Role Description
System Engineer - Data Networks

Cluster	Transport & Infrastructure
Agency	Sydney Trains
Division/Branch/Unit	Engineering and Maintenance / Major Works / Operational Technology
Location	Clyde
Role Grade or Band	RC5
Senior Executive Work Level Standards	Not Applicable
Kind of Employment	Permanent Full Time
Role Number	50053930
ANZSCO Code	263312
PCAT Code	111912
Job Code	81000332
Health Assessment Category - Safety	Category 3
Vision	Nil
Hearing	Category 3
Date of Approval	January 2020
Agency Website	www.sydneytrains.nsw.gov.au

Agency overview

Sydney Trains provides train services throughout the Sydney metropolitan area and was established in July 2013. Its vision is to keep Sydney moving by putting the customer at the centre of everything it does and delivering safe, reliable and clean rail services to the people of Sydney. The organisation is focused on providing sustainable, efficient and cost effective services.

Primary purpose of the role

The System Engineer - Data Networks, is to perform allocated system engineering works associated with the ongoing development of Sydney Trains' Operation-critical Data Networks including implementation of allocated projects, both internal and external. The role is required to undertake technical options, technical requirements definition, logical decompositions, system interface management, and Type Approval activities are compliant with Sydney Trains' Engineering and Configuration Management processes.

Key accountabilities

- Prepare Engineering design, implementation and commissioning test plans and specifications to facilitate program/project delivery.

- Provide detailed technical directions for the installation, configuration and commissioning of new or altered Operation-critical Data networks equipment to assist in deployment whilst meeting project requirements.
- Provide specialist technical directions for the installation, configuration and commissioning of new or altered Operation-critical Data networks equipment and support to field staff
- Contribute to technical management activities for Sydney Trains' Operation-Critical Data Network including technical planning (e.g. system verification and validation plan), compliance to Engineering processes, Asset Standards Authority, technical risk management, system configuration management
- Analyse and report on system performance and reliability to determine and make recommendations for new works or upgrade of Sydney Trains' Operation-critical Data Network for inclusion in the development and scoping of Asset Management's Annual Works Program /Major Periodic Maintenance program.
- Consistently deliver efficiency and set a platform for increased commerciality while holding and exercising appropriate Engineering Design Authority function for Sydney Trains' Operation-critical Data Networks.
- Comply with and promote the quality assurance processes for Operation-critical Data Network works, ensuring strict compliance with design requirements, specifications and standards, Sydney Trains' Engineering Design process and Configuration Change Control processes.
- Execute safety responsibilities, authorities and accountabilities consistent with Sydney Trains safety management system requirements which are defined in SMS document number SMS-02-RG-3058

Key challenges

- Integrating the rapidly developing data communication technologies into railway environment with relatively long asset life
- Strict adherence to Engineering processes while at the same time, delivering efficiency and setting a platform for increased commerciality

Key relationships

Who	Why
Internal	
Manager	• Escalate issues, keep informed and receive instructions • Provide regular updates on assigned engineering tasks, projects, issues and priorities • Participate in meetings and share information
Work Team	• Collaborate with to provide engineering design outcomes
Stakeholders	• Provide Engineering Design deliverables to support project delivery (MPM, RM, Capital, External, Transport Projects) • Collaborate with Operational Technology Network Maintenance Team to maintain integrity of OT systems and assets • Liaison with Asset Standards Authority on issues around technical standards associated with data networks and system
External	
Stakeholders	• Liaison on technical matters with current and prospective vendors and

Who	Why
	suppliers
	• Liaison on technical matters between OT Engineering and Rail Organisations and Alliances

Role dimensions

Decision making

As per the delegations of the role

Reporting line

The position reports to the Data Networks Manager

Direct reports

Nil

Budget/Expenditure

Nil

Essential requirements

Tertiary qualifications in IT / Electrical / Telecommunications Engineering, qualifying for graduate membership of the Institution of Engineers Australia OR Tertiary qualifications in IT / Electrical / Telecommunications Engineering and extensive experience in rail engineering design.

Demonstrated extensive experience of several years with the design of Ethernet/IP, MPLS and Data networks, in particular as applied to meet operation-critical requirements and should be able to produce designs independently.

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.

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NSW Public Sector Capability Framework		
Capability Group	**Capability Name**	**Level**
Personal Attributes	Display Resilience and Courage	Intermediate
	Act with Integrity	Adept
	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**	**Adept**
	Plan and Prioritise	Adept
	Think and Solve Problems	**Adept**
	Demonstrate Accountability	**Adept**
Business Enablers	Finance	Intermediate
	Technology	**Adept**
	Procurement and Contract Management	Intermediate
	Project Management	Intermediate

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 Manage Self	Adept	• 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 guidance • Demonstrate a high level of personal motivation
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

NSW Public Sector Capability Framework		
Group and Capability	**Level**	**Behavioural Indicators**
Relationships Work Collaboratively	Adept	• Encourage a culture of recognising the value of collaboration • Build co-operation and overcome barriers to information sharing and communication across teams/units • Share lessons learned across teams/units • Identify opportunities to work collaboratively with other teams/units to solve issues and develop better processes and approaches to work
Relationships Influence and Negotiate	Intermediate	• Utilise facts, knowledge and experience to support recommendations • Work towards positive and mutually satisfactory outcomes • Identify and resolve issues in discussion with other staff and stakeholders • Identify others' concerns and expectations • Respond constructively to conflict and disagreements • Keep discussion focused on the key issues
Results Deliver Results	Adept	• Take responsibility for delivering on intended outcomes • Make sure team/unit staff understand expected goals and acknowledge success • Identify resource needs and ensure goals are achieved within budget and deadlines • 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 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	Adept	• Assess work outcomes and identify and share learnings to inform future actions • Ensure that actions of self and others are focused on achieving organisational outcomes • Exercise delegations responsibly • Understand and apply high standards of financial probity with public monies and other resources • Identify and implement safe work practices, taking a systematic risk management approach to ensure health and safety of self and others • Conduct and report on quality control audits • Identify risks to successful achievement of goals, and take

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NSW Public Sector Capability Framework		
Group and Capability	**Level**	**Behavioural Indicators**
		appropriate steps to mitigate those risks
Business Enablers Technology	Adept	• 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 knowledge management requirements of the organisation

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