SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY
TECHNICAL SKILLS & COMPETENCIES (TSC) REFERENCE DOCUMENT

TSC Category	Development and Implementation					
TSC Title	Software Testing					
TSC Description	Assess and test the overall effectiveness and performance of an application, involving the setting up of suitable testing conditions, definition of test cases and/or technical criteria					
TSC Proficiency Description	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**
		ICT-DIT-2015-1.1	**ICT-DIT-3015-1.1**	**ICT-DIT-4015-1.1**		
		Draft simple test scenarios, and perform software testing procedures, highlighting bugs or glitches affecting performance	Design test scenarios and implement new or complex tests, investigating issues or gaps between actual and expected results	Define the testing objectives and criteria for success and oversee the testing and follow up processes for software products		
Knowledge		• Purpose and elements of a test case • Feature requirements of the testing environment • Procedures and process of software testing • Automation testing tools and practices • Indicators of software success and failure • Commonly encountered glitches, bugs, faults and failures	• Software and components which require testing • Process and methodology to create test scenarios • Implementation of more complicated software tests • Analysis of test results through automation • Various testing outcomes and their implications • Indicators of software malfunctioning or incompatibility	• Key objectives, pros, cons and applicability of various software tests • Impact of business requirements and regulatory standards on acceptable baselines • Success indicators for software testing		
Abilities		• Draft standard test cases or scenarios • Prepare testing environment for testing based on technical criteria and specifications • Execute testing procedures • Execute software testing using automation • Assess test results for unexpected outcome	• Design test scenarios or cases to cover a broad range of scenarios for the application • Determine appropriate tests, execution conditions and expected results • Define technical criteria and specifications for tests • Implement new, complex or advanced tests	• Define the testing objectives • Establish guidelines and criteria for success for various software tests • Review test cases, technical criteria and specifications of tests • Oversee testing process for software products • Evaluate outcomes and patterns in test results in-depth		

		• Document details of failures or glitches that surface from the test results in testing documents • Compare the test results against the functional requirements or desired outcomes to highlight gaps and areas for improvement • Diagnose commonly encountered faults and failures in applications	• Analyse gaps between expected and actual test results • Diagnose any indicators of application malfunctioning or under-performance • Propose modifications to the product and/or system to address requirements more effectively	• Recommend changes to address issues and optimise software performance and effectiveness		
Range of Application	Types of testing may include but are not limited to: • Unit Testing • Integration Testing • System Testing • Acceptance Testing					