

<b>SKILLS FRAMEWORK FOR ENGINEERING SERVICES</b> <b>SKILLS MAP – SENIOR ENGINEER/ASSISTANT MANAGER (OPERATIONS AND MAINTENANCE)</b>			
<b>Sector</b>	Engineering Services		
<b>Track</b>	Operations and Maintenance		
<b>Occupation</b>	Engineering Professional		
<b>Job Role</b>	<b>Senior Engineer/Assistant Manager (Operations and Maintenance)</b>		
<b>Job Role Description</b>	<p>The Senior Engineer/Assistant Manager (Operations and Maintenance) is responsible for developing the operations and maintenance plans and schedules for the continuous operations of equipment and systems. He/She ensures resourcing needs of engineering projects are met based on developed plans and resourcing requirements. He ensures compliance of work activities to regulatory and statutory policies, procedures and regulations, performing root cause analysis to manage safety lapses. He manages emergency response procedures and adheres to workplace safety and health (WSH) requirements. He manages a team of engineers and ensures efficient business operations.</p> <p>He is a good team player and is adept in engaging and interacting with internal and external stakeholders. He is systematic and logical in his work approaches, and possesses strong technical writing, communication, analytical and problem-solving skills. He is also expected to travel occasionally to project locations.</p>		
<b>Critical Work Functions and Key Tasks / Performance Expectations</b>	<b>Critical Work Functions</b>	<b>Key Tasks</b>	<b>Performance Expectations* (For legislated / regulated occupations)</b>
	Maintain equipment and systems	Develop maintenance plans and schedules for inspection, testing, repair and predictive maintenance of equipment and systems	In accordance with: <ul style="list-style-type: none"> <li>• Workplace Safety and Health (WSH) Act;</li> <li>• Building Control Act;</li> <li>• Electricity Act;</li> <li>• Fire Safety Act</li> </ul>
		Verify that recommended repair works for equipment and system failures are implemented	
		Review recommended repair works and solutions to address equipment and system failures	
		Lead root cause analysis of equipment and system failures and malfunctions, and develop reports	
		Review testing, maintenance and repair records to evaluate impact of trends, and potential malfunctions and solutions	
		Review housekeeping procedures and standards to ensure adherence to required quality standards	

		Oversee test runs of new processes involving automated equipment, systems and controls	
	Conduct operations	Collaborate with internal stakeholders on operations	
		Evaluate feasibility of identified resourcing requirements to achieve operational state in accordance with organisational standards	
		Review operational plans and Standard Operating Procedures (SOPs) for equipment and systems	
		Review methods of application for emerging technologies to improve performance monitoring and process troubleshooting	
		Lead root cause analysis of equipment and system underperformance, and develop reports	
	Manage responses to emergencies and crises	Propose emergency technical and recovery activities based on the crisis management frameworks	
		Evaluate the severity of emergency situations and determine the type of responses needed	
	Manage health, safety and environment	Drive departmental plans to ensure compliance with the organisational Workplace Safety and Health (WSH) policies and Environmental Management Systems (EMS)	
		Review contractor and vendor compliance with the organisation's WSH and EMS standards and practices	
		Ensure proper closure of WSH and EMS accident and incident investigations and their notification to relevant authorities	
		Ensure implementation of sustainable engineering procedures and guidelines	
	Manage people and organisational function	Acquire and allocate resources to support business operations	
		Drive team performance to achieve department goals	
		Identify recruitment needs and areas for technical and business management training and development	

		Analyse financial implications of business strategies to daily operations		
		Develop risk management plans and risk controls in alignment with organisation's risk management framework		
		Analyse viability of proposed continuous improvement initiatives and drive change management	*Performance Expectations are non-exhaustive and subject to prevailing regulations	
<b>Skills &amp; Competencies</b>	<b>Technical Skills &amp; Competencies</b>		<b>Generic Skills &amp; Competencies (Top 5)</b>	
	Artificial Intelligence Application	Level 4	Decision Making	Advanced
	Asset Management	Level 4	Communication	Advanced
	Budgeting	Level 3	Problem Solving	Advanced
	Building Information Modelling Application	Level 4	Interpersonal Skills	Advanced
	Business Performance Management	Level 3	Digital Literacy	Advanced
	Business Presentation Delivery	Level 4		
	Change Management	Level 4		
	Civil and Structural Engineering Management	Level 4		
	Condition-based Assets Monitoring Management	Level 4		
	Continuous Improvement Management	Level 4		
	Cost Management	Level 4		
	Data and Statistical Analytics	Level 3		
	Electrical Engineering Management	Level 3		
	Emergency Response Management	Level 3		
	Engineering Drawing Interpretation and Management	Level 4		
	Environmental Management System Framework Development and Implementation	Level 4		
	Equipment and Systems Repair	Level 4		
	Equipment and Systems Testing	Level 4		

Equipment Maintenance and Housekeeping	Level 3
Facility Maintenance	Level 3
Geotechnical Engineering Management	Level 4
Hazards and Risk Identification and Management	Level 4
Instrumentation and Control Design Engineering Management	Level 3
Internet of Things Management	Level 4
Inventory Management	Level 4
Learning and Development	Level 3
Maintenance Scheduling	Level 4
Maintenance Strategy Management	Level 4
Manpower Planning	Level 4
Mechanical Engineering Management	Level 3
Organisational Resource Management	Level 4
Organisational Risk Management	Level 3
Preventive Maintenance	Level 4
Programme Management	Level 4
Project Risk Management	Level 4
Quality System Management	Level 3
Robotic and Automation Technology Application	Level 4
Staff Management	Level 4
Stakeholder Management	Level 4
Structural Testing	Level 3
Sustainable Engineering	Level 3
Technical Inspection	Level 3
Technical Writing	Level 3
Technology Application	Level 3
Third Party Management	Level 4
Workplace Safety and Health Culture Development	Level 4

	Workplace Safety and Health Framework Development and Implementation	Level 4	
<b>Programme Listing</b>	For a list of Training Programmes available for the Engineering Services sector, please visit: <a href="http://www.skillsfuture.sg/skills-framework/engineeringservices">www.skillsfuture.sg/skills-framework/engineeringservices</a>		

The information contained in this document serves as a guide.