

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

TSC Category	Process Improvement					
TSC	Logistics Operations Research and Planning					
TSC Description	Adopt advanced quantitative methods to analyse, design, plan and control logistics systems in order to support business requirements					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
			STP-MPR-3021-1.1	STP-MPR-4021-1.1	STP-MPR-5021-1.1	
			Analyse current logistics operating model with respect to current and future business needs	Stimulate new models to optimise logistics operating models based on conclusions drawn from analysis	Evaluate models to optimise logistics operations to ensure alignment to business objectives	
Knowledge			<ul style="list-style-type: none"> Physical logistics operations Industry best practices for logistics operations Network analysis using methods such as Dijkstra's Algorithm and Ford-Fulkerson's Algorithm Future business needs and trends projection techniques such as time series methods, linear regression, Holt's method, and decomposition method 	<ul style="list-style-type: none"> Logistics operations management approaches Process improvement approaches Network optimisation methods Modelling techniques and methodologies such as transshipment and flow capacity modelling Techniques of capacity planning 	<ul style="list-style-type: none"> Logistics operations optimisation strategies Emerging trends in logistics industry research such as autonomous fleet, big data and blockchain technology Process improvement framework Strategies of capacity planning 	
Abilities			<ul style="list-style-type: none"> Project future demand for logistics services Analyse future logistics operations trends such as process structure, customer involvement, resource flexibility and capital intensity Analyse gaps of current logistics operating model with respect to key performance 	<ul style="list-style-type: none"> Develop appropriate performance indicators for logistics operations management Design optimisation plans for logistics operating models to close identified gaps Develop optimisation plans for logistics operations with models 	<ul style="list-style-type: none"> Formulate priorities in measuring key performance of logistics operations management Formulate logistics operations strategies to meet customer needs Lead evaluation of proposed logistics operating models by measuring business impact, ensure 	

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			<p>indicators, current industry best practices and future demand</p>		<p>marketing competitiveness and meet future customer needs</p> <ul style="list-style-type: none"> • Drive implementation of logistics operations optimisation models 	
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