

SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY SKILLS MAP – QUALITY ENGINEERING MANAGER		
<b>Sector</b>	Infocomm Technology	
<b>Track</b>	Strategy and Governance	
<b>Sub-track</b>	Quality Management	
<b>Occupation</b>	Quality Specialist	
<b>Job Role</b>	<b>Quality Engineering Manager</b>	
<b>Job Role Description</b>	<p>The Quality Engineering Manager establishes suitable quality standards at each stage of the development process, and evaluates suitability of matrices to assess quality. He/She determines types and variations of quality tests to fulfil business needs and requirements, as well as ensures that testing processes comply with applicable regulatory and relevant quality testing requirements. He synthesises product performance against user feedback to prioritise quality measures for testing, and manages the conduct of quality tests on quality measures under different operational and usage conditions. He recommends new technologies, tools and infrastructures, practices and changes to processes, as well as guides the automation of quality testing.</p> <p>He works in a team setting and is proficient in programming languages required by the organisation. He is familiar with international quality standards, test automation frameworks and tools, as well as applicable quality testing and analysis tools.</p> <p>The Quality Engineering Manager possesses strong analytical ability with excellent communication and interpersonal skills. He is highly meticulous in nature, curious and is able to work in a dynamic environment.</p>	
<b>Critical Work Functions and Key Tasks</b>	<b>Critical Work Functions</b>	<b>Key Tasks</b>
	Develop quality standards	Determine quality standards at each stage of the development process to ensure quality of outputs
		Synthesise user requirements and expectations to determine suitable quality standards for end products
		Determine the suitability of including international standards and best practices in quality standards
		Evaluate suitability of quality matrices
		Oversee the development of user guides on quality standards
		Address issues of non-compliance with quality standards and specifications
		Review appropriateness and suitability of quality standards in the development process and for end products
	Develop quality testing processes	Determine types and variations of quality tests for each phase of the product development process or lifecycle to fulfil business needs and requirements
		Assess objectives of quality tests for feasibility and relevancy to each phase of the development process or lifecycle
		Review steps in the quality test process against test objectives
		Ensure quality testing processes complies with regulatory and other relevant requirements
		Develop quality systems for the organisation
	Develop plans to execute quality testing	Synthesise product performance against user feedback to prioritise quality measures for testing
		Determine quality testing objectives, assumptions and hypotheses
		Determine timelines, test environment, tools and approaches required, work allocation and responsibilities in quality testing
		Review test plans and make refinements to ensure robustness of testing
		Review test scenarios for compliance with established testing procedures and guidelines
	Perform quality testing	Manage the conduct of quality tests across phases of the product development process or lifecycle on quality measures under different operational and usage conditions
		Provide technical inputs on quality gaps to the development team to improve product quality

		Develop quality systems to mitigate or prevent failure from occurring or to enable early detection of failure	
		Validate operating and usage conditions in which performance of quality measures drops	
		Develop reports documenting quality testing outcomes for the relevant development teams	
		Recommend new technologies, tools and infrastructures, as well as practices and changes to processes	
		Guide the development of tools to automate quality testing for suitable types of tests	
		Evaluate automated test cases and codes for enhancements	
		Ensure the conduct of applicable security tests with relevant functional teams	
		Manage the resolution of quality issues to ensure achievement of quality standards in an Agile Environment	
	Optimise quality processes	Evaluate the efficiency and outcomes of existing quality processes	
		Review recommendations to optimise quality testing processes and improve quality systems	
		Assess new quality testing processes, practices and tools for implementation to enhance quality systems	
	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	
		Coach team members on Agile practices and values	
Skills and Competencies	Technical Skills and Competencies		Generic Skills and Competencies
	Agile Coaching	Level 4	Leadership
	Agile Software Development	Level 4	Communication
	Applications Development	Level 4	Teamwork
	Budgeting	Level 4	Decision Making
	Business Agility	Level 4	Problem Solving
	Business Needs Analysis	Level 4	
	Business Performance Management	Level 4	
	Failure Analysis	Level 4	
	Learning and Development	Level 5	
	Manpower Planning	Level 4	
	Networking	Level 4	
	Partnership Management	Level 4	
	People and Performance Management	Level 4	
	Performance Management	Level 4	

	Product Management	Level 4	
	Problem Management	Level 4	
	Process Improvement and Optimisation	Level 4	
	Process Validation	Level 4	
	Project Management	Level 4	
	Quality Engineering	Level 4	
	Quality Standards	Level 5	
	Software Design	Level 4	
	Software Testing	Level 4	
	Stakeholder Management	Level 4	
	Strategy Implementation	Level 4	
	Strategy Planning	Level 4	
	Test Planning	Level 4	
<b>Programme Listing</b>	For a list of Training Programmes available for the ICT sector, please visit: <a href="http://www.skillsfuture.sg/skills-framework/ict">www.skillsfuture.sg/skills-framework/ict</a>		

The information contained in this document serves as a guide.