

Role Description

Geoscience Data Systems Developer



Planning,
Industry &
Environment

Cluster	Planning, Industry and Environment
Agency	Department of Planning, Industry and Environment
Division/Branch/Unit	Resources and Geoscience / Geological Survey of NSW
Location	Flexible
Classification/Grade/Band	Clerk grade 7/8
Role Number	35884
ANZSCO Code	261211
PCAT Code	1226492
Date of Approval	November 2019
Agency Website	www.dpie.nsw.gov.au

Agency overview

The Planning, Industry and Environment Cluster brings together the functions from the former Planning & Environment and Industry Clusters.

The new Cluster will drive for greater levels of integration and efficiency across key areas such as long-term planning, precincts, housing, property, infrastructure priorities, open space, the environment, our natural resources – land, water, mining – energy, and growing our industries. In particular, there will be a redoubling of emphasis on regional NSW.

The Division of Resources and Geoscience sets strategic policy for the state's mineral and energy resources, gathers, analyses and disseminates geoscientific information, and assesses and determines applications for mineral and petroleum titles for exploration activities and extractive uses.

Primary purpose of the role

Maintains and enhances the GSNSW online information systems including spatial and aspatial databases, server software for data management and custom services residing in the AWS cloud. The role improves accessibility of information through the use of modern practices, interoperability standards/protocols and open source technologies to support the provision of geological data to the mining/exploration industry, government and community.

Key accountabilities

- Develop systems and extend, maintain and support existing software systems (DiGS, MinView, others).

- Provide technical support for existing business critical information systems of Geological Survey (primarily DIGS/EROL) including the maintenance and enhancement of system functionality.
- Monitor and evaluate systems and information content, identifying potential problems or errors, initiating follow-up or corrective action and maintaining backup systems..
- Provide technical support for existing business critical information systems of Geological Survey (primarily DiGS and MinView) including the maintenance and enhancement of systems functionality.
- Collaborate with the Project stakeholders and Corporate IT to deliver enhancements or upgrades to sustain system integrity for geo-located data systems, addressing potential risks and security issues.
- Liaise with internal and external stakeholders to ensure the continuous improvement of the delivery processes for geoscience information and corporate data.
- Undertake research, consultation, analysis, monitoring and evaluation to ensure system development and administration activities comply with corporate business processes and standards.
- Contribute to the development of a strong and effective team culture in the Geoscience Information Unit by participating in other systems and data projects.

Key challenges

- Evaluating and implementing appropriate leading-edge technologies may pose significant challenges due to the rapid rate of innovation in technology.
- Managing multiple projects and issues effectively within allocated timeframes and resources in a complex environment and working closely with stakeholders to achieve successful outcomes.
- Understanding the complexities of geoscience data types and formats and corporate content (regulatory business functions and processes of the division).

Key relationships

Who	Why
Internal	
Team Leader	<ul style="list-style-type: none"> • Works closely to provide information, seek advice and instructions. • Escalate issues, make suggestions and provide updates.
Work team	<ul style="list-style-type: none"> • Participate in discussions and decisions regarding the implementation of innovation and best practice. • Work collaboratively and exchange information to contribute to achieving the teams' business outcomes.
Clients/stakeholders	<ul style="list-style-type: none"> • Liaise with and exchange information and data to understand business needs for system improvements and resolve and provide solutions to issues.
Business and Technology Services	<ul style="list-style-type: none"> • Exchange information to deliver major enhancements or upgrades to document management systems and databases.

Role dimensions

Decision making

- Identifies the priority requirements of internal and external stakeholders that require action.
- Undertakes and delivers work priorities and projects allocated by the Team Leader and Project Manager.
- Recommends changes to the development and deployment of new technologies and processes.

Reporting line

Role reports to the Director, Geoscience Information

Direct reports

Nil.

Budget/Expenditure

Nil.

Essential requirements

- Demonstrated knowledge and experience in modern programming languages eg. Python, Javascript, TypeScript, and web user interface development, open source software and production environments.
- Experience in Linux platform development, open source software and production environments.
- Linux administration skills.

Desirable skills

- Capacity to learn new languages, frameworks and skills.
- Familiarity with DevOps tools and processes, including test-driven development, continuous integration and infrastructure as code.
- Data science skills and knowledge of data science tools like Pandas, Jupyter, data visualisation, R.
- Broad knowledge of the open source software ecosystem and cloud-native landscape.
- Knowledge of spatial technologies such as Esri ArcGIS, FME, PostGIS, GeoServer and GeoNetwork.
- Exposure to Java and PHP legacy systems.
- Tertiary qualifications in an ICT discipline.





