

**SKILLS FRAMEWORK FOR SEA TRANSPORT
SKILLS MAP – HEAD OF ENGINEERING**

Sector	Sea Transport			
Track	Port			
Sub-track	Port Engineering			
Occupation	Port Engineer			
Job Role	Head of Engineering			
Job Role Description	The Head of Engineering is at the forefront of new technology, charting the port technology development and integration roadmaps. He/She works with internal and external parties to invest and develop technology and infrastructure solutions that meet the ports' business objectives, while managing budgetary constraints. He directs the use of new technology and equipment in the ports to drive greater productivity and service excellence, while ensuring the high reliability of existing port equipment through cost effective maintenance programmes. He is a core member of the management team, contributes to the overall organisation strategy, inspires a culture of process improvement to enhance workflow and efficiency, while mentoring others in their work.			
Critical Work Functions and Key Tasks	Critical Work Functions		Key Tasks	
	Manage the development and procurement of port equipment and infrastructure		Establish strategic long-term technology goals, policies and procedures for the organisation based on business objectives and budget requirements	
			Design and oversee the implementation of technological solutions	
			Oversee and deploy new applications and enhancements to existing equipment	
			Review technical specifications and scope of work for request for quotations (RFQ) and tenders	
			Manage tenders and evaluate bidders for ability to perform the required work	
			Build and manage project schedules based on product requirements, technical challenges, tooling lead-times and business needs	
	Oversee the implementation and maintenance of automated equipment and systems		Explore and evaluate current automated equipment and systems to identify its ability to meet future port requirements	
			Research and evaluate mechanical products, equipment, systems and processes to meet requirements	
			Act as a subject matter and industry expert in technology selection	
	Improve reliability of existing port equipment and infrastructure through asset enhancement and maintenance programmes		Oversees the overall equipment efficiency to assess the performance of port equipment and infrastructure	
			Review technical proposal and assume the role of the final endorser	
		Establish equipment productivity and availability target		
		Explore and evaluate new technologies in the maintenance of port equipment		
Lead improvements to enhance efficiency		Build a culture of innovation within the organisation to encourage continuous improvement		
Skills & Competencies	Technical Skills & Competencies		Generic Skills & Competencies (Top 5)	
	Architecture Design	Level 5	Transdisciplinary Thinking	Advanced
	Budgeting	Level 6	Sense Making	Advanced
	Business Continuity Management	Level 6	Leadership	Advanced
	Business Negotiation	Level 6	Communication	Advanced
	Crisis Management	Level 6	Interpersonal Skills	Advanced
	Cyber Security	Level 3		
	Financial Management	Level 6		
	Innovation	Level 6		
	Interface Management	Level 5		
	Networking	Level 6		
	Organisational Strategy and Policy Realisation	Level 6		
	Port Equipment Maintenance	Level 6		
	Risk Compliance and Governance	Level 6		
	Risk Control and Response Planning	Level 6		
	System Configuration Management	Level 6		
Systems Integration	Level 5			
Technology Integration	Level 4			
Programme Listing	For a list of Training Programmes available for the Sea Transport sector, please visit: www.skillsfuture.sg/skills-framework/sea-transport			

The information contained in this document serves as a guide.