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 Control Systems Senior Test Engineer is accountable for the verification and validation of internally developed software products to support the delivery and operation of the Sydney Trains ATRICS control systems against specified requirements.

This position will also be responsible for managing the preparation of technical documentation/specifications for the verification, validation and type approval of key software products used in the operation of Sydney Trains network.

Key accountabilities

1. Provide and apply high level specialist technical expertise in the quality verification and validation of technology software and systems infrastructure. Ensure the solution meets expectations in respect to availability, reliability, quality of service, and useability.
2. Contribute to team and project success by working closely with Team/Project Managers on project specifications to meet requirements and delivery of projects within schedule.
3. Comply with and assist in implementing Sydney Trains Safety Management System (SMS) to actively participate in the achievement of a safe working culture and complying with the Rail Safety Act to ensure a safe and reliable rail network.
4. Actively engage in fair and equitable workplace practices and behaviours to ensure discrimination free workplace in accordance with legislative requirements.
5. Maintain an awareness of Sydney Trains environmental policies and procedures minimising the impact of Sydney Trains business on the environment.
6. Check with Team/Project Managers on project specifications to ensure a shared understanding of project scope, budget, time constraints, success indicators, quality, environmental and safety standards.
7. Contribute to team success by following project plans and scheduled works for Systems projects to ensure they are completed to time, cost, quality and safety standards, as well as satisfying client requirements.
8. Liaise with Team/Project Managers to resolve problems related to technical specifications, safety, quality, environmental and resourcing by following established procedures to minimise the impact on the delivery of project elements.
9. Report to Team/Project Managers regarding the status and performance of projects so a collaborative approach can be taken to address issues.
10. Utilise appropriate resources so that current information is accessible about technological, industry and market changes and developments, so that innovative and cost-effective solutions can be provided to satisfy clients' requirements.

**Key challenges**

- To manage and ensure the timely delivery of work requests to meet customer expectations against competing priorities and acute resource constraints via constant and accurate communication.
- Ad-hoc night shift, weekend shift and extended shift work hours to support site installation and commissioning activities (approximately 6 weekends a year) is required.
- Travel to various Control Centre, Signal Box and Signals locations is required.

**Key relationships**

<table>
<thead>
<tr>
<th>Who</th>
<th>Why</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal</strong></td>
<td></td>
</tr>
<tr>
<td>Control System Product Technical leadership team</td>
<td>• Control System Product Technical leadership team</td>
</tr>
<tr>
<td>Program and Project Delivery Units, and Construction Works Delivery Units</td>
<td>• For collaboration on signalling and control system projects impacting system software functions</td>
</tr>
<tr>
<td><strong>External</strong></td>
<td></td>
</tr>
<tr>
<td>Asset Standards Authority, Transport for NSW</td>
<td>• For feedback on standards applying to engineering governance and assurance of design, safety, integrity, construction and commissioning of transport assets for the whole asset lifecycle.</td>
</tr>
</tbody>
</table>

**Role dimensions**

**Decision making**

The position is accountable for the timely delivery of Control Systems Product testing to a high quality and to approved designs within scheduled delivery timeframes.

Independent decision making requirements of the position include:

Independent verification and validation decisions of software or system products or components to requirements and design specification.
Independent recommendations and input into reports and papers where required
Collaborative decision making requirements of the position include:

Compliance with development and test processes in accordance with the quality standards and in-line with approved designs.

**Reporting line**
Test Manager (ATRICS)

**Direct reports**
Nil

**Budget/Expenditure**
Nil

**Essential requirements**

- Tertiary (degree level) qualifications in electrical or computer systems engineering or demonstrated equivalent experience.
- Demonstrated experience in reviewing user requirements in order to produce comprehensive test plans, procedures and reports.
- Experience in testing hardware to ensure that it meets requirements and is configured correctly.
- Experience in Microsoft environments and operating systems using Windows tools to test faults on computer systems.
- Experience in using MS Access and modifying data in databases.
- Demonstrated knowledge and understanding of test methodologies.
- Understanding of railway systems, network rules and procedures, and interlocking principals.
- Experienced in working independently on small projects or contributing to medium sized Systems projects performing formal testing.
- Demonstrated experience in system testing and identifying system deficiencies under test conditions including communications protocols based on serial, network a

**Capabilities for the role**
The NSW public sector capability framework describes the capabilities (knowledge, skills and abilities) needed to perform a role. There are four main groups of capabilities: personal attributes, relationships, results and business enablers, with a fifth people management group of capabilities for roles with managerial responsibilities. These groups, combined with capabilities drawn from occupation-specific capability sets where relevant, work together to provide an understanding of the capabilities needed for the role.

The capabilities are separated into focus capabilities and complementary capabilities.

**Focus capabilities**

Focus capabilities are the capabilities considered the most important for effective performance of the role. These capabilities will be assessed at recruitment.

