TSC Category	Data Analytics					
TSC	Data and Statistical Analytics					
TSC Description	Interpret and analyse data using statistical techniques to uncover trends and patterns to locate and define new process improvement opportunities					
TSC Proficiency Description	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**
	ECM-DAT-1002-1.1	ECM-DAT-2002-1.1	ECM-DAT-3002-1.1	ECM-DAT-4002-1.1	ECM-DAT-5002-1.1	ECM-DAT-6002-1.1
	Identify data collection procedures to assist in basic data collection and processing activities	Apply data analytical techniques to process and interpret data of limited complexity	Analyse data using statistical techniques to identify trends and patterns	Facilitate the development of new analytics solutions to address existing gaps in analytical tools	Devise the next generation of data science, with the use of big data analytics, to discover new process improvement opportunities	Transform the organisation through the use of big data analytics and data synthesis to drive solutions and improve business processes
Knowledge	• Units of measurement • Basic scientific and technical terminology • Procedures for coding, entering, storing, retrieving and communicating data • Procedures for verifying data and rectifying errors • Units of conversion • Calculations involving fractions, decimals, proportions and percentages • Procedures for maintaining and filing records, and securing data	• Units of measurement • Scientific and technical terminology • Statistics and scientific calculations • Operations of statistical techniques, e.g. mean, median, regression analysis • Practices in record management • Procedures for data management • Data management platforms and software	• Statistics and scientific calculations • Statistical Package for the Social Science (SPSS) functionalities • Quality Assurance and Statistics (QAS) • Data management platforms and software • Procedures for data traceability • Procedures for verifying data and rectifying mistakes • Records management	• Operations of statistical techniques, e.g. probability theory, probability distribution and hypothesis testing • Test conditions required for various statistical techniques • Interpretation of results from statistical modelling • Modelling software • Statistical data analysis application • Data analytics tools and techniques	• Strengths and limitations of various statistical techniques in evaluating big and complex data sets • Methods of manipulating statistical techniques for customised big data analytics • Factors that determine applicability of statistical models for big data analytics	• Relevance of big data analytics in improving business outcomes • Impact and influence of data analytics in transforming business decision making • Mechanics of big data analytics working in tandem with other forms of business

Effective Date: October 2017, Version 1.1

Abilities	• Perform calculations and interpret tables, graphs and charts • Code and record data accurately • Prepare accurate data in the required format • Recognise explicit trends in data • Identify areas for meaningful data for collection • Maintain confidentiality of data	• Perform calculations of scientific quantities • Use scientific notations • Apply concepts of metrology • Interpret trends of data • Identify correlation and regression models of data variables • Check accuracy of data • Enhance quality of data collected by scrubbing and removing duplicates • Ensure confidentiality of data	• Perform data computations • Analyse data sets using statistical techniques for identification of trends and/or problems • Analyse statistics and graphical results • Interpret data collected for categorisation into areas for process improvement • Collaborate with stakeholders to identify additional and more specific data for further analysis • Document data • Maintain security and confidentiality of data	• Recognise significant trends in data and/or aberrant results • Use statistical tests to estimate uncertainties and determine data acceptability • Review data sets to uncover trends or patterns • Identify and analyse potential causes of unacceptable data, or results, to troubleshoot performance • Develop new methods to conduct analyses of large complex data sets • Facilitate discussion on areas for application of big data analytics to examine issues	• Formulate approaches used in big data analytics to more bespoke solutions addressing shortfalls in the current system • Devise different analytical toolsets to provide arrays of integrated solutions for improving business processes through big data analytics • Integrate processes with data funnels • Synthesis data across entire plants and departments for monitoring and process improvement • Guide colleagues in the refinement of big data and statistical analytics, specific to the business	• Inspire the usage of big data science as a tool for business process improvements • Influence stakeholders on the importance of big data analytics to discover solutions to improve business processes • Synergise the use of big data analytics with other forms of business analytics to improve business processes