Capabilities for the role

The NSW Public Sector Capability Framework applies to all NSW public sector employees. The Capability Framework is available at www.psc.nsw.gov.au/capabilityframework

Capability summary

Below is the full list of capabilities and the level required for this role. The capabilities in bold are the focus capabilities for this role. Refer to the next section for further information about the focus capabilities.

NSW Public Sector Capability Framework

Capability Group	Capability Name	Level
 Personal Attributes	Display Resilience and Courage	Intermediate
	Act with Integrity	Intermediate
	Manage Self	Adept
	Value Diversity	Intermediate
 Relationships	Communicate Effectively	Adept
	Commit to Customer Service	Intermediate
	Work Collaboratively	Adept
	Influence and Negotiate	Intermediate
 Results	Deliver Results	Intermediate
	Plan and Prioritise	Adept
	Think and Solve Problems	Adept
	Demonstrate Accountability	Intermediate
 Business Enablers	Finance	Intermediate
	Technology	Adept
	Procurement and Contract Management	Intermediate
	Project Management	Adept

Focus capabilities

The focus capabilities for the role are the capabilities in which occupants must demonstrate immediate competence. The behavioural indicators provide examples of the types of behaviours that would be expected at that level and should be reviewed in conjunction with the role's key accountabilities.

NSW Public Sector Capability Framework

Group and Capability	Level	Behavioural Indicators
Personal Attributes Act with Integrity	Intermediate	<ul style="list-style-type: none"> • Represent the organisation in an honest, ethical and professional way • Support a culture of integrity and professionalism • Understand and follow legislation, rules, policies, guidelines and codes of conduct • Help others to understand their obligations to comply with legislation, rules, policies, guidelines and codes of conduct • Recognise and report misconduct, illegal or inappropriate behaviour • Report and manage apparent conflicts of interest
Personal Attributes Manage Self	Adept	<ul style="list-style-type: none"> • Look for and take advantage of opportunities to learn new skills and develop strengths • Show commitment to achieving challenging goals • Examine and reflect on own performance • Seek and respond positively to constructive feedback and
Relationships Communicate Effectively	Adept	<ul style="list-style-type: none"> • Tailor communication to the audience • Clearly explain complex concepts and arguments to individuals and groups • Monitor own and others' non-verbal cues and adapt where necessary • Create opportunities for others to be heard • Actively listen to others and clarify own understanding • Write fluently in a range of styles and formats
Relationships Commit to Customer Service	Intermediate	<ul style="list-style-type: none"> • Support a culture of quality customer service in the organisation • Demonstrate a thorough knowledge of the services provided and relay to customers • Identify and respond quickly to customer needs • Consider customer service requirements and develop solutions to meet needs • Resolve complex customer issues and needs • Co-operate across work areas to improve outcomes for customers

Results Think and Solve Problems	Adept	<ul style="list-style-type: none"> • Research and analyse information, identify interrelationships and make recommendations based on relevant evidence • Anticipate, identify and address issues and potential problems and select the most effective solutions from a range of option • Participate in and contribute to team/unit initiatives to resolve common issues or barriers to effectiveness • Identify and share business process improvements to enhance effectiveness
Results Demonstrate Accountability	Intermediate	<ul style="list-style-type: none"> • Take responsibility and be accountable for own actions • Understand delegations and act within authority levels • Identify and follow safe work practices, and be vigilant about their application by self and others • Be alert to risks that might impact the completion of an activity and escalate these when identified • Use financial and other resources responsibly
Business Enablers Technology	Adept	<ul style="list-style-type: none"> • Demonstrate a sound understanding of technology relevant to the work unit, and identify and select the most appropriate technology for assigned tasks • Identify opportunities to use a broad range of communications technologies to deliver effective messages • Understand, act on and monitor compliance with information and communications security and use policies • Identify ways to leverage the value of technology to achieve team/unit outcomes, using the existing technology of the business • Support compliance with the records, information and
Business Enablers Project Management	Adept	<ul style="list-style-type: none"> • Prepare clear project proposals and define scope and goals in measurable terms • Establish performance outcomes and measures for key project goals, and define monitoring, reporting and communication requirements • Prepare accurate estimates of costs and resources required for more complex projects • Communicate the project strategy and its expected benefits to others • Monitor the completion of project milestones against goals and initiate amendments where necessary • Evaluate progress and identify improvements to inform future projects