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| **Cluster** | Planning & Environment |
| **Agency** | Museum of Applied Arts and Sciences |
| **Division/Branch/Unit** | Programs & Engagement |
| **Location** | All MAAS Sites |
| **Classification/Grade/Band** | Clerk Grade 9/10 |
| **ANZSCO Code** | 261212 |
| **PCAT Code** | 1236492 |
| **Date of Approval** | March 2019 |
| **Agency Website** | maas.museum |

Agency overview

***A catalyst for creative expression and curious minds***

The Museum of Applied Arts and Sciences (MAAS) is an executive agency of the New South Wales State Government. Embodying the best of design ingenuity and innovation, the Museum profiles one of the world’s great collections and is a highly successful interdisciplinary institution that sits at the intersection of the arts, design, science and technology and plays a critical role in supporting the brand and vision of the city.    
   
Access to the Museum’s exceptional collection is a cornerstone of the vision, opening up opportunities for engagement, participation and research. Deepening audience engagement, bringing the collections to life through hands on experiences and offering a variety of pathways through ideas and information is key to the delivery of our programs for people of all ages.

MAAS currently operates three sites, the Powerhouse Museum in Ultimo, Sydney Observatory in Millers Point and Museums Discovery Centre in Castle Hill. In April 2018, the NSW Government announced the largest investment in museum infrastructure in Australia’s history, which will enable MAAS to expand its operations, and will ensure the Museum and its collection remain a critical part of our local and global communities for centuries to come.

A new, world-class flagship MAAS campus will be built in Parramatta, opening in 2023, and the Museums Discovery Centre will be expanded by 35%. Further planning is also underway for cultural spaces at Ultimo, which include a MAAS-led design and fashion museum.

# Primary purpose of the role

The Technical Lead is responsible for the technical and operational execution of all development work. This role will provide additional guidance and leadership for the other developers and work collaboratively with teams across the museum to deliver digital visitor experiences.

# Key accountabilities

* Technical leadership across the design, development and maintenance of innovative applications for web, mobile, and in-gallery interactive experiences.
* Plan, direct, supervise and coordinate work activities of Digital Studio developers and contractors responsible for the Museum’s web applications, including front-end and back-end components.
* Lead the reviewing of developer code for quality, security, standards and best practices and document and maintain site development standards and implement and maintain development workflow and the deployment/release process.
* Work with the Digital Studio team to maintain a prioritized engineering backlog. Plan, estimate, and deliver on-time according to agreed-upon estimates
* Ability to take initiative and ownership of project for assignments and responsibilities.
* Develop connections between content management system (CMS), collections information system, application programming interfaces (APIs), and front-end applications
* Serve as an expert on technical matters concerning web, mobile, and other software applications
* Lead research and development on emerging technologies including AR/VR, AI and machine learning and their application within the Museum environment, working with internal and external partners.
* Creation and maintenance of technical documentation and specifications.

# Key challenges

* Balance competing demands to ensure application development objectives are achieved

# Key relationships

| Who | Why |
| --- | --- |
| **Internal** |  |
| Manager | * Escalate issues, keep informed, advise and receive instructions * Provide advice and recommendations on issues related to development and implementation of innovative technological solutions. |
| Work team | * Inspire and motivate team, provide direction and manage performance * Guide, support, coach and mentor team members * Review the work and proposals of team members * Encourage team to work collaboratively to contribute to achieving the team’s business outcomes |
| Clients/customers | * Resolve and provide solutions to issues * Work collaboratively with teams across the museum to deliver digital visitor experiences |
| **External** |  |
| External agencies & vendors | * To manage technical partnerships and collaboration with external agencies and vendors. |

**Role dimensions**

**Decision making**

This role:

* Has autonomy and is accountable for the technical leadership across the design, development and maintenance of applications for web, mobile, and in-gallery interactive experiences working within approved plans and standards.
* Refers to supervisor for decisions that require significant change to operations; issues that are likely to escalate; cause risk; create precedent; or are outside of delegation limits.
* Coordinates and organises the work of direct reports to achieve agreed business objectives and performance criteria.
* Develops and maintains effective communication with key internal and external stakeholders

**Reporting line**

* Digital Engagement Manager

**Direct reports**

* Senior Digital Developer, Digital Developer

**Budget/Expenditure**

Nil

**Requirements**

* 3+ years experience leading development teams in the design and development of complex websites and applications.
* Technical expertise with contemporary web technologies including, JavaScript, NodeJS, PHP, HTML5, CSS, SASS, React, WordPress (build/theme), REST, GraphQL, MySQL and MongoDB.
* Demonstrated experience designing technical solutions and architecture using contemporary web technologies.
* Strong knowledge of responsive design and web accessibility standards.
* Familiarity with build tools such as Vagrant, Gulp and Docker.
* Strong experience designing and administering highly scalable systems using AWS or similar cloud computing platforms.
* Demonstrated experience designing technical solutions, including diagramming and communicating software and infrastructure design
* Familiarity with agile development methodologies
* Command-line knowledge operating in a Linux environment.
* Conversant with analytics tools (Google) and reporting.
* Experience code testing.
* Strong experience with Git.

