Unit title:	Managing Data Assets
SQA code:	J6V6 47
SCQF level:	7
SCQF credit points:	8

History of changes

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Unit template: January 2022

Unit title:	Managing Data Assets (SCQF level 7)

Unit purpose

This is about individuals managing data assets to support data analysis. It involves using the methods and techniques of modern digital data management to implement data modelling, data storage, data security and data governance, which deliver and enhance the value of the organisation's data assets.

Learning outcome

To implement data management processes for data collection, storage, curation, and availability for analysis in line with legislative and organisational requirements. This includes the development and implementation of relevant data models, including metadata.

Performance requirements	**Knowledge and understanding**
1. Using entity-relationship data modelling techniques to create and refine data models for efficient storage and retrieval. 2. Developing and testing simple relational databases using pre-defined data models. 3. Applying database normalisation to structure databases to reduce data redundancy and improve data integrity. 4. Composing appropriate database queries using Structured Query Language (SQL) to translate data into information. 5. Processing data to ensure appropriate security of the data and its availability only to authorised users. 6. Storing, managing, and distributing data in line with legislation, data governance and data security organisational policies and standards. 7. Applying the organisations data governance rules for authorised data creation, updating, deleting, and handling of data.	1. Why managing data matters. 2. Common data formats and the applicable usage of these. 3. The importance of long-term data management. 4. The importance of efficiently storing data to improve data accessibility. 5. The concepts of data modelling and how to apply them. 6. The role of metadata for describing data. 7. Data structures capture information at different levels of specificity. 8. Which data structures (including data models and databases) are in use by which organisational areas. 9. How to design, build and manage databases to store and manage data. 10. How to query databases using Structured Query Language (SQL) to gather information. 11. The objectives of database normalisation and how the process is carried out. 12. The characteristics and management of Big data, and the role of Big data platforms. 13. The role of data warehousing to centralise and consolidate large amounts of data from multiple sources to provide business intelligence and reporting activities.

Performance requirements (continued)	Knowledge and understanding (continued)
	14. Good security practices in data management. 15. The ways in which data security is a collaborative effort involving IT security, data governance, and data operators. 16. How data governance processes define the formal management of data assets within an organisation.

Additional information about the unit

Assessment (evidence) requirements:

There should be a mix of **product**, **performance** and **knowledge** evidence for this unit.

Evidence should be sourced from routine work activities. **Simulation is not permissible in this unit.**

The evidence should be produced as a by-product of normal work activities. The evidence should relate to the learner's work role. For example, the data governance and data security policies and standards should be those of the employing organisation.

An example of product evidence is the results of database testing. An example of performance evidence is observation of the learner applying the organisation's data governance rules for authorised data creation, updating, deleting and handling of data. An example of knowledge evidence is written evidence that the learner understands the concept of data modelling.

It is unlikely that the learner will be the only contributor to the production of some of the evidence required for this unit. For example, they will likely work with others when processing data to ensure its security, in which case the specific role of the learner should be clearly identified.

Further guidance on the assessment (evidence) requirements for this unit, and other units, can be found in the Assessment Guidance document.

Guidance on instruments of assessment:

It is anticipated that most evidence will be generated as a by-product of routine workplace activities carried out as part of the learner's job role. However, there may be occasions when specific activities have to be undertaken to satisfy specific performance requirements or demonstrate specific knowledge and understanding. For example, a workplace may employ a limited number of security approaches and the learner will have to produce evidence that she / he is aware of other approaches.

It may be possible for one type of evidence to imply another. For example, developing and testing relational databases (product and / or performance evidence) may demonstrate a range of knowledge and understanding (knowledge evidence). Combining assessment (evidence) in this way is encouraged. However, it is vital that each piece of evidence is clearly related to performance requirements and knowledge and understanding.

Professional recorded discussion and / or personal reflective statements can be used to demonstrate knowledge and understanding.

Additional information about the unit (continued)

Details of the relationship between the unit and relevant National Occupational Standards (if appropriate):

This unit is related to the following National Occupational Standards:

ESKITP801301: Assist in Delivering the Data Management Infrastructure to Support Data Analysis and Reporting.

ESKITP801401: Deliver Data Management Infrastructure Projects to Support Data Analysis and Reporting.

ESKITP2085.04: Develop data models of proposed solutions.

ESKITP4053: Data Design Level 3 role.

ESKITP4054: Data Design Level 4 role.

https://www.ukstandards.org.uk/

Details of the relationship between the unit and other standards or curricula (if appropriate):

Assessment requirements specified by a sector or regulatory body (if appropriate):

Please refer to the Overarching Assessment Strategy for Competence-based Qualification and the associated sector-specific guidance relating to Digital Technology (Diploma in Digital Technology at SCQF Level 8) produced by SQA Accreditation (2022).

Simulation is not permissible in this unit.

Meta-skills signposting:

This unit aligns to the following meta-skills:

- Critical thinking
- Focusing
- Integrity