The focus capabilities for this role are shown below with a brief explanation of what each capability covers and the indicators describing the types of behaviours expected at each level.
<table>
<thead>
<tr>
<th>Capability group/sets</th>
<th>Capability name</th>
<th>Behavioural indicators</th>
<th>Level</th>
</tr>
</thead>
</table>
| **Act with Integrity** | Be ethical and professional, and uphold and promote the public sector values | • Represent the organisation in an honest, ethical and professional way and encourage others to do so  
• Act professionally and support a culture of integrity  
• Identify and explain ethical issues and set an example for others to follow  
• Ensure that others are aware of and understand the legislation and policy framework within which they operate  
• Act to prevent and report misconduct and illegal and inappropriate behaviour | Adept |
| **Communicate Effectively** | Communicate clearly, actively listen to others, and respond with understanding and respect | • Tailor communication to diverse audiences  
• Clearly explain complex concepts and arguments to individuals and groups  
• Create opportunities for others to be heard, listen attentively and encourage them to express their views  
• Share information across teams and units to enable informed decision making  
• Write fluently in plain English and in a range of styles and formats  
• Use contemporary communication channels to share information, engage and interact with diverse audiences | Adept |
| **Commit to Customer Service** | Provide customer-focused services in line with public sector and organisational objectives | • Take responsibility for delivering high-quality customer-focused services  
• Design processes and policies based on the customer’s point of view and needs  
• Understand and measure what is important to customers  
• Use data and information to monitor and improve customer service delivery  
• Find opportunities to cooperate with internal and external stakeholders to improve outcomes for customers  
• Maintain relationships with key customers in area of expertise  
• Connect and collaborate with relevant customers within the community | Adept |
| **Work Collaboratively** | Collaborate with others and value their contribution | • Encourage a culture that recognises the value of collaboration  
• Build cooperation and overcome barriers to information sharing and communication across | Adept |
<table>
<thead>
<tr>
<th>Capability group/sets</th>
<th>Capability name</th>
<th>Behavioural indicators</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>teams and units</td>
<td>Share lessons learned across teams and units</td>
<td></td>
<td></td>
</tr>
<tr>
<td>teams and units</td>
<td>Identify opportunities to leverage the strengths of others to solve issues and develop better processes and approaches to work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>teams and units</td>
<td>Actively use collaboration tools, including digital technologies, to engage diverse audiences in solving problems and improving services</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### FOCUS CAPABILITIES

<table>
<thead>
<tr>
<th>Capability group/sets</th>
<th>Capability name</th>
<th>Behavioural indicators</th>
<th>Level</th>
</tr>
</thead>
</table>
|                       | **Deliver Results**                                  | • Use own and others’ expertise to achieve outcomes, and take responsibility for delivering intended outcomes  
• Make sure staff understand expected goals and acknowledge staff success in achieving these  
• Identify resource needs and ensure goals are achieved within set budgets and deadlines  
• Use business data to evaluate outcomes and inform continuous improvement  
• Identify priorities that need to change and ensure the allocation of resources meets new business needs  
• Ensure that the financial implications of changed priorities are explicit and budgeted for | Adept  |
|                       | **Think and Solve Problems**                         | • Undertake objective, critical analysis to draw accurate conclusions that recognise and manage contextual issues  
• Work through issues, weigh up alternatives and identify the most effective solutions in collaboration with others  
• Take account of the wider business context when considering options to resolve issues  
• Explore a range of possibilities and creative alternatives to contribute to system, process and business improvements  
• Implement systems and processes that are underpinned by high-quality research and analysis  
• Look for opportunities to design innovative solutions to meet user needs and service demands  
• Evaluate the performance and effectiveness of services, policies and programs against clear criteria | Advanced|
|                       | **Technology**                                       | • Champion the use of innovative technologies in the workplace  
• Actively manage risk to ensure compliance with cyber security and acceptable use of technology policies  
• Keep up to date with emerging technologies and technology trends to understand how their application can support business outcomes  
• Seek advice from appropriate subject-matter experts on using technologies to achieve business strategies and outcomes | Advanced|

**Role Description**  
**SENIOR TEST ENGINEER (CONTROL SYSTEMS)**
### Focus Capabilities

<table>
<thead>
<tr>
<th>Capability group/sets</th>
<th>Capability name</th>
<th>Behavioural indicators</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Actively manage risk of breaches to appropriate records, information and knowledge management systems, protocols and policies</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Complementary Capabilities

*Complementary capabilities* are also identified from the Capability Framework and relevant occupation-specific capability sets. They are important to identifying performance required for the role and development opportunities.

Note: capabilities listed as ‘not essential’ for this role are not relevant for recruitment purposes however may be relevant for future career development.

<table>
<thead>
<tr>
<th>Capability group/sets</th>
<th>Capability name</th>
<th>Description</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Display Resilience and Courage</strong></td>
<td>Be open and honest, prepared to express your views, and willing to accept and commit to change</td>
<td>Adept</td>
</tr>
<tr>
<td></td>
<td><strong>Manage Self</strong></td>
<td>Show drive and motivation, an ability to self-reflect and a commitment to learning</td>
<td>Adept</td>
</tr>
<tr>
<td></td>
<td><strong>Value Diversity and Inclusion</strong></td>
<td>Demonstrate inclusive behaviour and show respect for diverse backgrounds, experiences and perspectives</td>
<td>Intermediate</td>
</tr>
<tr>
<td></td>
<td><strong>Influence and Negotiate</strong></td>
<td>Gain consensus and commitment from others, and resolve issues and conflicts</td>
<td>Adept</td>
</tr>
<tr>
<td></td>
<td><strong>Plan and Prioritise</strong></td>
<td>Plan to achieve priority outcomes and respond flexibly to changing circumstances</td>
<td>Adept</td>
</tr>
<tr>
<td></td>
<td><strong>Demonstrate Accountability</strong></td>
<td>Be proactive and responsible for own actions, and adhere to legislation, policy and guidelines</td>
<td>Adept</td>
</tr>
<tr>
<td></td>
<td><strong>Finance</strong></td>
<td>Understand and apply financial processes to achieve value for money and minimise financial risk</td>
<td>Intermediate</td>
</tr>
<tr>
<td></td>
<td><strong>Procurement and Contract Management</strong></td>
<td>Understand and apply procurement processes to ensure effective purchasing and contract performance</td>
<td>Intermediate</td>
</tr>
<tr>
<td></td>
<td><strong>Project Management</strong></td>
<td>Understand and apply effective planning, coordination and control methods</td>
<td>Intermediate</td>
</tr>
</tbody>
</table>