SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY
SKILLS MAP – INFRASTRUCTURE ARCHITECT

Sector	Infocomm Technology
Track	Infrastructure
Sub-track	Plan and Design
Occupation	Enterprise Architect
Job Role	**Infrastructure Architect**
Job Role Description	The Infrastructure Architect translates the overall business strategy into an infrastructure architecture strategy. He/She defines future state infrastructure architecture design considerations based on current and future business requirements. He engages business leaders and synthesises critical infrastructure gaps, current technology environment, and anticipated business and user challenges to inform architecture design. He determines design specifications of the future state infrastructure architecture, and develops the infrastructure architecture blueprint, roadmap for implementation, as well as plans for the integration of new systems architecture into existing infrastructure. He oversees the implementation of infrastructure architecture and ensures transition of current business practices and processes to enable delivery of appropriate solutions for the business. He also evaluates infrastructure performance against changing business and user requirements to inform architecture design changes. He is familiar with enterprise architecture methodologies and frameworks, and architecture modelling tools. He is knowledgeable of various cloud, network, storage and security technologies, as well as cloud computing models and services. The Infrastructure Architect adopts an analytical and strategic thinking approach to developing innovative infrastructure design that meets business requirements. He possesses strong communication and interpersonal skills, and is able to influence key stakeholders and build strategic relationships with partners and vendors.

	Critical Work Functions	**Key Tasks**
Critical Work Functions and Key Tasks	**Formulate the organisation's architecture strategy, governance, roadmap, standards, policies and procedures**	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 infrastructure architecture governance process based on the enterprise architecture governance structure
		Manage exceptions to architectural standards at an infrastructure level
		Review and approve recommendations to infrastructure architectural standards
	Develop architecture requirements and maintain oversight	Analyse and develop infrastructure 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 infrastructure architecture solutions
		Analyses cost versus benefits, risks, impact and technology priorities
		Provide recommendations on emerging technology to senior management
		Develop a communication plan for infrastructure architecture
		Lead the research and evaluation of emerging technology, industry and market trends to assist in project development
		Identify organisational requirements for resources
	Design infrastructure architecture	Oversee the development of infrastructure architecture based on business requirements and IT strategies
		Approve and modify infrastructure designs and architecture
		Manage the assessment of capacity and resource utilisation of organisational infrastructure
		Define the principles that guide infrastructure decisions for the organisation
		Oversee and facilitate the evaluation and selection of infrastructure technology and the design of configuration standards

	Technical Skills and Competencies		**Generic Skills and Competencies**	
Skills and Competencies	Business Continuity	Level 4	Communication	Intermediate
	Business Environment Analysis	Level 4	Transdisciplinary Thinking	Advanced
	Business Innovation	Level 5	Decision Making	Intermediate
	Business Needs Analysis	Level 5	Sense Making	Intermediate
	Business Requirements Mapping	Level 4	Creative Thinking	Advanced
	Business Risk Management	Level 4		
	Change Management	Level 4		
	Disaster Recovery Management	Level 5		
	Emerging Technology Synthesis	Level 5		
	Enterprise Architecture	Level 4		
	Infrastructure Design	Level 5		
	Infrastructure Strategy	Level 5		
	Network Administration and Maintenance	Level 4		
	Network Configuration	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	
	Sustainability Management	Level 4	
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.