

TSC Category	Research and Development Management					
TSC	Applied Research and Development Management					
TSC Description	Manage applied Research and Development (R&D) projects and activities to innovate and develop new products and processes					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
				ECM-RND-4001-1.1	ECM-RND-5001-1.1	ECM-RND-6001-1.1
				Interpret Research and Development (R&D) aims and objectives to execute R&D projects that are aligned with the organisation's business direction and strategies	Devise Research and Development (R&D) project scopes and objectives to manage R&D activities and ensure alignment with the organisation's business direction and strategies	Establish strategies and methodologies for Research and Development (R&D) and product innovation activities to achieve the organisation's strategic aims and objectives
Knowledge				<ul style="list-style-type: none"> Research principles and methods Statistical analysis techniques Principles of designing experiments Product specifications Product innovation methods Technology developments Technology-driven research collaboration methods Guidelines for collaboration in applied R&D 	<ul style="list-style-type: none"> Organisation approved research areas Market trends and sector products Intellectual Property (IP) and patent principles and regulations Factors that may have a critical effect on research methodology Processes and data statistical analysis techniques Time scales required for research Resources required for research Project management Sources of external technical expertise, partnerships and alliances Research collaboration management Technical writing and presentation skills 	<ul style="list-style-type: none"> Regulations and guidelines for R&D Market trends and sector products Intellectual Property (IP) and patent principles and regulations Organisational innovation management Innovation strategies Product innovation management Emerging product and technology trends Strategies and processes for R&D partnership and alliances New technology developments in research collaboration strategies
Abilities				<ul style="list-style-type: none"> Interpret the aims and objectives of research Identify factors impacting research methodologies 	<ul style="list-style-type: none"> Determine scopes, aims and objectives of R&D projects 	<ul style="list-style-type: none"> Lead new technologies and research techniques and integration into R&D projects

				<ul style="list-style-type: none"> Assess potential constraints on research and develop contingency plans Apply research methods which best achieve the aims and objectives Support complex, innovative technical laboratory based studies, experiments, analysis and evaluation Support the design of experiments and tests according to market needs Determine new product specifications Support the development of new technically advanced formulas ensuring full compliance with Intellectual Property (IP) and patent rights Apply technology in research collaboration methods Collaborate with internal and external stakeholders in conducting research where specified Maintain up-to-date knowledge of technical developments within the industry and market requirements 	<ul style="list-style-type: none"> Identify factors that may have an impact on research methodologies Assess potential constraints on research and develop contingency plans Select research methods which best achieve the aims and objectives Prioritise and schedule research activities that are necessary Calculate the resources and time scales required to implement the methodology Produce detailed plans of research and record them in the organisation's information systems Establish benefits and opportunities of collaborating with others in conducting research Manage the use of technology in research collaboration Collaborate with multi-disciplinary teams internally or externally to co-create new products Write R&D project proposals Communicate with internal and external stakeholders on R&D projects Maintain up-to-date knowledge of technical developments within the industry and market requirements 	<ul style="list-style-type: none"> Interface with sales and marketing teams to understand business and customer's needs to translate into a portfolio of innovation initiatives Lead scientific and technical guidance to research teams on their projects Build tools to translate business strategy into a portfolio of innovation initiatives Review manufacturing processes for new and improved products Manage new product pipelines and projects for product launches Build processes and structures to enhance the capabilities of the organisation to generate creative ideas for different purposes and with different value propositions Drive the use of technology in research collaborations Lead collaboration with multi-disciplinary teams internally or externally to co-create new products Review and endorse R&D project proposals Lead communication with internal and external stakeholders on R&D projects Maintain up-to-date knowledge of technical developments within the industry and market requirements
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