

SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY SKILLS MAP – RADIO FREQUENCY ENGINEER		
Sector	Infocomm Technology	
Track	Infrastructure	
Sub-track	Build and Maintain	
Occupation	Infrastructure Engineer	
Job Role	Radio Frequency Engineer	
Job Role Description	<p>The Radio Frequency Engineer is responsible for designing, implementing and maintaining wireless networks and systems. He/She installs equipment required for wireless communication, tests and troubleshoots radio networks to ensure quality and performance. He works in conjunction with core and cloud network teams for integrated functioning of the organisation's networks.</p> <p>He possesses deep expertise and knowledge in wireless networking technologies and has the ability to translate business requirements into technical specifications for the design and implementation of wireless networks. He is proficient in the use of simulation software, programming languages and database servers.</p> <p>The Radio Frequency Engineer is an analytical thinker and a problem-solver. He has excellent communication skills and readily establishes collaborative working relationships across teams.</p>	
Critical Work Functions and Key Tasks	Critical Work Functions	Key Tasks
	Design wireless network and infrastructure	Develop proposals for the expansion of radio networks and systems based on business requirements
		Design radio frequency schematic for the construction of wireless networks
		Define technical specifications and resource requirements necessary for wireless networks
		Conduct technical evaluation and proof-of-concept for new technologies in wireless networking and radio frequency transmission
	Deploy wireless networks and infrastructure	Evaluate data from site surveys to determine suitability for optimal deployment of wireless networks
		Manage the installation and maintenance of wireless network equipment
		Analyse functionality of and recommend upgrades to existing wireless network equipment
		Perform simulations for radio frequency network design
		Implement solutions or techniques to mitigate radio frequency interference
		Provide technical advice on the procurement of wireless network equipment
		Develop operating processes and protocols for disaster recovery of wireless network infrastructure
	Optimise wireless network performance	Conduct radio network drive tests to obtain information on network coverage and performance
		Review logs and reports from radio network drive tests and monitor network performance
		Analyse key performance indicators to identify problem areas in wireless communication systems and network performance
		Implement measures and tune network parameters to improve wireless communication systems and network performance
	Manage wireless network security	Plan and coordinate network security measures for wireless network infrastructure
		Assess the security of wireless protocols and radio networks to identify vulnerabilities or interceptions
		Prioritise and resolve wireless network security incidents, and escalate where necessary
		Conduct audit of wireless networks and design to ensure compliance to regulatory standards
	Troubleshoot wireless communication issues	Resolve defects in wireless network infrastructure and software
		Oversee the resolution of wireless network issues

		Establish standards and procedures for troubleshooting and resolution of wireless network issues		
		Implement automation workflows for the management of repeated network issues		
Skills and Competencies	Technical Skills and Competencies		Generic Skills and Competencies	
	Budgeting	Level 3	Problem Solving	Intermediate
	Business Environment Analysis	Level 3	Communication	Intermediate
	Business Innovation	Level 4	Computational Thinking	Intermediate
	Business Needs Analysis	Level 3	Sense Making	Intermediate
	Business Requirements Mapping	Level 3	Decision Making	Basic
	Business Risk Management	Level 3		
	Change Management	Level 3		
	Contract Management	Level 3		
	Cyber and Data Breach Incident Management	Level 4		
	Emerging Technology Synthesis	Level 4		
	Network Administration and Maintenance	Level 3		
	Network Configuration	Level 3		
	Network Security	Level 4		
	Performance Management	Level 4		
	Problem Management	Level 3		
	Process Improvement and Optimisation	Level 3		
	Procurement	Level 3		
	Radio Frequency Engineering	Level 4		
	Security Administration	Level 3		
	Service Level Management	Level 3		
	Software Configuration	Level 3		
	Stakeholder Management	Level 3		
	Test Planning	Level 3		
	Vendor 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.