

**SKILLS FRAMEWORK FOR SEA TRANSPORT
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT**

TSC Category	Systems Engineering					
TSC	Architecture Design					
TSC Description	Synthesise system architecture baselines that satisfy stakeholder requirements					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
			STP-SYS-3001-1.1	STP-SYS-4001-1.1	STP-SYS-5001-1.1	
			Translate stakeholder expectations into system design considerations	Recommend design solutions to meet functional and behavioural expectations and performance requirements	Establish measures of effectiveness (MOEs) and technical performance measures (TPMs) aligned to stakeholder expectation statements	
Knowledge			<ul style="list-style-type: none"> Product lifecycle Components of technical design Methods to convert functional and behavioural expectations Types of design solutions 	<ul style="list-style-type: none"> Product lifecycle Components of technical design Method to convert functional and behavioural expectations Stakeholders and stakeholder expectations Types of design solutions Components of full design description 	<ul style="list-style-type: none"> Product lifecycle Stakeholders and stakeholder expectations Components of measures of performance Components of measure of effectiveness Components of technical performance measures Components of technical design Functional and behavioural expectations Methods of evaluating design solutions Methods of selecting the best design solution Authority requirements Design code of practices and design principles 	
Abilities			<ul style="list-style-type: none"> Identify project stakeholders Convert functional and behavioural expectations to technical terms with 	<ul style="list-style-type: none"> Identify design constraints Convert functional and behavioural expectations to technical terms with 	<ul style="list-style-type: none"> Create measures of effectiveness (MOE) and measures of performance (MOP) from 	

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			<p>performance requirements</p> <ul style="list-style-type: none"> • Translate and validate stakeholder expectations into stakeholder expectation statements • Define functional and behavioural expectations of the system design • Define performance requirements for each defined functional and behavioural expectations • Review requirement statements to ensure compliance with guidelines 	<p>performance requirements</p> <ul style="list-style-type: none"> • Translate and validate stakeholder expectations into stakeholder expectation statements • Define performance requirements for each defined functional and behavioural expectation • Identify and propose out-of-tolerance technical parameters • Evaluate potential design solutions to recommend appropriate options 	<p>stakeholder expectation statements</p> <ul style="list-style-type: none"> • Define scope of technical design • Define technical performance measures (TPMs) • Generate full design descriptions • Select best design solutions for stakeholders' endorsement • Establish strategies for systems requirements management • Verify changes for system out-of-tolerance technical parameters • Develop and maintain compliance matrices • Disseminate approved changes to Engineering Change Proposals (ECPs) for a system 	
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