

SKILLS FRAMEWORK FOR ENGINEERING SERVICES SKILLS MAP – DIRECTOR (ENGINEERING)					
Sector	Engineering Services				
Track	Engineering				
Occupation	Engineering Professional				
Job Role	Director (Engineering)				
Job Role Description	<p>The Director (Engineering) is responsible for spearheading the strategic planning, design and implementation of complex engineering solutions to meet customers' requirements. He/She drives direction and strategy for the development and execution of engineering projects, and ensures alignment to the organisational strategy, vision and mission. He formulates strategies and frameworks to drive workplace health, safety, risk and environmental management in accordance with local and international regulations. He develops the organisation's technology roadmap and drives continuous improvement strategies. In addition, he leverages his deep technical expertise and industry experience to develop technical capabilities and domain expertise for the organisation. He is a professional engineer, specialising in mechanical, electrical, control and instrumentation, civil, structural or geotechnical engineering disciplines.</p> <p>He is the organisation's technical expert who advises senior management and business partners on complex engineering matters. He maintains and builds strong links with the external engineering community and establishes best practises in the implementation of engineering standards and design. He is a strategic and creative thinker, demonstrates exceptional leadership and problem-solving skills, and establishes strategic partnerships.</p>				
Critical Work Functions and Key Tasks / Performance Expectations	Critical Work Functions	Key Tasks	Performance Expectations* (For legislated / regulated occupations)		
			Manage execution of engineering projects	Drive direction and strategies for engineering projects in line with organisational strategies and plans	In accordance with: • Professional Engineers Act and Rules; • Workplace Safety and Health (WSH) Act; • Building Control Act
				Formulate strategies to ensure operational excellence and effectiveness across the engineering value chain	
				Establish workflows to ensure effectiveness of Front-End Engineering and Design (FEED) for engineering projects	
				Endorse feasibility and process safety reviews for engineering projects	
				Establish strategies to drive compliance with regulatory and legislative requirements	

		Establish communication protocols and conflict and dispute resolution mechanisms for strengthening industrial relations	
	Deploy new technologies	Lead innovation in new technologies for engineering processes and systems	
		Evaluate benefits, trade-offs and impact of new technologies	
		Build business case for implementing new technologies in the organisation	
	Employ advanced analytics and big data	Drive the organisation's commitment to efficient and effective analyses of large data sets	
		Lead innovation in advanced analytics through adoption of new methodologies and identification of new datasets	
		Evaluate the benefits and trade-offs of implementing advanced analytics within strategic decision-making	
		Develop organisational advanced analytics application strategy	
		Prepare business case for implementing advanced analytical methods in new areas	
	Manage health, safety and environment	Formulate strategies and frameworks to drive a culture of workplace safety, health and environmental management at organisational level	
		Establish strategies and frameworks to drive compliance with Workplace Safety and Health (WSH) policies and Environmental Management Systems (EMS)	
		Formulate proactive strategies to mitigate WSH and EMS accidents and incidents	
		Establish the organisation's sustainable engineering strategy, procedures and guidelines	
	Manage people and organisational function	Establish long-term objectives for the department in alignment with organisation's strategy, vision and mission	
		Establish the operating and resourcing structure for the department to support business objectives	

		Establish department-wide performance indicators to ensure achievement of organisational goals		
		Formulate talent recruitment and development strategies in alignment with organisation's vision, mission and values		
		Drive sourcing and allocation of budgets for the department's activities		
		Contribute to the development of the organisation's risk management framework		
		Drive continuous improvement strategies and change management initiatives at organisation level		
		Drive strategic partnerships with internal and external stakeholders		
Skills & Competencies	Technical Skills & Competencies		Generic Skills & Competencies (Top 5)	
	Artificial Intelligence Application	Level 6	Decision Making	Advanced
	Budgeting	Level 5	Communication	Advanced
	Building Information Modelling Application	Level 5	Leadership	Advanced
	Business Negotiation	Level 6	Problem Solving	Advanced
	Business Performance Management	Level 5	Resource Management	Advanced
	Business Presentation Delivery	Level 5		
	Business Proposal Writing	Level 5		
	Change Management	Level 5		
	Civil and Structural Engineering Management	Level 6		
	Commissioning and Start-Up Management	Level 5		
	Conflict Resolution	Level 6		
	Continuous Improvement Management	Level 5		
	Contract Development and Management	Level 6		
	Cost Management	Level 6		
	Data and Statistical Analytics	Level 5		
	Design for Safety	Level 6		
	Electrical Engineering Management	Level 5		

*Performance Expectations are non-exhaustive and subject to prevailing regulations

Engineering Drawing Interpretation and Management	Level 5
Engineering Safety Standards Interpretation	Level 5
Environmental Management System Framework Development and Implementation	Level 6
Front-End Engineering and Design	Level 5
Geotechnical Engineering Management	Level 6
Hazards and Risk Identification and Management	Level 5
Instrumentation and Control Design Engineering Management	Level 5
Internet of Things Management	Level 5
Learning and Development	Level 5
Manpower Planning	Level 5
Market Research	Level 5
Mechanical Engineering Management	Level 5
Organisational Resource Management	Level 6
Organisational Risk Management	Level 5
Procurement Coordination and Policy Development	Level 6
Programme Management	Level 5
Project Feasibility Assessment	Level 5
Project Risk Management	Level 5
Quality System Management	Level 5
Reliability Engineering Management	Level 6
Robotic and Automation Technology Application	Level 6
Staff Management	Level 5
Stakeholder Management	Level 5
Strategy Development	Level 5

	Sustainable Engineering	Level 6	
	Technology Road Mapping	Level 5	
	Workplace Safety and Health Culture Development	Level 5	
	Workplace Safety and Health Framework Development and Implementation	Level 6	
Programme Listing	For a list of Training Programmes available for the Engineering Services sector, please visit: www.skillsfuture.sg/skills-framework/engineeringservices		

The information contained in this document serves as a guide.