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| **SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY SKILLS MAP – Quality assurance engineer** | | | | | | |
| **Sector** | Infocomm Technology | | | | | |
| **Track** | Strategy and Governance | | | | | |
| **Sub-track** | Quality Management | | | | | |
| **Occupation** | Quality Specialist | | | | | |
| **Job Role** | **Quality Assurance Engineer** | | | | | |
| **Job Role Description** | The Quality Assurance Engineer monitors the software development process to ensure design quality and adherence to standards. He/She is involved in tasks that include software design, source code development, review and control, configuration management and integration of software. He participates in a wide range of quality assurance testing and analyses to ensure that product meets or exceeds specified quality standards and end-user requirements before release.  He works in a team setting and is proficient in programming languages required by the organisation. He is familiar with international quality standards and processes, as well as applicable test automation tools.  The Quality Assurance Engineer takes pride in delivering quality service to internal stakeholders and is meticulous in conducting tests to ensure product quality requirements are met. He should be able to anticipate problems in the development process, and develop and articulate innovative and effective solutions to address them and prevent re-occurrence. | | | | | |
| **Critical Work Functions and Key Tasks** | **Critical Work Functions** | **Key Tasks** | | | | |
| Develop plans to execute quality testing | Obtain technical documents to understand user requirements, product specifications and intended outcomes | | | | |
| Identify relevant features for quality testing | | | | |
| Develop test plans | | | | |
| Develop quality testing approach and steps to satisfy test objectives | | | | |
| Create test scenarios that complies with established testing procedures and guidelines | | | | |
| Work with relevant teams to plan for quality testing based on established testing procedures and guidelines | | | | |
| Perform quality testing | Conduct quality assurance tests against design requirements, and specifications | | | | |
| Analyse results from quality assurance tests to determine if the product fulfils performance standards and functional requirements as detailed in design requirements and specifications | | | | |
| Identify issues that arise from quality assurance tests | | | | |
| Apply existing procedures to solve routine or standard problems | | | | |
| Trace issues to relevant development stage and teams | | | | |
| Document quality assurance testing outcomes | | | | |
| Automate quality assurance testing for suitable types of tests and test processes | | | | |
| Keep track of improvements made to enhance quality of products | | | | |
| Optimise quality processes | Identify opportunities to decrease time and cost spent on system quality assurance processes | | | | |
| Propose improvements to optimise quality assurance testing process | | | | |
| Conduct research on industry best practices and new methodologies, practices and technologies to optimise quality assurance processes | | | | |
| **Skills and Competencies** | **Technical Skills and Competencies** | | | **Generic Skills and Competencies** | | |
| Applications Development | | Level 3 | Global Mindset | | Basic |
| Budgeting | | Level 3 | Sense Making | | Basic |
| Business Needs Analysis | | Level 3 | Leadership | | Basic |
| Business Performance Management | | Level 3 | Interpersonal Skills | | Basic |
| Configuration Tracking | | Level 1, Level 2 | Teamwork | | Basic |
| Networking | | Level 3 |  | | |
| Partnership Management | | Level 3 |
| Problem Management | | Level 3 |
| Process Improvement and Optimisation | | Level 3 |
| Project Management | | Level 3 |
| Quality Assurance | | Level 3 |
| Quality Standards | | Level 4 |
| Software Design | | Level 3 |
| Software Testing | | Level 2, Level 3 |
| Stakeholder Management | | Level 2, Level 3 |
| Strategy Implementation | | Level 3 |
| Test Planning | | Level 2, Level 3 |
| **Programme Listing** | For a list of Training Programmes available for the ICT sector, please visit: [www.skillsfuture.sg/skills-framework/ict](http://www.skillsfuture.sg/skills-framework/ict) | | | | | |
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| The information contained in this document serves as a guide. | | | | | | |