SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY SKILLS MAP – SOFTWARE ARCHITECT	
Sector	Infocomm Technology
Track	Software and Applications
Sub-track	Software Engineering
Occupation	Enterprise Architect
Job Role	**Software Architect**
Job Role Description	The Software Architect analyses, designs and develops roadmaps and implementation plans based on a current versus future state business architecture, and reviews recommendations to software architectural standards for approval. He/She leads and facilitates the software architecture governance process based on the enterprise architecture governance structure, and manages exceptions to architectural standards at a software level. He assesses near-term needs to establish business priorities and aligns architectural requirements with IT strategy. He consults with clients and IT teams on software architecture solutions and provides recommendations on emerging technology to senior management. He oversees the development of guidelines and standards to be used in software development and integration, and formulates the conceptual and detailed architecture for the development of applications. The Software Architect is imaginative and creative, drawing connections from diverse disciplines to develop application architectures and solutions. He enjoys the challenge of analysing, resolving complex issues and is able to interact effectively with others to gain buy-in where required.

	Critical Work Functions	**Key Tasks**
Critical Work Functions and Key Tasks	**Formulate the organisation's architecture strategy, roadmap, standards, policies and procedures, and governance**	Lead and coordinate the domain technical and business discussions
		Participate in ecosystem strategy development, environment analysis and opportunity identification
		Analyse, design and develop roadmaps and implementation plans based on a current versus future state
		Design standard configurations and patterns
		Lead and facilitate the software architecture governance process based on the enterprise architecture governance structure
		Manage exceptions to architectural standards at a software level
		Review and approve recommendations to software architectural standards
	Develop architecture requirements and maintain oversight	Analyse and develop software architectural requirements
		Align architectural requirements with IT strategy
		Assess near-term needs to establish business priorities
		Ensure compatibility with existing solutions, infrastructure, services and strategic requirements
		Coordinate architecture implementation and modification activities
		Assist in post-implementation and continuous improvement efforts to enhance performance and provide increased functionality
		Ensure conceptual completeness of the technical solution
	Manage quality and continuous improvement of architecture	Analyse the current architecture to identify weaknesses and develop opportunities for improvement
		Identify and propose variances to the architecture to accommodate project needs
		Perform ongoing architecture quality review activities
	Research emerging technologies	Consults with clients and IT teams on software architecture solutions
		Analyses cost versus benefits, risks, impact and technology priorities
		Provide recommendations on emerging technology to senior management

		Develop a communication plan for software architecture
		Lead the research and evaluation of emerging technology, industry and market trends to assist in project development
		Identify organisational requirements for resources
	Manage software architecture design	Oversee the development of guidelines and standards to be used in software development and integration
		Formulate the conceptual and detailed architecture for the development of applications
		Manage the software architecture governance process
		Define transition steps and strategy from current to the future software architecture
		Develop methods to integrate systems that interact and extend across organisational and functional lines

	Technical Skills and Competencies		Generic Skills and Competencies	
Skills and Competencies	Applications Development	Level 5	Communication	Intermediate
	Applications Integration	Level 5	Interpersonal Skills	Intermediate
	Business Environment Analysis	Level 4	Creative Thinking	Intermediate
	Business Innovation	Level 5	Transdisciplinary Thinking	Advanced
	Business Needs Analysis	Level 5	Computational Thinking	Advanced
	Business Requirements Mapping	Level 4		
	Business Risk Management	Level 4		
	Change Management	Level 4		
	Data Design	Level 4		
	Embedded Systems Interface Design	Level 5		
	Emerging Technology Synthesis	Level 5		
	Enterprise Architecture	Level 4		
	Infrastructure Design	Level 4		
	Networking	Level 4		
	Product Management	Level 5		
	Project Management	Level 5		
	Quality Standards	Level 5		
	Security Architecture	Level 4		
	Software Design	Level 5		
	Solution Architecture	Level 4		
	Stakeholder Management	Level 5		
	System Integration	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.