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| **TSC Category** | Business Development | | | | | |
| **TSC Title** | Data Analytics | | | | | |
| **TSC Description** | Implementing data analytics within the organisation to generate business insights and intelligence through the use of statistical and computational techniques and tools, algorithms, predictive data modelling and data visualisation. | | | | | |
| **TSC Proficiency Description** | **Level 1** | **Level 2** | **Level 3** | **Level 4** | **Level 5** | **Level 6** |
|  | **ICT-BIN-2104-1.1** | **ICT-BIN-3104-1.1** | **ICT-BIN-4104-1.1** | **ICT-BIN-5104-1.1** |  |
|  | Identify underlying trends and patterns in business data using statistical and computational techniques and tools | Develop, apply and evaluate algorithms, predictive data modelling and data visualisation to identify underlying trends and patterns in data | Design and conduct data studies to drive organisational decisions and insights | Manage and enhance organisational data science capability by refining financial and other business performance criteria and design data studies |  |
| **Knowledge** |  | * Principles of data modelling and data visualisation * Techniques used in data science and how to apply them * Range of data protection and legal issues * Range of functional languages that can be applied for business insights * Methods to apply statistical techniques and machine learning * Importance of the domain context for data science * Underlying data structures involved for data science | * Organisational domain(s) and key business processes * Methods to use analytics to tell the story of the data * Methods to use exploratory visual analysis and predictive modelling * Methods to identify and prioritise the problems to be solved * Methods to develop prototype algorithms * Methods to build a data model * Methods to use data mining to discover new business insights * Methods to interpret patterns in data and their relevance to business issues * Range of established and novel tools and techniques used in developing new business insights * Methods to apply complex software tools to analyse data * Use of statistical techniques, experimental techniques, and hypothesis testing | * Organisational benefits of business insights * Methods to evaluate data science solutions in contributing to efficiency, growth and return on investment * Methods to identify and interpret the implications of data patterns * Methods to prioritise proposed data science projects * Methods to approach a business problem and come up with a solution that leverages the available data * Methods to run complex data mining models * Methods to visually and analytically explore a data set * Methods to manage the capacity to perform data science projects * Application of statistics, data mining and data modelling and the application of relevant tools and techniques * Methods to measure the capability of the data science team | * Organisational context for data and the opportunities that data analytics can provide * Business processes that use and manipulate data * Methods to develop and maintain controls for data quality * Methods to define and manage policies and programs for data stewardship * Impact that data analysis has on business service offerings * Horizon scanning methods |  |
| **Abilities** |  | * Use data mining, time series forecasting and modelling techniques to identify and predict trends and patterns in data * Assist with data transformation, quality checking and cleansing into digestible data sets * Perform database queries across multiple tables/unions to extract relevant data * Perform appropriate data analysis on distinct data sets * Produce performance dashboards and insight reports * Assist in the production of a range of business insight reports * Summarise and present business insights developed from data studies | * Apply predictive data modelling techniques to identify underlying trends and patterns in data using statistical computing tools, methods and   procedures   * Identify patterns across multiple data sets to derive insights * Develop prototype algorithms and proof of concept demonstrations * Make decisions about which patterns are meaningful, and   which to further analyse   * Assemble data aggregations to build data models to help test   problem hypotheses   * Use machine learning techniques to gain new insights from data * Mine data to find relevant insights to develop ongoing improvements * Asses the business insights presented to determine impact of insights on organisation * Manage the creation of interactive visualisations of data and data study   outcomes   * Use industry standard tools and techniques for data visualisation in line with organisational procedures | * Interpret implications of data patterns on business problem scenarios * Exploit business data to extract insights * Manage data science projects * Configure and customise data models to investigate organisational business hypotheses * Manage organisational capacity for performing data science projects * Run complex data mining models to provide business insights in line with organisational procedures * Communicate the results of data science projects * Make recommendations to guide organisational decision making | * Formulate the organisation’s data science capability to inform business decision making * Lead the implementation of the data science strategy, policies, procedures and metrics to support organisational requirements * Oversee the design, collection, retrieval and analysis of forecasting and performance data * Produce ad hoc analyses and management reports for senior management * Develop and maintain controls on data quality, inter-operability and sources to effectively manage risk * Define and manage policies and programs for data stewardship and custodianship in line with legal, information security, and corporate risk and compliance requirements * Conduct horizon scan to identify, evaluate and implement new technologies and techniques which may contribute to the success of the organisation’s data analysis capability |  |
| **Range of Application** |  | | | | | |