (iterative/agile) approaches, and ensures they are applied effectively. Designs large or complex systems. Undertakes impact analysis on major design options and trade-off. Makes recommendations and assesses and manages associated risks. Reviews others' systems designs to ensure selection of appropriate technology, efficient use of resources, and integration of multiple systems and technology. Ensures that the system design balances functional and non-functional requirements. Contributes to development of systems design policies and standards and selection of architecture components.

Deputises for the Chief Technology Officer as required.

AND such other duties as are within the scope of the spirit of the job purpose, the title of the post and its grading.

2.3. Supervision Received

Line management is from the Chief Technology Officer.

2.4. Supervision Given

None.

2.5. Contacts

- IT Services staff, including Executive Team.
- University Group Leadership Team.
- Staff and students in other Schools / Support Areas of the University Group.
- External Suppliers and other education institutions.

3. Person Specification

ATTRIBUTES	ESSENTIAL	ADVANTAGEOUS
<i>Education & Qualifications</i>	<ul style="list-style-type: none"> • Educated to degree level in a relevant discipline with a professional qualification or substantial experience in related field in lieu of the above. 	<ul style="list-style-type: none"> • Postgraduate or professional qualification in a relevant discipline, or chartered member. • DASA (DevOps Practitioner). • CISSP.
<i>Knowledge & Experience</i>	<ul style="list-style-type: none"> • Substantial experience of automation & tooling solution architecture in a large, complex organisation. • Significant experience in developing & supporting complex middleware environments. • Knowledge of monitoring and automation technologies. 	<ul style="list-style-type: none"> • Higher Education experience. • Experience of 'DevOps' methodologies.
<i>Job-related Skills, Abilities & Competencies</i>	<ul style="list-style-type: none"> • Excellent analytical, strategic conceptual thinking, strategic planning and execution skills. • Exceptional leadership skills with the ability to develop and communicate the automation & tooling solution architecture vision and inspire, motivate and develop staff. • Takes accountability and has strong sense of ownership. • Results oriented and a commitment to a high quality customer service • A distinctive blend of business, IT, financial and communication skills. • Understanding business organisation, politics and culture. • Ability to build and maintain broad network of business relationships. • Knowledge of customer behaviours, needs and expectations. • Ability to lead a team/discipline to quickly resolve complex problems in the provision of IT services. • Good understanding of current and 	<ul style="list-style-type: none"> • Designing modular architecture. • Public cloud infrastructure. • Microsoft Azure. • Amazon Web Services.

	<p>emerging technologies and how other enterprises are employing them to drive digital business support.</p> <ul style="list-style-type: none"> • Application solution design & architecture. • Cyber-security within application & middleware technologies. 	
<i>Interpersonal Skills</i>	<ul style="list-style-type: none"> • Able to influence and negotiate at all levels and also where resources may not be in direct control of this role. • Excellent communication, and presentation skills. • Ability to forge effective relationships in a complex matrix management environment. • Results oriented, adaptive and decisive. • Ability to build trust and display integrity. • Ability to work collaboratively and be a key team player. • Creative and innovative thinking. • Can resolve conflicts and problems. 	
<i>Other Requirements</i>	<ul style="list-style-type: none"> • A flexible approach to working hours and location, including a willingness to travel, locally, nationally or overseas, as required. • An appreciation of other cultures; the global reach of the University Group and its international agenda. • Ability to work flexibly and extended hours by agreement to meet tight, fixed deadlines or as required by service imperatives. 	