

**Specification of Competency Standards**  
**for the Information & Communications Technology Industry**  
**Unit of Competency**

Functional Area - Data Science

Title	Appraise and select the appropriate data management tools, services and/or platforms to manage the target data based on different requirements
Code	111141L6
Range	Appraise different data management tools/services/platforms in the existing market and select the appropriate data management tools/services/platforms to manage the target data based on different requirements including capacity, performance, reliability, recoverability, discovery scheme, security, etc.
Level	6
Credit	3 (For Reference Only)
Competency	<p>Performance Requirements</p> <ol style="list-style-type: none"> <li>1. Understand the practices of data management throughout its lifetime through the internal (and external) data streams of an enterprise <ul style="list-style-type: none"> <li>• Be able to: <ul style="list-style-type: none"> <li>○ understand the data management being a comprehensive set of concepts, procedures, practices, processes, and a number of systems that allow for an organization to gain control of the data assets</li> <li>○ know the data operations covered in data management (See Remark 1)</li> <li>○ know the requirements of using different data management tools/services/platforms (See Remark 2)</li> </ul> </li> </ul> </li> <li>2. Appraise various data management tools and services in the existing market <ul style="list-style-type: none"> <li>• Be able to: <ul style="list-style-type: none"> <li>○ appraise various data management tools/services/platforms (See Remark 3) in the existing market based on different knowledge areas (See Remark 4)</li> </ul> </li> </ul> </li> <li>3. Select the appropriate data management tools/services/platforms to manage the target data based on different requirements <ul style="list-style-type: none"> <li>• Be able to <ul style="list-style-type: none"> <li>○ select the appropriate data management tools/services/platforms to manage the target data based on different requirements</li> </ul> </li> </ul> </li> <li>4. Perform supplier management of data management tools/services/platforms <ul style="list-style-type: none"> <li>• Be able to <ul style="list-style-type: none"> <li>○ perform supplier management of the data management tools/services/platforms to ensure the right suppliers are chosen to meet the data objectives</li> </ul> </li> </ul> </li> <li>5. Assess the target data management tools/services/platforms <ul style="list-style-type: none"> <li>• Be able to <ul style="list-style-type: none"> <li>○ assess the target data management tools/services/platforms for the data management effectiveness and maturity</li> </ul> </li> </ul> </li> </ol>
Assessment Criteria	The integrated outcome requirement of this UoC is the ability to know the practices of data management and select the appropriate data management tools/services/platforms to manage the target data. While at the same time achieving high availability and disaster recovery, securing data, providing privacy, and following compliance requirements, etc.
Remark	1. Data management covers the following operations (but not limited to):

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	<ul style="list-style-type: none"><li>• create, access, and update data across diverse data tiers</li><li>• store data across clouds and on-premise</li><li>• use data across applications, analytics, and algorithms</li><li>• provide high-availability and disaster recovery</li><li>• secure data and provide privacy</li><li>• archive and destroy data based on retention rules and compliance requirements.</li></ul> <p>2. The requirements of using different data management tools and services include (but not limited to) capacity, performance, reliability, recoverability, discovery scheme, security, etc.</p> <p>3. There are various popular data management tools/services/platforms in the existing market, i.e., Oracle Data Management Suite, SAP Data Management, IBM Infosphere Master Data Management Server, Microsoft Master Data Services, Talend, Tableau, Amazon Web Services - Data Lakes and Analytics, Google Cloud - Big Data Analytics, etc.</p> <p>4. Knowledge areas found in Data Management:</p> <ul style="list-style-type: none"><li>• Open source data management</li><li>• Data architecture and data model design software</li><li>• Master and reference data management</li><li>• Database management</li><li>• Data storage and operations: data warehousing and data lake</li><li>• Document collection and analysis</li><li>• Metadata management</li><li>• Data quality management</li><li>• Data analysis</li><li>• Data security and protection</li></ul>
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