TSC Category	Analytical Thinking					
TSC	Systems Thinking					
TSC Description	Identify, analyse and evaluate relationships among systems' parts, with the use of simulation tools and systems thinking techniques and frameworks to understand situations and drive change for improvements					
TSC Proficiency	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**
			DSN-ACE-3013-1.1	DSN-ACE-4013-1.1	DSN-ACE-5013-1.1	
			Examine the interactions of components within systems to attain holistic understanding of how the parts relate to one another	Evaluate the interdependencies of different systems across the organisation to link patterns and trends across systems, programmes and operations	Drive strategic alignment of systems and processes across functional teams and departments in the organisation	
Knowledge			• Concepts of systems archetypes • Usage of computer simulation tools • Types of guiding questions that can be used for systems thinking • Mind maps, concept maps, map systems and other tools and mental models for developing systems thinking	• Concepts of systems archetypes • Usage of computer simulation tools • Types of guiding questions that can be used for systems thinking • Mind maps, concept maps, map systems and other tools and mental models for developing systems thinking • Chaos theory, and other frameworks in systems thinking	• Types of computer simulation tools • Chaos theory, and other frameworks in systems thinking • Diagnostic tools for change management • Concept of enterprise knowledge management (EKM) • Advantages and limitations of applying systems thinking to design	

Abilities			• Identify and diagnose the root causes of problems • Apply concepts of systems archetypes to analyse and attain holistic understanding of problems • Break down concepts and issues to facilitate understanding of individual parts of their systems • Analyse causal relationships and draw connections between elements of a system causing feedback to one another • Identify counterproductive approaches in solving issues or problems	• Guide stakeholders to interpret design problems in new ways • Critique mental models and archetypes to challenge current ways of thinking • Evaluate interactions between systems and their external environment to determine causal relationships • Facilitate the use of systems thinking to change perceptions and mental models to bring about new design insights and ideas • Simulate effects of management decisions, using design simulation tools • Synthesise insights and link patterns and trends across different organisational systems, programmes and operations	• Formulate multiple interventions to address the identified root causes to design problems • Develop strategies to deal with different systems archetypes • Manage the anticipated impact of trade-offs to the various elements of systems • Drive interventions utilising enterprise knowledge management (EKM) to foster an enterprise thinking culture across the organisation • Align organisational stakeholders and the design community to enhance effectiveness and depth of design work	

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