SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY
SKILLS MAP – PRODUCT SECURITY ENGINEER

Sector	Infocomm Technology
Track	Product Development
Sub-track	Quality, Risk and Security
Occupation	Product Security Engineer
Job Role	**Product Security Engineer**
Job Role Description	The Product Security Engineer conducts cyber risk assessment in support of product development, existing product upgrades and new launches to help identify IT related risk and determines appropriate controls to mitigate risks. He/She monitors, identify recurring security issues in each product, tracks and manages risk mitigations and exceptions to ensure cyber security standards and policies are established. He applies a defined set of analytical or scientific methods and works independently. He is also responsible for documentation of cyber risk assessment reports. He is also responsible for performing real-time analysis of products and trending of security log data from various security devices and systems on products. He responds to user incident reports and evaluates the type and severity of security events. He is familiar with cyber security standards, protocols and frameworks, and acts in accordance with the Cyber Security Act 2018. He uses various cyber security monitoring and analysis tools and techniques depending on the organisation's needs and requirements. The Product Security Engineer is vigilant and systematic in identifying cyber risks, and takes an analytical approach to performing real-time analysis and investigating issues. He communicates well both verbally and in writing.

	Critical Work Functions	**Key Tasks**	**Performance Expectations**
Critical Work Functions, Key Tasks and Performance Expectations	**Establish cyber security standards and policies**	Conduct review of existing security policies, procedures, standards and exceptions	In accordance with: • Cyber Security Act 2018, Cyber Security Agency of Singapore
		Assist in the development of policies for conducting cyber security risk assessments and compliance audits	
		Support implementation of information systems and cyber security policies	
	Manage cyber risks and assessments	Perform cyber risk assessment activities based on risk assessment plans	
		Assess third party security controls and internal security systems	
		Establish scope of risk analysis for new technology initiatives	
		Conduct research on emerging cyber security and risk management trends, issues, and alerts	
		Monitor risks and incidents in accordance with the risk mitigation policies and guidelines	
	Mitigate cyber security risks and respond to cyber security incidents	Determine cause of security violations in products	
		Assist in establishing procedures for handling detected cyber security incidents in products	
		Recommend corrective actions or appropriate controls to mitigate technical risks in products	
		Assist in the implementation of preventive measures against intrusion, frauds, attacks or leaks and correction of cybersecurity breaches in products	
		Track remediation efforts for security and audit deficiencies in products	

	Technical Skills and Competencies		Critical Core Skills	
Skills and Competencies	Audit and Compliance*	Level 3	Sense Making	Intermediate
	Cyber and Data Breach Incident* Management	Level 3	Transdisciplinary Thinking	Basic
	Cyber Risk Management*	Level 4	Problem Solving	Intermediate
	Data Analytics*	Level 3	Collaboration	Intermediate
	Data Governance*	Level 4	Decision Making	Basic
	Network Security*	Level 4		
	Security Administration*	Level 3		
	Security Education and Awareness*	Level 3, Level 4		
	Security Governance*	Level 4		
	Security Programme Management*	Level 3		
	Agile Software Development	Level 3		
	AI Ethics and Governance	Level 2, Level 3		
	Applications Development	Level 3		
	Business Continuity	Level 4		
	Business Needs Analysis	Level 3		
	Cyber Forensics	Level 2		
	IT Governance	Level 4		
	Partnership Management	Level 3		
	Process Improvement and Optimisation	Level 3		
	Product Management	Level 3		
	Quality Standards	Level 4		
	Software Design	Level 3		
	Software Testing	Level 2, Level 3		
	Stakeholder Management	Level 2, Level 3		
	Strategy Implementation	Level 3		
	Strategy Planning	Level 4		
	Test Planning	Level 2, Level 3		
	Threat Analysis and Defence	Level 2		
	Threat Intelligence and Detection	Level 2		
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.

*Note: Technical Skills and Competencies (TSCs) with an asterisk (*) refer to Priority Skills (i.e., TSCs to be prioritised for this role).