**Technical Competencies**

| **Domain** | **Beginner** | **Competent** | **Advanced** | **Expert** | **Assessment** | **Importance** |
| --- | --- | --- | --- | --- | --- | --- |
| **Mathematics and statistics** | Basic understanding of mathematical and statistical concepts, performs basic tasks with assistance | Independently uses simple mathematical and statistical concepts, calculations and models, including available tools | Creates solutions involving advanced mathematical and statistical concepts, including utilisation of available tools | Creates complex mathematical and statistical models as part of integrated data solutions, including utilisation of available tools | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |
| **Programming and scripting languages[[1]](#footnote-1)** | Reads and makes modifications to basic programs and SQL scrips | Creates and modifies programs and scripts in multiple programming and scripting languages | Creates complex scripts across different platforms | Coaches and guides others in evaluation and development of cross-platform solutions, programs and scripts | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |
| **Databases and data storage[[2]](#footnote-2)** | Basic understanding of database concepts and data storage solutions | Database modelling and support experience, ability to work across one or more data storage platforms | Evaluates and implements solutions that involve integrated structured and unstructured data components in complex business and technical environment | Architects complex end-to-end data storage and performance solutions, integrated across different platforms, tools and systems | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |
| **Computing systems, platforms, security, integration[[3]](#footnote-3)** | Basic knowledge of the technical platforms, integration principles and systems development processes | Good working knowledge of systems development, multi-platform environment, security protocols and integration methods | Experienced in developing multi-platform systems, can easily visualise and articulate end-to-end data solutions across different technology options | Capable of architecting new solutions with complex integration requirements in a multi-platform technical environment | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |
| **Data mining** | Ability to recognise and develop basic patterns and relationships in data | Ability to work independently with multiple patterns and events | Ability to create solutions involving new patterns and relationships leading to predictive analytics | Ability to develop cross-subject predictive analytics solutions that enable complex data mining functionality | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |
| **Data modelling** | Ability to understand data structures and relationships and perform simple modelling tasks | Ability to create logical and physical data structures, with consideration for platform, tools and utilisation | Ability to create scalable, timely, maintainable and reliable multi-subject data models including structured and unstructured data | Ability to create multi-platform and multi-industry models that will ensure high performance and meet complex integration and strategic requirements | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |
| **Analytics, predictive modelling and machine learning** | Ability to participate in the design and development of predictive analytics solutions | Ability to develop, maintain and support solutions for predictive modelling and analytics in the existing environment | Ability to integrate advantages of various technologies in providing new solutions to complex analytical requirements | Ability to engineer multi-platform and multi-subject predictive analytics solutions | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |
| **Data visualisation** | Basic understanding of the tools and standards related to data visualisation solutions | Ability to work independently on data visualisation tasks and to utilise available tools | Develops creative end-to-end data visualisation solutions that effectively utilise available data and tools | Creates highly interactive and visually effective solutions for data analytics that cover multiple sources and integrate information with operational systems | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |
| **Business analysis and interpretation** | Ability to participate in business and interpretation of business initiatives and translation to data requirements | Capable of independently understanding and analysing simple business problems or initiatives, and translating it into data science requirements | Prior experience and in-depth industry knowledge that produces effective analysis and interpretation of complex business issues, translated into data requirements | Proven multi-sector cross-industry experience in strategy facilitation, business and data analysis and/or data-driven business transformation processes | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |
| **Product Development** | Understands the basic concepts behind data products development and can assist in analysis and support tasks | Capable of identifying product development opportunities and executing design and delivery of new products in support of an existing business strategy | Capable of developing and executing innovative product development strategies that will create new opportunities and drive business strategy | Capable of developing and delivering innovative product developing strategies across different datasets and industries, creating opportunities for bold and “disruptive” business strategies | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |

**Interpersonal Competencies**

| **Domain** | **Beginner** | **Competent** | **Advanced** | **Expert** | **Assessment** | **Importance** |
| --- | --- | --- | --- | --- | --- | --- |
| **Creativity** | Shows willingness to share ideas for new solutions or process improvements | Demonstrates creative approach to finding solutions to customer needs and continuous process improvements | Ability to recognise and implement opportunities for cross-department and cross-industry improvements and innovation | Ability to recognise and integrate complex innovative ideas across industry, departments and platforms, as well as to create environment to stimulate ideas and creativity | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |
| **Communication** | Can clearly translate technical ideas, information and findings to non-technical people | Capable of communicating complex messages in simplified manner between business and technical people | Capable of engaging stakeholders in business-technical communication at strategic and tactical level and to secure support for ideas and solutions | Capable of engaging diverse groups of people of various expertise and backgrounds and successfully influencing, promoting and delivering the intended message at both strategic and tactical level | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |
| **Data strategy** | Basic understanding of the purpose and direction of data related business goals | Can contribute to establishment and creation of data strategy direction with basic technical and interpersonal skills | Can lead data strategy efforts, define and translate business objectives into data-specific goals | Capable of recognising data opportunities and translating it into a full data-driven strategy with tangible benefits, clear definition of actions, initiatives and projects | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |
| **Line management** | Understanding of basic concepts in managing people and teams | Experience in managing team resources, performance and outcomes | Experience in creating and managing large teams with a diverse set of responsibilities | Experience with cultural transformation, team integration and performance improvement | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |
| **Data management and governance** | Understanding of basic data elements and their relationships, stakeholders and their responsibilities | Can independently manage already established data assets ownership and related responsibilities | Can create and manage new data management teams and responsibilities over data assets | Establishes new and improves existing data management standards and processes, integrated across different departments, organisations, industry sectors or community | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |
| **Facilitation and presentation** | Able to assist with facilitation and presentation efforts under expert guidance | Can confidently conduct meetings, discussions and workshops and present and communicate findings | Charismatic facilitator and presenter – capable of effective facilitation of complex discussions and creative presentation of solutions and ideas | Coaches and teaches others on how to effectively facilitate ideas, exchange and promote solutions | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |
| **Project management** | Understands project management processes and can operate as part of a project team | Capable of independently coordinating small projects or part of large projects or initiatives | Capable of independently managing complex projects solutions | Capable of guiding others in effective project management practices | * Beginner * Competent * Advanced * Expert | * Low * Medium * High * Very High |

1. *SQL, NoSQL, Python, C, C++, C3, Java, etc.*  [↑](#footnote-ref-1)
2. *Relational, DW, Hadoop, etc.* [↑](#footnote-ref-2)
3. *Mainframe, client/server, web, PC, communication protocols etc.* [↑](#footnote-ref-3)