

| SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY SKILLS MAP – INFRASTRUCTURE ENGINEERING MANAGER | | |
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| Sector | Infocomm Technology | |
| Track | Infrastructure | |
| Sub-track | Build and Maintain | |
| Occupation | Infrastructure Engineer | |
| Job Role | Infrastructure Engineering Manager | |
| Job Role Description | The Infrastructure Engineering Manager drives the implementation of strategy for infrastructure operations and maintenance to ensure availability of stable and secure systems and networks. He/She manages project resource allocation and develops infrastructure implementation, operations and maintenance engineers; scopes out policies and sets performance expectations. He identifies problems and presents new methodologies/solutions to key stakeholders to enhance and improve the delivery of infrastructure operations and maintenance services. | |
| | He has expertise in the planning, implementation and maintenance of infrastructure systems across cloud, on-premise, server and network infrastructure. He is familiar with the infrastructure deployment and IT service management processes, tools and methodologies. He is knowledgeable in both technical and business aspects of the organisation's IT infrastructure to bridge gaps and enhance collaboration between IT and functional teams. | |
| | The Infrastructure Engineering Manager is able to address multi-faceted issues effectively to ensure systems are stable and secure. He adopts a methodical approach to managing project resources and communicates well to his team and key stakeholders on the solutions developed. | |
| Critical Work Functions and Key Tasks | Critical Work Functions | Key Tasks |
| | Establish infrastructure strategy and design | Develop roadmaps to achieve desired future-state IT infrastructure for the organisation |
| | | Advise the business on infrastructure operations and maintenance-related issues |
| | | Recommend process, product or service improvements, resource optimisation and cost savings |
| | | Partner with stakeholders to define infrastructure operations and maintenance requirements for new technology implementations |
| | | Anticipate internal and/or external business challenges and/or regulatory issues |
| | | Forecast financial, physical, and human resource needs to meet established objectives |
| | | Evaluate trends and new technologies in engineering to enhance infrastructure and orchestration |
| | Manage infrastructure Implementation and optimisation | Integrate solutions with other applications and platforms based on engineering requirements |
| | | Develop new alerts and monitoring techniques based on engineering requirements |
| | | Forecast utilisation patterns and identifies modifications or upgrades |
| | | Conduct capacity workload modelling and availability analysis for platforms and environments |
| | | Recommend changes and/or enhancements for improved systems availability, reliability and performance |
| | | Recommend and implement software or hardware changes to rectify problems or address improvement opportunities |
| | | Assist in the design, implementation and execution of back-up and disaster recovery plans for infrastructure |
| | Establish and oversee standards and governance | Monitor infrastructure availability and performance to ensure compliance with Service Level Agreements (SLAs) |
| | | Assist in development of SLAs, metrics and key performance indicators |
| | | Ensure adherence to security requirements |
| | | Ensure regulatory and legal compliance in infrastructure operations and maintenance activities |

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| | Manage partners and vendors | Evaluate and qualify key infrastructure partners, vendors and technology providers | | |
| | | Manage contracts with key partners and vendors | | |
| | | Assess performance of key partners and vendors according to defined service delivery metrics | | |
| | Manage people and organisation | Manage the budget expenditure and allocation across teams and projects | | |
| | | Monitor and track the team's achievements and key performance indicators | | |
| | | Propose new operational plans, including targeted budgets, work allocations and staff forecasts | | |
| | | Acquire, allocate and optimise the use of resources | | |
| | | Develop learning roadmaps to support the professional development of the team | | |
| | | Manage the performance and development process, including providing coaching and development opportunities to maximise the potential of each individual | | |
| Skills and Competencies | Technical Skills and Competencies | | Generic Skills and Competencies | |
| | Audit and Compliance | Level 3 | Decision Making | Intermediate |
| | Budgeting | Level 4 | Leadership | Intermediate |
| | Business Environment Analysis | Level 4 | Communication | Advanced |
| | Business Innovation | Level 5 | Resource Management | Intermediate |
| | Business Needs Analysis | Level 4 | Service Orientation | Advanced |
| | Business Negotiation | Level 4 | | |
| | Business Performance Management | Level 4 | | |
| | Business Requirements Mapping | Level 4 | | |
| | Business Risk Management | Level 4 | | |
| | Change Management | Level 4 | | |
| | Cloud Computing | Level 5 | | |
| | Contract Management | Level 4 | | |
| | Cyber and Data Breach Incident Management | Level 5 | | |
| | Disaster Recovery Management | Level 4 | | |
| | Emerging Technology Synthesis | Level 5 | | |
| | Infrastructure Deployment | Level 4 | | |
| | Infrastructure Design | Level 5 | | |
| | Infrastructure Strategy | Level 4 | | |
| | IT Asset Management | Level 4 | | |
| | IT Governance | Level 4 | | |
| | IT Standards | Level 4 | | |
| | IT Strategy | Level 4 | | |
| | Learning and Development | Level 4 | | |
| | Manpower Planning | Level 3 | | |

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| | Network Administration and Maintenance | Level 4 | |
| | Networking | Level 4 | |
| | Organisational Analysis | Level 4 | |
| | Partnership Management | Level 4 | |
| | People and Performance Management | Level 3 | |
| | Performance Management | Level 5 | |
| | Problem Management | Level 4 | |
| | Project Feasibility Assessment | Level 4 | |
| | Project Management | Level 5 | |
| | Quality Engineering | Level 5 | |
| | Security Administration | Level 4 | |
| | Stakeholder Management | Level 5 | |
| | Strategy Implementation | Level 3 | |
| | Strategy Planning | Level 4 | |
| | Sustainability Management | Level 4 | |
| | Test Planning | Level 4 | |
| | Vendor Management | Level 5 | |
| Programme Listing | For a list of Training Programmes available for the ICT sector, please visit: www.skillsfuture.sg/skills-framework/ict | | |

The information contained in this document serves as a guide.