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| **TSC Category** | Development and Implementation | | | | | |
| **TSC Title** | Quality Engineering | | | | | |
| **TSC Description** | Create, deploy and maintain quality-related systems, processes and tools to establish an environment that supports process and product quality | | | | | |
| **TSC Proficiency Description** | **Level 1** | **Level 2** | **Level 3** | **Level 4** | **Level 5** | **Level 6** |
|  |  | **ICT-DIT-3011-1.1** | **ICT-DIT-4011-1.1** | **ICT-DIT-5011-1.1** |  |
|  |  | Measure current process capability and identify areas for quality improvement | Investigate process drivers of quality, and recommend quality management infrastructure, techniques and tools to facilitate quality optimisation | Develop quality-related infrastructure and practices, as well as new techniques, tools and control systems, to drive high quality products and processes |  |
| **Knowledge** |  |  | * Tools and techniques to measure process capability * Usage of quality-related processes and tools * Indicators of quality lapses or deviations * Quality management infrastructure maintenance procedures | * Infrastructure and process capability key performance measures and tools * Process drivers of quality and potential causes of quality lapses * Techniques and tools for quality optimisation * Usage of control systems * Quality management infrastructure, their benefits and proper deployment | * Principles of quality management and their application to internal infrastructure or processes * Projection of organisation quality-management needs * Quality management methodologies * New and emerging techniques and tools for process / product quality optimisation * Quality-related infrastructure options, components, and their costs and benefits * Effective application of control systems |  |
| **Abilities** |  |  | * Measure quality of current processes using appropriate tools and techniques * Collect relevant data on current process capability to identify quality lapses and possible areas for improvement * Provide clarifications on quality-related processes an d tools to relevant stakeholders * Apply established infrastructure, processes and systems to identify and highlight lapses or deviations from required quality standards * Support communications and implementation of changes to business processes in line with objectives of quality management infrastructure * Maintain quality management infrastructure | * Determine key performance measures and tools to evaluate existing systems, for assessment of current infrastructure and process capability * Analyse current process capability to investigate cause-and-effect relationships, process drivers of quality, and underlying causes of quality lapses * Recommend techniques and tools to facilitate process or product quality optimisation * Implement control systems to identify and correct deviations from required quality standards before they result in defects or disruptions * Deploy quality management infrastructure and ensure organisation understanding and acceptance of new systems, processes and tools * Manage maintenance of quality-related infrastructure to ensure that systems, processes and tools are properly followed and utilised | * Determine current process capability, monitor and evaluate performance of key systems and processes * Anticipate current and future needs of the organisation to preserve required quality standards * Develop quality-related infrastructure for process improvements with reference to relevant quality management methodologies and internal capabilities * Establish organisation-wide practices and norms to create a culture that encourages high quality products and processes * Introduce new techniques and tools to optimise process and product quality * Establish control systems to guide processes toward reaching optimal quality * Drive deployment of quality-related infrastructure that yields business value * Manage implementation of quality systems and processes, in ensuring alignment with business direction |  |
| **Range of Application** |  | | | | | |