

**SKILLS FRAMEWORK FOR PRECISION ENGINEERING  
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT**

<b>TSC Category</b>	Network Technology Management					
<b>TSC</b>	Cyber Risk Management					
<b>TSC Description</b>	Develop cyber risk assessment and treatment techniques that can effectively pre-empt and identify significant security loopholes and weaknesses, demonstration of the business risks associated with these loopholes and provision of risk treatment and prioritisation strategies to effectively address the cyber-related risks, threats and vulnerabilities identified to ensure appropriate levels of protection, confidentiality, integrity and privacy in alignment with the security framework					
<b>TSC Proficiency Description</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>	<b>Level 6</b>
				<b>PRE-SNA-4007-1.1</b>	<b>PRE-SNA-5007-1.1</b>	<b>PRE-SNA-6007-1.1</b>
				Develop cyber risk assessment techniques and roll-out endorsed measures to address identified cyber security risks, threats and vulnerabilities	Assess and direct enhancements to cyber risk assessment techniques, and develop strategies to address cyber security loopholes	Evaluate the readiness and robustness of the organisation's cyber security defences, and authorise cyber risk assessment activities
<b>Knowledge</b>				<ul style="list-style-type: none"> <li>• Cyber risk assessment techniques</li> <li>• Security risks, threats and vulnerabilities</li> <li>• Possible treatments of security risks, threats and vulnerabilities</li> <li>• Required levels of confidentiality, integrity, privacy and personal data protection as well as privacy technologies</li> </ul>	<ul style="list-style-type: none"> <li>• Design of cyber risk assessment techniques</li> <li>• Projection of cyber security risks, threats and vulnerabilities</li> <li>• Key requirements and objectives of various cyber risk assessments</li> <li>• Pros and cons of various treatment approaches</li> <li>• Business risks and implications from cyber security loopholes</li> </ul>	<ul style="list-style-type: none"> <li>• Key business implications of cyber risk assessment and testing policies</li> <li>• Evolving security landscape and emerging cyber security threats</li> <li>• Measures of organisational readiness against threats</li> <li>• Assessment of potential business risks from security loopholes</li> </ul>
<b>Abilities</b>				<ul style="list-style-type: none"> <li>• Develop cyber risk assessment techniques to identify security loopholes and weaknesses in the business</li> <li>• Design cyber risk assessments by consolidating insights from the business and various functions</li> <li>• Identify cyber security risks, threats and vulnerabilities, and their</li> </ul>	<ul style="list-style-type: none"> <li>• Guide the development of cyber risk assessment techniques</li> <li>• Pre-empt risks, vulnerabilities and threats across organisation policies, processes and defences</li> <li>• Evaluate effectiveness of current cyber risk assessment techniques</li> <li>• Direct improvements or modifications to vulnerability assessment techniques in view of</li> </ul>	<ul style="list-style-type: none"> <li>• Establish organisation's position and strategy for assessing and managing cyber risk</li> <li>• Determine security testing policies and authorise the management of all testing activities within the organisation</li> <li>• Articulate implications of potential cyber threats on requirements of organisational readiness</li> </ul>

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				<p>impact on the organisation</p> <ul style="list-style-type: none"> <li>Identify possible treatments for cyber risks, threats and vulnerabilities identified</li> <li>Implement endorsed treatment and measures to address security gaps</li> </ul>	<p>emerging security risks and threats</p> <ul style="list-style-type: none"> <li>Lead the implementation of cyber risk assessment activities throughout organisation, ensuring alignment with organisation's policies and principles</li> <li>Analyse cybersecurity loopholes identified and project business risk and impact to the organisation</li> <li>Evaluate options and decide on suitable treatment of cyber risks, threats and vulnerabilities</li> <li>Develop strategies to address loopholes and ensure appropriate levels of protection, confidentiality, integrity and personal data protection</li> </ul>	<p>and assessment techniques</p> <ul style="list-style-type: none"> <li>Weigh potential business risks associated with cyber security risks, threats and vulnerabilities surfaced</li> <li>Assess overall strength of the organisation's existing defences in light of evolving internal and external security landscape</li> <li>Endorse strategies to effectively address the security risks, threats and vulnerabilities identified and evaluate potential costs to the organisation to implement the strategies</li> </ul>
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