Science Systems Architect

The purpose of this Science Systems Architect role is to refine the strategic outcomes for our scientific data, software and infrastructure, to provide technology direction for scientific projects or initiatives and to lead and promote the overall improvement of data science disciplines across GNS Science. This role will work with our scientific programmers, data analysts and science staff to understand the needs of our research delivery and to design and develop our scientific architectural framework.

The Science Systems Architect will also be heavily involved in the long term design and architecture for Geonet. It will have a close working relationship with our Information Services and Technology Department to ensure that organisational and scientific architectural frameworks are aligned. This role will ensure that the respective business, application, data and technology perspectives are in line with GNS Science’s technology and governance strategies, policies and standards.

Position priorities and responsibilities

Priorities and responsibilities

- Liaises with science departments/teams to understand the needs of research delivery
- Researches overall ICT solutions on the market for particular technical requirements and research delivery needs
- Liaises with other IT areas to design solution architecture for research delivery
- Provides architectural guidance for software solutions and data
- Explains technical issues and IT solution strategies to stakeholders and customers
- Identifies and mitigates existing business risk or risks associated with architecture
- Performs system and data analysis and planning
- Leads, presents and translates the design to ensure the design will meet the organisation’s requirements
- Reviews and analyses current solutions and its ability to support strategic objectives
- Is responsible for documentation of architectural framework, solution templates, system processes and information flows

Reports to: Data Science and Geohazards Monitoring Manager

Department: Data Science and Geohazards Monitoring

Group: Science

Tenure: Permanent

Location: Avalon

Direct reports: Nil

Budget: Nil

Date: March 2020
Leads, recommends and participates in the design and implementation of standards, tools and methodologies

Recommends and participates in the analysis, evaluation and development of enterprise long-term strategic and operating plans to ensure that the Science Systems Architect objectives are consistent with the organisation’s strategic direction.

Responsibilities of all staff

- Comply with all GNS Science policies and procedures
- Contribute to making GNS Science a healthy and safe place to work by complying with the responsibilities and accountabilities outlined in the Health and Safety Management System Framework

The responsibilities of this position will change over time to respond to changing needs. The incumbent will need the flexibility to adapt and develop as the company and its environment evolves.

Key working relationships

**Internal:**
- Information Service & Technology staff
- Scientific programmers and database experts
- General Manager Strategy
- General Manager Stakeholder Relations
- Managers and science staff

**External:**
- Contract Business Architects
- Software and Hardware suppliers

Person specification

Skills, knowledge and attributes

- Extensive knowledge of Cloud architectures with Amazon Web Services preferred
- Experience working with large and complex data sets and real time data
- Ability to rapidly assimilate new knowledge and technologies
- A knowledge of Agile software development, database design, and mobile development would be useful
- Strong organisational ability to optimise and prioritise conflicting demands in a busy environment, to achieve deadlines and see responsibilities through to completion
- Demonstrated interpersonal and communications, including oral and written communication and particularly the ability to present ideas, information and advice in a way that is understandable by a range of audiences
- Excellent self-management skills, including working effectively without direct supervision, managing and organising fluctuating workloads in sometimes stressful situations
- Critical analysis and decision-making skills
- Problem solving
- A willingness to learn and stay up to date with new technology
- Is able to personally cope with ambiguity and change
- Able to work effectively and competently with people at all levels; within and external to the organisation
**Experience**

**Essential:**
- Minimum of 10 years’ recent experience in the IT industry with an emphasis on complex distributed real-time systems and big data
- Proven experience designing, documenting, and communicating complex IT solutions
- Proven experience working with service-oriented application architecture and technologies
- Previous involvement in setting technology direction and design planning
- Experience with data science methods and geospatial solutions

**Qualifications**

**Essential:**
- A relevant tertiary or technical qualification and demonstrated industry experience

**Competencies**

The following competencies are expected of all staff:

- **Results Orientation:** The ability and commitment to achieve effective results, and work towards or exceed agreed goals.

- **Business Focus:** The ability and desire to apply appropriate principles and practices to maximise revenue, minimise cost, while meeting our obligations.

- **Relationship Management:** The ability and commitment to develop and maintain effective relationships with groups and individuals.

- **Communication:** The ability to express thoughts and ideas clearly and consistently (orally and in writing).

- **Innovation and Initiative:** The ability and commitment to seek and use better ways of doing things (to improve personal and GNS Science performance).

- **Teamwork:** The ability to establish and maintain effective and cooperative relationships.

- **Professional Integrity:** Act in a manner that conveys high personal and professional standards.

- **Technical Expertise:** The ability to maintain and develop technical expertise.

- **Leadership and Management Skills:** The ability to inspire others to achieve desired results and to develop and enable others to realise their full potential.