Role Description
Senior Data Engineer, Platforms

Cluster	Customer Service
Department/ Agency	Department of Customer Service
Division/ Branch/Unit	Customer Delivery and Transformation / Data, Insights and Transformation / Data Analytics Centre
Classification/Grade/Band	Clerk Grade 11/12
Role Number	(P&C will assign code)
ANZSCO Code	261312
PCAT Code	1226468
Date of Approval	July 2019

Primary purpose of the role

Technical delivery lead on platform and project builds for building and maintaining optimized and highly available data pipelines that facilitate data management and data analytics solutions using tools available on the DAC Platform. The role will drive developing data processing frameworks and data architectural approaches that scales to handle the business's growing demands. This is a hands-on role which requires technical expertise to deliver data and analytical services including data ingestion, transformation, storage, and reporting, and strives to continuously develop new and improved data engineering capabilities.

Key accountabilities

- Design data solutions to meet business, technical and user requirements. This includes building modern data pipelines that meet that meet functional/non-functional business requirements and provide end to end data solutions
- Participate in proofs-of-concepts on platform innovation, and effectively transition and scale those concepts into production at scale through, engineering, deployment and commercialization
- Contribute to ongoing management of the Unit's platform including platform enhancements, capacity management, performance monitoring, troubleshooting and resolution of technical issues
- Identify, design, and implement process improvements: automating manual processes, optimizing data delivery, re-designing infrastructure for greater scalability
- Technical ownership for data and data pipelines to ensure compliance with data standards, architectural standards, and achievement of business requirements
- Build a strong understanding of platform architecture and the best way to leverage it to achieve effective outcomes for a given project
- Support compliance with data, information and security management requirements of the Unit
- Collaborating with line management executives and with other stakeholders to ensure active support and resolution of risk related matters

Key challenges

- Working within the boundaries of the platform to provide solutions, whilst simultaneously innovating new solutions and supporting the platform to on-board new clients, and setting operating standards given the complexity of dynamic agency environment.

- Working within the security, governance and process constraints of the Unit and the larger organisation within which it sits
- Maintaining knowledge of contemporary trends and developments and an understanding of current and emerging data management, analytic, statistical and visual technologies and initiatives

Key relationships

Who	Why
Internal	
Executive/Manager	• Escalate issues, keep informed, advise, receive guidance and instructions. • Participate in meetings and collaborate • Provide recommendations on technology and new technology developments • Provide clear, unbiased advice and consultancy to executives on platforms
Work Team	• Provide technical solutions to the team including architectures, designs, code and review • Champion best practice use of the platform • Encourage team members to work collaboratively to achieve business outcomes • Guide, support, coach and mentor junior team members
Internal Customers/ Stakeholders	• Provide a client-focused approach to platform and project delivery • Communicate with business stakeholders on technology subjects in a business context • Participate in flow of information, seek clarification and provide advice and responses to ensure prompt resolution of issues • Address/respond to queries to provide advice where possible or redirect to relevant party for review and resolution
External	
External Customers/ Stakeholders	• Develop and maintain effective working relationships and open channels of communication to provide and obtain information, and ensure effective management and implementation of expectations and standards • Engage with, consult, seek clarification and provide advice and responses to ensure the prompt resolution of issues
Vendors/Service Providers	• May be involved in evaluating technology and assisting in managing vendor relationships from a technical perspective from time to time
Industry professionals/ consultants	• Seek/maintain specialist knowledge/advice and collaborate, and keep up with global best practice in agile and project management • Participate in forums, groups to represent the agency and share information • Identify and lead opportunities to discuss innovation and best practice

Role dimensions

Decision making

This role has autonomy and makes decisions that are under their direct control as directed by their Executive. It refers to the Executive decisions that require significant change to program outcomes or timeframes or are likely to escalate. This role is fully accountable for the delivery of work assignments on time and to expectations in terms of quality, deliverables and outcomes. This role submits reports, business cases and other forms of written advice with minimal input from the Director.

Reporting line

Engineering Manager, Platforms

Direct reports

This role has no direct reports

Budget/Expenditure

As per the Customer Service Delegations

Essential requirements

- Software Engineering background and relevant tertiary qualifications or demonstrated currency of knowledge in the areas of opensource data products.
- Satisfactory Criminal Record Check
- Working with Children Certification

Capabilities for the role

The NSW Public Sector Capability Framework applies to all NSW public sector employees. The Capability Framework is available at http://www.psc.nsw.gov.au/sector-support/capability-framework

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.