# 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](https://www.psc.nsw.gov.au/workforce-management/capability-framework/access-the-capability-framework/the-capability-framework)

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](https://www.psc.nsw.gov.au/workforce-management/capability-framework/occupation-specific-capability-sets/ict-professionals)

## 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** | **Adept** |
| Act with Integrity | Intermediate |
| Manage Self | Adept |
| Value Diversity | Intermediate |
| Relationships | **Communicate Effectively** | **Adept** |
| Commit to Customer Service | Adept |
| Work Collaboratively | Adept |
| Influence and Negotiate | Intermediate |
| Results | **Deliver Results** | **Adept** |
| Plan and Prioritise | Adept |
| **Think and Solve Problems** | **Advanced** |
| Demonstrate Accountability | Intermediate |
| Business Enablers | Finance | Intermediate |
| **Technology** | **Adept** |
| Procurement and Contract Management | Intermediate |
| Project Management | Adept |
| People Management | **Manage and Develop People** | **Intermediate** |
| Inspire Direction and Purpose | Intermediate |
| Optimise Business Outcomes | Intermediate |
| Manage Reform and Change | Intermediate |
|  |  |  |

| Occupation / profession specific capabilities | | |
| --- | --- | --- |
| **Capability Set** | **Category, Sub-category and Skill** | **Level and Code** |
| Skills Framework for the Information Age logo | **Solution Development & Implementation, Systems Development, Programming/software development** | **Level 5 – PROG** |
| **Solution Development and Implementation, Systems Development, Systems Design** | **Level 5 - DESN** |
| **Business Change, Business Change Management, Requirements Definition and Management** | **Level 5 - REQM** |
| Solution 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**  Display Resilience and Courage | Adept | Be flexible, show initiative and respond quickly when situations change  Give frank and honest feedback/advice  Listen when ideas are challenged, seek to understand the nature of the criticism and respond constructively  Raise and work through challenging issues and seek alternatives  Keep control of own emotions and stay calm under pressure and in challenging situations |
| **Relationships**  Communicate Effectively | Adept | Be flexible, show initiative and respond quickly when situations change  Give frank and honest feedback/advice  Listen when ideas are challenged, seek to understand the nature of the criticism and respond constructively  Raise and work through challenging issues and seek alternatives  Keep control of own emotions and stay calm under pressure and in challenging situations |
| **Results**  Deliver Results | Adept | Be flexible, show initiative and respond quickly when situations change  Give frank and honest feedback/advice  Listen when ideas are challenged, seek to understand the nature of the criticism and respond constructively  Raise and work through challenging issues and seek alternatives  Keep control of own emotions and stay calm under pressure and in challenging situations |
| **Results**  Think and Problem Solve | Advanced | Be flexible, show initiative and respond quickly when situations change  Give frank and honest feedback/advice  Listen when ideas are challenged, seek to understand the nature of the criticism and respond constructively  Raise and work through challenging issues and seek alternatives  Keep control of own emotions and stay calm under pressure and in challenging situations |
| **Business Enablers**  Technology | Adept | Be flexible, show initiative and respond quickly when situations change  Give frank and honest feedback/advice  Listen when ideas are challenged, seek to understand the nature of the criticism and respond constructively  Raise and work through challenging issues and seek alternatives  Keep control of own emotions and stay calm under pressure and in challenging situations |
| **People Management**  Manage and Develop People | Intermediate | Ensure that roles and responsibilities are clearly communicated  Collaborate on the establishment of clear performance standards and deadlines in line with established performance development frameworks  Develop team capability and recognise and develop potential in people  Be constructive and build on strengths when giving feedback  Identify and act on opportunities to provide coaching and mentoring  Recognise performance issues that need to be addressed and work towards resolution of issues |

| Occupation specific capability set (Skills Framework for the Information Age – SFIA) | | |
| --- | --- | --- |
| **Category and Sub-Category** | **Level and Code** | **Level Descriptions** |
| **Solution Development & Implementation,** Systems Development, Programming/software development | Level 5 – PROG | Sets local or team-based standards for programming tools and techniques, advises on their application and ensures compliance. Takes technical responsibility for all stages in the software development process. Prepares project and quality plans and advises systems development teams. Assigns work packages to technical staff, monitors performance and reports progress. Provides advice, guidance and assistance to less experienced colleagues as required. |
| **Solution Development and Implementation,** Systems Development, Systems Design | Level 5 – DESN | Specifies and designs large or complex systems. Selects appropriate design standards, methods and tools, consistent with agreed enterprise and solution architectures and ensures they are applied effectively. Reviews others' systems designs to ensure selection of appropriate technology, efficient use of resources, and integration of multiple systems and technology. Contributes to policy for selection of architecture components. Evaluates and undertakes impact analysis on major design options and assesses and manages associated risks. Ensures that the system design balances functional, service quality and systems management requirements. |
| **Business Change,** Business Change Management, Requirements Definition and Management | Level 5 - REQM | Facilitates scoping and business priority setting for large or complex changes, engaging senior stakeholders as required. Selects the most appropriate means of representing business requirements in the context of a specific change initiative. Drives the requirements elicitation process where necessary, identifying what stake-holder input is required. Obtains formal agreement from a large and diverse range of potentially senior stakeholders and recipients to the scope and requirements, plus the establishment of a base-line on which delivery of a solution can commence. Takes responsibility for the investigation and application of changes to programme scope. Identifies the impact on business requirements of external impacts affecting a programme or project. |