This role also utilises an occupation specific capability set which contains information from the Skills Framework for the Information Age (SFIA). The capability set is available at www.psc.nsw.gov.au/capabilityframework/ICT

NSW Public Sector Capability Framework		
Capability Group	**Capability Name**	**Level**
Personal Attributes	Display Resilience and Courage	Adept
	Act with Integrity	**Advanced**
	Manage Self	Adept
	Value Diversity	Intermediate

NSW Public Sector Capability Framework		
Capability Group	**Capability Name**	**Level**
Relationships	**Communicate Effectively**	**Adept**
	Commit to Customer Service	**Adept**
	Work Collaboratively	Adept
	Influence and Negotiate	Intermediate
Results	**Deliver Results**	**Advanced**
	Plan and Prioritise	Intermediate
	Think and Solve Problems	**Adept**
	Demonstrate Accountability	Adept
Business Enablers	Finance	Adept
	Technology	**Advanced**
	Procurement and Contract Management	Adept
	Project Management	Adept

Occupation / profession specific capabilities		
Capability Set	**Category, Sub-category and Skill**	**Level and Code**
SFIA	**Development & Implementation, Systems Development, Programming/software development**	**Level 5 - PROG**
	Development and Implementation, Systems Development, Systems Design	**Level 5 - DESN**
	Change and Transformation, Business Change Management, Requirements Definition and Management	**Level 5 - REQM**
	Development and Implementation, Systems Development, Testing	Level 5 - TEST

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	Advanced	• Model the highest standards of ethical behaviour and reinforce them in others • Represent the organisation in an honest, ethical and professional way and set an example for others to follow • Ensure that others have a working understanding of the legislation and policy framework within which they operate

NSW GOVERNMENT

NSW Public Sector Capability Framework		
Group and Capability	**Level**	**Behavioural Indicators**
		• Promote a culture of integrity and professionalism within the organisation and in dealings external to government
		• Monitor ethical practices, standards and systems and reinforce their use
		• Act on reported breaches of rules, policies and guidelines
		•
Relationships Communicate Effectively	Adept	• 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	Adept	• Take responsibility for delivering high quality customer-focused services
		• Understand customer perspectives and ensure responsiveness to their needs
		• Identify customer service needs and implement solutions
		• Find opportunities to co-operate with internal and external parties to improve outcomes for customers
		• Maintain relationships with key customers in area of expertise
		• Connect and collaborate with relevant stakeholders within the community
Results Deliver Results	Advanced	• Take responsibility for delivering on intended outcomes
		• Make sure team/unit staff understand expected goals and acknowledge success
		• Identify changed priorities and ensure allocation of resources meets new business needs
		• Ensure financial implications of changed priorities are explicit and budgeted for
		• Use own expertise and seek others' expertise to achieve work outcomes
Results Think and Solve Problems	Adept	• 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 options
		• 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

NSW Public Sector Capability Framework		
Group and Capability	**Level**	**Behavioural Indicators**
		•
Business Enablers Technology	Advanced	• Show commitment to the use of existing and deployment of appropriate new technologies in the workplace • Implement appropriate controls to ensure compliance with information and communications security and use policies • Maintain a level of currency regarding emerging technologies and how they might be applied to support business outcomes • Seek advice from appropriate technical experts to leverage information, communication and other technologies to achieve business outcomes • Implement and monitor appropriate records, information and knowledge management systems protocols and policies

Occupation specific capability set (Skills Framework for the Information Age – SFIA)		
Category and Sub-Category	**Level and Code**	**Skill and Level Descriptions**
Development & Implementation, Systems Development	**Level 5 - PROG**	**Programming/software development (PROG)** Takes technical responsibility across all stages and iterations of software development. Plans and drives software construction activities. Adopts and adapts appropriate software development methods, tools and techniques selecting appropriately from predictive (plan-driven) approaches or adaptive (iterative/agile) approaches. Measures and monitors applications of project/team standards for software construction including software security. Contributes to the development of organisational policies, standards, and guidelines for software development.
Development and Implementation, Systems Development	**Level 5 - DESN**	**Systems Design (DESN)** 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.

Occupation specific capability set (Skills Framework for the Information Age – SFIA)			
Category and Sub-Category	**Level and Code**	**Skill and Level Descriptions**	
Change and Transformation, Business Change Management	**Level 5 – REQM**	**Requirements Definition and Management (REQM)** Plans and drives scoping, requirements definition and prioritisation activities for large, complex initiatives. Selects, adopts and adapts appropriate requirements definition and management methods, tools and techniques selecting appropriately from predictive (plan-driven) approaches or adaptive (iterative/agile) approaches. Obtains input from, and formal agreement to, requirements from a diverse range of stakeholders. Negotiates with stakeholders to manage competing priorities and conflicts. Establishes requirements baselines. Ensures changes to requirements are investigated and managed. Contributes to the development of organisational methods and standards.	